



DRAFT PROGRAM ENVIRONMENTAL IMPACT REPORT

CITY OF VICTORVILLE GENERAL PLAN 2030

(SCH NO. 2008021086)

Lead Agency:
City of Victorville
14343 Civic Drive
Victorville, CA 92393-5001
City of Victorville

Date: August 14, 2008

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INTRODUCTION

This Program Environmental Impact Report (EIR) examines the potential effects of the proposed General Plan 2030 for the City of Victorville. The General Plan 2030 would update and supersede the City's current General Plan, which was adopted in July 1997 and subsequently amended. Referred to within this document as the proposed "project", General Plan 2030 plans for the City of Victorville's continued development during the next twenty years.

1.1 PURPOSE

This General Plan 2030 requires the review and recommendation for adoption by the City of Victorville Planning Commission and the discretionary approval of the City Council. Adoption and implementation of the proposed General Plan 2030 is considered a "project" pursuant to Section 21065 of the Public Resources Code, commonly known as the State of California Environmental Quality Act (or CEQA). A "project", pursuant to CEQA, is an activity that may cause either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment.

CEQA's basic purposes are to:

- 1) Inform governmental decision-makers and the public about the potential significant environmental effects of the proposed project.
- 2) Identify ways that environmental damage from the proposed project can be avoided or significantly reduced,
- 3) Prevent significant, avoidable damage to the environment from the proposed project by requiring changes in the project through the use of alternatives or mitigation measures when the governmental agency finds that the project changes are feasible.
- 4) Disclose to the public the reasons why a governmental agency approved the project if significant environmental effects are involved.

CEQA is implemented through a series of regulations known as the "CEQA Guidelines". These guidelines specify the scope, content and process for preparing, reviewing and approving an EIR.

Pursuant to Section 15168 of the CEQA Guidelines, an EIR for a General Plan may be Program EIR. A Program EIR is prepared on a series of related actions that can be characterized as one large project. Advantages of a Program EIR include the following:

- 1) Provide an occasion for a more exhaustive consideration of effects and alternatives than would be practical in an EIR on an individual action.

- 2) Ensure consideration of cumulative impacts that might be slighted in a case-by-case analysis.
- 3) Avoid duplicative reconsideration of basic policy considerations.
- 4) Allow the Lead Agency to consider broad policy alternatives and program wide mitigation measures at an early time when the agency has greater flexibility to deal with basic problems or cumulative impacts.
- 5) Allow reduction in paperwork.

1.2 SCOPE OF THE EIR

The project consists of five primary components:

1. General Plan 2030 which would comprehensively update and supersede the City's current General Plan, with the most significant change to land use being the provision of larger commercial corners at major intersections, and a circulation plan to implement it. This includes deletion of the Old Town and SCLA Elements which are included in the existing General Plan; and
2. Rezoning of the unincorporated County islands to include Mountain View Acres North and South and the Coad Road area, and rezoning of the City's existing northern sphere area to include 2,049 acres of land adjacent to the existing sphere. All of the existing northern sphere is to be zoned Specific Plan upon annexation into the City; and
3. Extension of the City Sphere of Influence to include the Northern Expansion Area of approximately 37,000± acres and the Victorville Water District Sphere of Influence to be coterminous with the proposed City Sphere of Influence; and
4. Expansion of the Victorville Water District boundary to be coterminous with the northern sphere rezoning; and
5. Deletion of the Midtown and Southdown Industrial Specific Plans.

This EIR reviews each of these components through its discussion, which focuses on the General Plan 2030. The rezoning of the County islands and the City's existing northern sphere area is included in the proposed General Plan 2030 Land Use Map; and therefore the review and assessment of the potential impacts associated with the rezoning are incorporated into EIR discussions regarding the proposed Land Use Map. The extension of the City SOI to include the Northern Expansion Area is addressed throughout this EIR. Where available, existing conditions of the SOI are presented. The proposed expansion of the Victorville Water District boundaries would expand available water service to the northern sphere rezoning area. Impacts associated with the expanded boundaries relate to the availability of water, which is addressed in Section 5.8, Hydrology, and 5.16 Utilities. Deletion of the Midtown and Southdown Industrial Specific Plans are incorporated in the proposed General Plan 2030 Land Use Element and Land Use Map; and therefore the review and assessment of the potential impacts associated with the deletion of these Specific Plans are incorporated into EIR discussions regarding the proposed Land Use Element and Map.

In this EIR, the existing City of Victorville incorporated boundaries, existing SOI and proposed SOI expansion are collectively referred to as the "Planning Area". This EIR reviews the existing

conditions of the Planning Area, analyzes potential environmental impacts from implementation of the proposed General Plan 2030 including its primary project components; identifies policies from the proposed General Plan 2030 that serve to reduce and minimize impacts; identifies additional mitigation measures necessary to minimize significant effects; and describes reasonable alternatives to the project.

This EIR discloses all identified significant environmental impacts associated with approval and implementation of General Plan 2030; including impacts that cannot be avoided; growth inducing impacts; effects not found to be significant; and significant cumulative impacts of all past, present, and reasonably anticipated future projects. Because, the proposed General Plan 2030 encompasses all aspects of Victorville's future development, the scope of this EIR encompasses all environmental issues delineated in Appendix G of the CEQA Guidelines. These issues, which are outlined in the project Notice of Preparation and Initial Study (contained in Appendix A of this document), include the following:

- 1) Aesthetics
- 2) Agricultural Resources
- 3) Air Quality
- 4) Biological Resources
- 5) Cultural Resources
- 6) Geology and Soils
- 7) Hazards and Hazardous Materials
- 8) Hydrology and Water Quality
- 9) Land Use and Planning
- 10) Mineral Resources
- 11) Noise
- 12) Population and Housing
- 13) Public Services
- 14) Recreation
- 15) Transportation/Traffic
- 16) Utilities and Service Systems.

1.2.1 Environmental Setting/Definition of the Baseline

Section 15125 of the CEQA Guidelines requires that an EIR include a description of the existing physical environmental conditions in the vicinity of the project to provide the "baseline condition" against which project-related impacts are compared. Normally, the baseline condition

is the physical condition that currently exists. The CEQA Guidelines recognize that the date for establishing an environmental baseline cannot be rigid. Because the General Plan 2030 has been under preparation since 2004, data collected on its and this EIR's behalf ranges between 2005 and 2008, during which time numerous technical studies in support of the General Plan 2030 have been prepared.

For analytical purposes, impacts associated with implementation of General Plan Update 2030 are derived from the supporting technical studies and more contemporary information as it has become available. For each impact discussion presented in this EIR, the source of baseline information is identified.

The City of Victorville Traffic Model, which provides technical basis for the traffic, air quality and noise sections of this EIR, applies a base year of 2005 to assess existing conditions, and a base year of 2004 to assess existing General Plan conditions. Future or General Plan 2030 buildout traffic conditions are evaluated for year 2035. Because the General Plan 2030 buildout is assumed to be 2030, the Traffic Model provides a worse-case scenario of future traffic conditions in 2030.

1.2.2 Plan Comparison

This EIR evaluates the potential impacts of the proposed General Plan 2030 land use changes and associated growth potential compared to the existing setting/baseline conditions, as described above. In some cases, the existing General Plan growth potential is also discussed to provide additional information to the reader of the differences or changes between the City's existing General Plan and the proposed General Plan 2030. However, the determination of significance presented in this document is a comparison of the baseline (existing conditions) to General Plan 2030, not a comparison of the existing General Plan to the proposed General Plan 2030.

1.3 LEAD AGENCY

Pursuant to Section 15050 of the CEQA Guidelines, the public agency that holds principal responsibility for approving the project is the lead agency. For the General Plan 2030, the City of Victorville, which will be responsible for approving the project, is the lead agency. As lead agency, the City is responsible for the preparation, review and approval of this EIR.

1.4 INTENDED USE OF THE EIR

This EIR will carry out the basic purposes of CEQA, as delineated in Section 1.1, above, which include to inform the City Planning Commission and City Council and the public about the potential significant environmental effects of the proposed project; to identify, evaluate, and propose mitigation measures and alternatives to reduce project impacts, if required, for significant environmental impacts that may be associated with the adoption of the project.

This EIR also seeks to solicit comments from public agencies, other organizations and the public at large. It is intended for use as an informational document, and neither makes any recommendations regarding the project, nor authorizes any implementing actions by the Agency or the City. Rather, the EIR is oriented toward providing decision makers, their staffs, other involved public agencies, interested organizations, and the general public with an objective and impartial assessment of the potential environmental impacts that could result from implementation of the project.

1.5 EIR PROCESS

In accordance with Section 15082 of the CEQA Guidelines, the City distributed a Notice of Preparation (NOP) in February 2008 advising others that an EIR would be prepared and listing the issues to be studied. The purpose of the NOP was to solicit comments on the scope and content of the EIR. A copy of the NOP and accompanying Initial Study is found in Appendix A of this document. Those receiving copies of the NOP had 30 days to respond. Written comments received in response to the NOP are included in Appendix B of this document.

This Draft EIR (DEIR) was prepared following the 30-day NOP response period. Upon its completion, the DEIR will be circulated for a 45-day public review period, as mandated by law. The 45-day public review period will begin on or about August 18, 2008 and end on or about October 2, 2008.

During the 45-day public review period, this DEIR will be available for general public review at the following locations:

- Planning Division, City of Victorville: 14343 Civic Drive, Victorville, CA 92393-5001.
- City of Victorville Public Library: 15011 Circle Drive, Victorville, CA 92395

Interested parties may provide comments on the EIR in written form. Comments should be addressed to:

Chris Borchert, Assistant Director of Planning
City of Victorville
P.O. Box 5001
14343 Civic Drive
Victorville, CA 92393-5001.

Responses to all written comments or questions on the DEIR that are received during the 45-day review period will be included and responded to in the Final Environmental Impact Report (FEIR). The Planning Commission and City Council will review and consider the FEIR, including comments and their responses, before arriving at a decision to approve, revise or reject the proposed project.

1.6 MITIGATION MONITORING PROGRAM

Pursuant to Public Resources Code Section 21081.6, public agencies are required to establish monitoring programs to ensure project mitigation measures are adopted and implemented. A Mitigation Monitoring Program (MMP), using the mitigation measures set forth in this document, will be included with the Final EIR and proposed for adoption at the time of certification.

1.7 DOCUMENT ORGANIZATION

The EIR is organized according to the following chapters:

Chapter 1: Introduction: This section describes the purpose and scope of the EIR, identifies the lead agency and intended use of the EIR, summarizes the EIR process the organization of the EIR document.

Chapter 2: Executive Summary: This section contains a summary of the proposed project, as well as a summary of environmental impacts, proposed mitigation, level of significance after mitigation, and unavoidable impacts.

Chapter 3: Project Description: This section provides a detailed description of the proposed General Plan Update, including a description of the project location, background, project components, General Plan 2030 goals, General Plan 2030 Land Use Plan and Circulation Plan, and public actions and approvals required.

Chapter 4: Existing Setting: This section provides an overview of the existing setting of the Planning Area, including a description of the existing General Plan, existing land uses, existing circulation system, existing infrastructure, existing geologic conditions, existing biological, cultural resources, and cumulative projects.

Chapter 5: Environmental Analysis: This section describes and evaluates the environmental issue areas, applicable environmental thresholds, environmental impacts (short-term, long-term and cumulative), policy considerations related to the particular environmental issue area under analysis, mitigation measures capable of minimizing environmental harm, and a determination of the level of significance after General Plan policies and mitigation measures are applied.

Chapter 6: Project Alternatives: This section analyzes feasible alternatives to the proposed General Plan Update, including the No Project Alternative (the continuation of the city’s existing General Plan) and two additional reduced intensity alternatives.

Chapter 7: Other CEQA Considerations: This chapter provides analysis, as required by CEQA, regarding impacts that would result from the proposed General Plan Update, including growth-inducing impacts, effects found not to be significant, cumulative impacts, significant and unavoidable adverse impacts, mandatory findings of significance, and significant irreversible change to the environment,

Chapter 8: Energy Conservation: This section provides a discussion of the potential energy impacts of the General Plan 2030, with particular emphasis on avoiding or reducing inefficient, wasteful and unnecessary consumption of energy.

Chapter 9: Information Sources: This section provides a bibliography of all primary information sources used to prepare this EIR, and a list of the individuals responsible for the preparation of this EIR.

Chapter 10: Acronyms: This section lists and defines the acronyms used in this EIR.

EXECUTIVE SUMMARY

Following is a summary of the EIR for the City of Victorville General Plan 2030. Copies of plans and documents related to the project are available for review at the City of Victorville Development Department.

Character of the proposed Project, its identified significant environmental impacts, mitigation measures, and potential alternatives are summarized in this chapter. The remaining chapters of the EIR address the details of the issues outlined below.

2.1 SUMMARY PROJECT DESCRIPTION

The project consists of the adoption and implementation of General Plan 2030, a comprehensive update to the City of Victorville General Plan. The update would supersede the City's current General Plan, which was adopted in July 1997 and subsequently amended.

A General Plan is a community's planning "constitution" and is the single most important policy document in guiding land use and development decisions within the City. California law requires every general plan to cover, at minimum, seven major land use and development issues typical to most California cities and counties. These seven issues – land use, circulation, housing, conservation, open space, noise and public safety – are addressed in different chapters of a general plan commonly known as "elements."

Victorville's General Plan 2030 will distill the City's vision for the future into specific goals, policies and implementation measures that will guide the physical development of the City through the year 2030. The General Plan will cover the seven required issues in the following six elements:

1. Land Use Element
2. Circulation Element
3. Housing Element
4. Noise Element
5. Safety Element
6. Resource Element (incorporating two of the mandated elements, Open Space and Conservation).

The proposed General Plan 2030 would delete the Old Town and SCLA Elements which are included in the existing General Plan. Both the Old Town and SCLA are currently addressed through respective Specific Plans. The City has the need for elements in the General Plan is unnecessary and cumbersome.

In addition to the General Plan 2030, the project includes the following components:

1. Rezoning of the unincorporated County islands to include Mountain View Acres North and South and the Coad Road area, and rezoning of the City's existing northern sphere area to include 2,049 acres of land adjacent to the existing sphere. All of the existing northern sphere is to be zoned Specific Plan upon annexation into the City; and
2. Extension of the City Sphere of Influence to include the Northern Expansion Area of approximately 37,000± acres and the Victorville Water District Sphere of Influence to be coterminous with the proposed City Sphere of Influence; and
3. Expansion of the Victorville Water District boundary to be coterminous with the northern sphere rezoning; and
4. Deletion of the Midtown and Southdown Industrial Specific Plans.

At expected buildout, General Plan 2030 would result in substantially more development than would occur under the existing General Plan. General Plan 2030 would increase the amount of development by 112% (99,253 acres of the proposed General Plan 2030 Planning Area to 46,791 acres of the existing General Plan area, resulting in an increase in 52,462 acres). This increase is due largely to the proposed inclusion of the Northern Expansion Area in the Victorville Planning Area, the City existing SOI and County islands into the Planning Area.

2.1.1 Summary Project Location

The City of Victorville is located in southwestern San Bernardino County, in the geographic subregion of the southwestern Mojave Desert known as the Victor Valley and commonly referred to as the "High Desert". Although the City is separated from larger urbanized areas of Southern California, it is easily accessible via Interstate 15, U.S. Highway 395, California State Highway 18 and historic Route 66.

2.2 SUMMARY OF PROJECT ALTERNATIVES

Alternatives to the project are found in Section 7.0. In accordance with Section 15126.6 of the CEQA Guidelines, acceptable alternatives could feasibly attain most of the basic project objectives but would avoid or substantially lessen potential significant effects of the project.

Five project alternatives have been selected for evaluation. These include Alternative 1, the No-Project alternative and four additional project alternatives. Alternative 1, the No-Project alternative, includes the existing site conditions, and assumes no new development would occur onsite. Alternative 2, Buildout of Existing General Plan, projects development of the land use designations in the current General Plan. Alternative 3, the Reduced Density in 2030 alternative, proposes that all land use density proposed in General Plan 2030 (the project) be reduced by 20 percent. Alternative 4, Land Use Alternative A, proposes a substantial increase in Very Low Residential land use (22,947 acres) compared to General Plan 2030 (8,152 acres). Alternative 5, Land Use Alternative B, also increases the acreage for Very Low Residential (14,098 acres) in

comparison to General Plan 2030 and increases the acreage for Open Space from 22,536 acres to 33,259 acres.

The No-Project Alternative is designated the Environmentally Superior Alternative. However, pursuant to the CEQA Guidelines (Section 15126 (e) (2)), whenever the No-Project is the superior alternative, another alternative should be designated the alternate Environmentally Superior Alternative. The next best environmentally superior alternative in terms of least amount of impacts is Alternative 2, Existing General Plan, however that alternative does not meet the project objectives. Alternative 3, Reduced Density, is designated the superior alternate based on the reduced trips generated by the alternative and its ability to meet project objectives.

2.3 SUMMARY CLASSIFICATION OF ENVIRONMENTAL IMPACTS

Potential environmental impacts identified in this Section 5 of this EIR, *Existing Conditions, Impacts, and Mitigation Measures*, are classified according to the following categories:

- No Impact: Results in no substantial adverse change to existing environmental conditions.
- Less Than Significant: Potential impacts may occur, however these will be below established thresholds of significance, and will consequently not result in a substantial adverse change to existing environmental conditions. Alternately, this finding applies when a potentially significant impact is identified, but mitigation measures have been added to the project that cause the potentially significant impact to be reduced to less than significant levels, resulting in no substantial adverse change to existing environmental conditions.
- Significant and Unavoidable: Constitutes a substantial adverse change to existing environmental conditions that cannot be fully mitigated by implementation of all feasible mitigation measures. Whether or not these impacts can be reduced to a less than significant level through selection of an environmentally superior project alternative is discussed in Section 7.0 of this EIR, *Alternatives to the Proposed Project*.

2.4 AREAS OF CONTROVERSY

Section 15123(b)(2) of CEQA requires that the EIR Summary include a brief statement of areas of controversy associated with the project and/or EIR process. Prior to preparation of the EIR, comments were received by the lead agency in response to the project Initial Study and Notice of Preparation (NOP). These comment letters (Appendix B) were received from 11 public agencies, two law firms representing local residents, and 4 residents.

Additional oral comments were received during the public EIR Scoping Meeting, held on March 5,

2008. This meeting was intended to inform public agencies and the general public about the proposed Project and to solicit input regarding the potentially significant effects to be analyzed in the EIR, including alternatives and mitigation measures.

These written and oral comment letters have been used to determine areas of potential controversy and issues to be resolved. These issues are discussed within the technical sections of this document, and summarized below.

- Commercial land use changes
- Community sensitive transportation planning
- Agricultural resources
- Legal requirements of EIR scope
- Impacts on flora and fauna
- Public service agency authority and responsibilities
- Highway safety
- Airport land use compatibility
- Regional policies
- Air quality impacts
- Potential hazards
- Native American resources.

2.5 ISSUES TO BE RESOLVED

Section 15123(b)(3) of the CEQA Guidelines requires that the EIR Summary include a brief statement of issues to be resolved. In this proposed Project, the major issues to be resolved include decisions by the City as to:

1. Whether this adequately describes the environmental impacts of the project;
2. Whether the mitigation measures identified in this EIR should be adopted or modified;
3. Whether the benefits of the project override the impacts relative to air quality, noise, population and housing and traffic that cannot feasibly be avoided or mitigated to a level of insignificance;
4. Whether there are any alternatives to the project that would substantially lessen the significant impacts of the proposed project and achieve most of the basic objectives.

The project is expected to generate unavoidable significant impacts relative to air quality, noise, population and housing, and traffic. The project also is expected to result in unavoidable impacts relative to growth inducement; mandatory findings of significance that would adversely affect human beings, either directly or indirectly, specifically in regard to traffic, noise and air quality conditions;

and significant irreversible environmental changes based on the project's expected large commitments of nonrenewable resources.

Should the City decide to approve the proposed General Plan 2030 regardless of these unavoidable impacts, CEQA requires that the City consider adoption of two sets of findings. The first set is the Statement of Facts and Findings which requires the City to identify significant project impacts, presents facts supporting the conclusions reached in the analysis, makes one or more of three findings for each impact, and explains the reasoning behind the agency's findings. The second set is the Statement of Overriding Considerations which requires the City to make findings that weigh the economic, legal, social, technological, and other benefits of the project against the unavoidable environmental risks to historic resources.

2.6 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Table 2.1, below, summarizes the impacts and mitigation measures discussed in detail in Section 5.0. Potential environmental impacts of the project are summarized in the left column of the following table. The mitigation measures necessary for alleviating the impacts due to implementation of the project are summarized in the second column of the table. The third column summarizes the status of the impacts after the implementation of the mitigation measures.

Table 2.1 General Plan 2030 Summary of Project Impacts, Mitigation Measures and Status After Mitigation		
Potential Impacts	Mitigation Measures	Status After Mitigation
AESTHETICS (See Section 5.1)		
Potential impacts related to scenic visual resources; visual character and quality and light and glare.	Potential impacts are expected to be partially mitigated through proposed General Plan 2030 provisions and existing City policies; plus recommended mitigation measures listed below: AES-1: The City shall endeavor to preserve natural open spaces, including those in the Northern Expansion Area, in perpetuity. Potential measures used to preserve open space lands include dedication to the City or conservation agency, dedication or purchase of conservation easements, and transfer of development rights. AES-2: The City shall work with developers to retain areas in new	Less than significant.

**Table 2.1
General Plan 2030**

Summary of Project Impacts, Mitigation Measures and Status After Mitigation

Potential Impacts	Mitigation Measures	Status After Mitigation
	<p>developments which are not suitable for habitable structures as open space, including recreational open space uses, trails, and scenic outlooks.</p> <p>AES-3: The City shall work with developers to retain open spaces adjacent to view corridors or scenic resources in exchange for increased density elsewhere on the project site. Features meeting the following criteria shall be considered for designation as scenic resources:</p> <ul style="list-style-type: none"> ▪ A roadway, vista point, or area that provides a vista of undisturbed natural areas; ▪ 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 the San Bernardino and San Gabriel Mountains, and Mojave River Corridor urban areas). <p>AES-4: The City shall locate trail routes to highlight the City's recreational and educational experiences, including natural, scenic, cultural and historic features.</p> <p>AES-5: The City shall require that hillside development be compatible with natural features and that site development occur 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. Avoid/discourage development on ridgelines and areas where structures would</p>	

**Table 2.1
General Plan 2030**

Summary of Project Impacts, Mitigation Measures and Status After Mitigation

Potential Impacts	Mitigation Measures	Status After Mitigation
	<p>be the dominant visual element. These criteria shall be incorporated into hillside development regulations for specific plans that encompass land in the Northern Expansion Area or any other hillside areas within the Planning Area.</p> <p>AES-6: The City shall require new electrical and communication lines to be placed underground.</p> <p>AES-7: The City shall design area-wide 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 Planning Area's streams and creeks.</p> <p>AES-8: Lighting fixtures shall be architecturally compatible with the character of the surrounding structure(s) and shall be energy efficient. Fixtures shall be appropriate in height, intensity, and scale to the use they are serving. Generally, pole-mounted fixtures shall be low in height (20 feet or less) and be equipped with light shields to reduce or eliminate light spillage beyond the project's boundaries.</p> <p>AES-9: Parking areas shall be provided with lighting capable of providing adequate illumination for nighttime security and safety. Lighting, as set forth in the lighting or electrical plan, shall provide a minimum one foot candle of illumination at the ground throughout the parking area and all associated walkways, plazas and courts. Building-mounted decorative lights shall not exceed</p>	

**Table 2.1
General Plan 2030**

Summary of Project Impacts, Mitigation Measures and Status After Mitigation

Potential Impacts	Mitigation Measures	Status After Mitigation
	<p>five foot-candles measured five feet from the light source.</p> <p>AES-10: Security lighting shall be provided in all nonresidential zoning districts at building entrances/exits. Security lighting shall provide a minimum of two foot-candles and a maximum of three foot-candles at the ground level of the entrance.</p> <p>AES-11: Where the light source is visible from outside the project boundary, shielding shall be required to reduce glare so that neither the light source nor its image from a reflective surface shall be directly visible from any point five feet or more beyond the property line. This requirement shall not apply to single-family residential uses, traffic safety lighting, or public street lighting.</p>	
AGRICULTURAL RESOURCES (See Section 5.2)		
Potential, but less than significant, impacts related to conversion of prime farmlands; agricultural contracts; and agricultural zoning.	The proposed General Plan 2030 provisions would not alter existing conditions related to agricultural resources. No mitigation measures are required.	Less than significant.
AIR QUALITY (See Section 5.3)		
Potential impacts related to conflicts with applicable air quality plans; violations of air quality standards; significant contribution to greenhouse gases; impacts to sensitive receptors; cumulatively considerable increases in criteria pollutants; objectionable odors;	Potential impacts are expected to be partially mitigated through proposed General Plan 2030 provisions and existing City policies; plus recommended mitigation measures listed below; however no mitigation measures are feasible to fully reduce impacts to relative to exceedences of established air quality thresholds, and cumulative impacts.	Significant and unavoidable.

**Table 2.1
General Plan 2030**

Summary of Project Impacts, Mitigation Measures and Status After Mitigation

Potential Impacts	Mitigation Measures	Status After Mitigation
<p>cumulative air quality impacts.</p>	<p><u>Greenhouse Gas Emissions Reduction Measures</u> GHG reduction options on a project-level basis are similar to those measures designed to reduce criteria air pollutants (those with ambient air quality standards). The transportation sector is the largest emitter of greenhouse gases, emitting roughly 38 percent of California’s greenhouse gases in 2004. Measures that reduce trip generation or trip lengths, measures that optimize the transportation efficiency of a region, and measures that promote energy conservation within a development will reduce GHG emissions. Additionally, carbon sequestering can be achieved through urban forestry measures (i.e. <u>AQ-3</u>).</p> <p>Project-specific mitigation recommendations to reduce the global cumulative impact from project implementation include the following:</p> <p>AQ-1: Land Use and Transportation</p> <ul style="list-style-type: none"> a) Implement land use strategies to encourage jobs, housing proximity, promote transit-oriented development and encourage high density development along transit corridors. Encourage compact, mixed-use projects, forming urban villages designed to maximize affordable housing and encourage walking, bicycling and the use of public transit systems. b) Encourage infill, redevelopment, and higher density development, whether in incorporated or unincorporated settings. 	

**Table 2.1
General Plan 2030**

Summary of Project Impacts, Mitigation Measures and Status After Mitigation

Potential Impacts	Mitigation Measures	Status After Mitigation
	<ul style="list-style-type: none"> c) Encourage new developments to integrate housing, civic and retail amenities (jobs, schools, parks, and shopping opportunities) to help reduce vehicle miles traveled resulting from discretionary automobile trips. d) Apply advanced technology systems and management strategies to improve operational efficiency of transportation systems and movement of people goods and services. e) Incorporate features into project design that would accommodate the supply of frequent, reliable and convenient public transit. f) Implement street improvements that are designed to relieve pressure on the most congested roadways and intersections. g) Limit idling time for commercial vehicles, including delivery and construction vehicles. h) Develop a Safe Routes to School program that allows and promotes bicycling and walking to school. i) Assess project air quality impacts on sensitive receptors at the project level, with special consideration of school playgrounds, parks and other outdoor recreational uses. 	

**Table 2.1
General Plan 2030**

Summary of Project Impacts, Mitigation Measures and Status After Mitigation

Potential Impacts	Mitigation Measures	Status After Mitigation
	<p>AQ-2: Energy Conservation</p> <ul style="list-style-type: none"> a) Recognize and promote energy savings measures beyond Title 24 requirements for residential and commercial projects. b) Where feasible, include in new buildings facilities to support the use of low/zero carbon fueled vehicles, such as the charging of electric vehicles from green electricity sources. c) Educate the public, schools and other jurisdictions, and businesses about reducing GHG emissions. d) Replace traffic lights, streetlights, and other electrical uses to energy efficient bulbs and appliances. e) Design, build, and operate schools that meet the Collaborative for High Performance Schools (CHPS) best practices. f) Offer rebates and low-interest loans to residents that make energy-saving improvements on their homes. g) Construct non-residential buildings to meet LEED (Leadership in Energy and Environmental Design) Silver Certification where possible. 	

**Table 2.1
General Plan 2030**

Summary of Project Impacts, Mitigation Measures and Status After Mitigation

Potential Impacts	Mitigation Measures	Status After Mitigation
	<p>h) Maximize use of low-pressure sodium and/or fluorescent lighting.</p> <p>i) Require acquisition of new appliances and equipment to meet Energy Star certification.</p> <p>AQ-3: Urban Forestry</p> <p>a) Plant trees or vegetation to shade buildings and thus reduce heating/cooling demand.</p> <p>b) Preserve or replace onsite trees (that are removed due to development) as a means of providing carbon storage.</p> <p>c) Select landscaping that is fast-growing while minimizing water demand to sequester carbon while reducing electrical loads associated with regional water transportation.</p> <p><u>Construction Emissions Mitigation</u></p> <p>Construction activity air pollution emissions are anticipated to exceed MDAQMD CEQA thresholds. Regardless, the PM-10 non-attainment status of the Victorville area requires that Best Available Control Measures (BACMs) be used where feasible. Recommended construction activity mitigation includes:</p> <p>AQ-4: Dust Control</p>	

**Table 2.1
General Plan 2030**

Summary of Project Impacts, Mitigation Measures and Status After Mitigation

Potential Impacts	Mitigation Measures	Status After Mitigation
	<ul style="list-style-type: none"> a) Require property owners to apply soil stabilizers to inactive areas. b) During construction, require property owners to prepare a high wind dust control plan and implement plan-elements and terminate soil disturbance when winds exceed 25 mph. c) During construction, require property owners to stabilize previously disturbed areas if subsequent construction is delayed. d) During construction, require property owners to water exposed surfaces and haul roads 3 times/day. e) During construction, require property owners to cover all earth stockpiles with tarps. f) During construction, require property owners replace ground cover in disturbed areas quickly. g) Require all vehicles to reduce speeds on unpaved roads to less than 15 mph. <p>AQ-5: Exhaust Emissions</p> <ul style="list-style-type: none"> a) Require 90-day low-NOx tune-ups for off-road equipment operating in the Planning Area. b) Limit allowable idling to 5 minutes for trucks and heavy equipment. c) Require construction operators to use Tier 3-rated engines during site 	

**Table 2.1
General Plan 2030**

Summary of Project Impacts, Mitigation Measures and Status After Mitigation

Potential Impacts	Mitigation Measures	Status After Mitigation
	<p>grading for all equipment exceeding 100 horsepower if available.</p> <p>d) Require construction operators to utilize equipment whose engines are equipped with diesel oxidation catalyts if available.</p> <p>e) Require construction operators to utilize diesel particulate filter and diesel oxidation catalyst on heavy equipment where feasible.</p> <p>AQ-6: ROG Emissions</p> <p>a) Require the use of high-volume, low-pressure paint sprayers, apply paint thickness of 0.75 millimeters or less and, use water-based and low-VOC coatings with ROG emissions of less than 8.0 pounds per 1,000 square feet of painted surface.</p> <p><u>Operational Emissions Mitigation</u></p> <p>Operational emissions for PM-10 are forecast to exceed MDAQMD thresholds by a wide margin at build out. For operational emissions, automotive sources are the dominant contributors to the project emissions burden. Mitigation in the form of alternatives to the single occupant automobile (SOV), therefore, should be considered where possible through viable transportation control measures (TCMs).</p> <p>AQ-7: Wherever feasible, developers should be encouraged to incorporate the following TCMs on a project-specific basis includes:</p>	

**Table 2.1
General Plan 2030**

Summary of Project Impacts, Mitigation Measures and Status After Mitigation

Potential Impacts	Mitigation Measures	Status After Mitigation
	<ul style="list-style-type: none"> a) Provide future transit access points within the development. b) Include bicycle lanes in the project design. c) Provide an attractive pedestrian environment. d) Encourage mixed-use developments where employment, shopping and living can occur within short distances. 	
BIOLOGICAL RESOURCES (See Section 5.4)		
<p>Potential impacts related to sensitive habitat or species; riparian habitat or other sensitive natural communities; federally protected wetlands; conflicts with local policies or ordinances protecting biological resources; conflicts with the provisions of an adopted Habitat Conservation Plan; cumulative impacts to biological resources.</p>	<p>Potential impacts are expected to be partially mitigated through proposed General Plan 2030 provisions and existing City policies; plus recommended mitigation measures listed below:</p> <p>BIO-1: The Mohave Ground Squirrel is a state-listed species known to occur in natural open spaces within the City of Victorville. The City shall continue working with the CDF&G to ensure that individual projects comply with state laws protecting this species. In areas so designated by the agencies, appropriate surveys shall be conducted and appropriate mitigation applied.</p> <p>BIO-2: The Desert Tortoise is a federally and state-listed species with potential to occur in natural open spaces within the City of Victorville. The City shall continue working with the USFWS and CDF&G to ensure that individual projects comply with federal and state laws protecting this species. In areas so</p>	<p>Less than significant.</p>

**Table 2.1
General Plan 2030**

Summary of Project Impacts, Mitigation Measures and Status After Mitigation

Potential Impacts	Mitigation Measures	Status After Mitigation
	<p>designated by the agencies, appropriate surveys shall be conducted and appropriate mitigation applied. The exception is the urbanized area identified by the USFWS as a designated Desert Tortoise no-survey area, a map of which is maintained at the Planning Division.</p> <p>BIO-3: The Burrowing Owl is a California Species of Special Concern that is known to occur in agricultural fields and natural open spaces within the City of Victorville. This species has declined markedly, and continues to decline, across large parts of its range. Focused surveys for the Burrowing Owl shall be required for all projects that propose the development of agricultural fields or natural open spaces that are contiguous with larger open space areas capable of supporting Burrowing Owls. Burrowing Owl surveys, and any mitigation measures to be undertaken in the case of positive survey results, shall comply with current CDF&G recommendations.</p> <p>BIO-4: The City shall coordinate with state and federal agencies for the creation of buffers and mitigation banks for sensitive species. The City shall work with adjacent local governments and the County to conserve critical habitat and minimize recreational use in sensitive areas supporting protected or sensitive species. As feasible, the City shall work with the USFWS to establish mitigation banks or other conservation easements for the SOI areas supporting sensitive species. For areas of unique habitat qualities, replacement compensation and restoration mitigation may not be adequate for some habitat loss to reduce the impact to less than significant.</p>	

**Table 2.1
General Plan 2030**

Summary of Project Impacts, Mitigation Measures and Status After Mitigation

Potential Impacts	Mitigation Measures	Status After Mitigation
	<p>BIO-5: Prior to permitting conversion of undeveloped land in the Northern Expansion Area, the City shall ensure that appropriate biological surveys and assessments are conducted, and if warranted, adequate mitigation is provided to reduce biological resource impacts to less than significant to the greatest extent possible.</p> <p>BIO-6: To reduce predator attraction, the City shall work to improve trash collection, recycling programs, and illegal dumping in open areas. The City 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 Northern Expansion Area), and reduce illegal dumping of bulk items (e.g., furniture, appliances, tires, batteries). Residential impact from such waste products will be mitigated to less than significant prior to permitting land use conversion.</p> <p>BIO-7: The City shall work with state and federal agencies to create a specific and detailed wildlife corridor map for the Northern Expansion Area. The map will identify movement corridors and refuge areas for mammal, migratory bird species, and other desert species dependent on transitory resources based on rainfall. The wildlife corridor and refuge area map will be used for preparation of biological assessments prior to permitting for land use conversion.</p>	
CULTURAL RESOURCES (See Section 5.5)		
Potential impacts relative to historical	Potential impacts are expected to be partially mitigated through proposed	Less than significant.

**Table 2.1
General Plan 2030**

Summary of Project Impacts, Mitigation Measures and Status After Mitigation

Potential Impacts	Mitigation Measures	Status After Mitigation
<p>resources; archaeological resources; paleontological resources; and human remains.</p>	<p>General Plan 2030 provisions and existing City policies; plus recommended mitigation measures listed below:</p> <p>CUL-1: The applicant shall provide for an on-site paleontological/archaeological inspector to monitor all grading operations, or a letter from said licensed professional indicating that monitoring is not necessary during grading. Further, if disturbed resources are required to be collected and preserved, the applicant shall be required to participate financially up to the limits imposed by Public Resources Code Section 21083.2. The results of said monitoring shall be filed with the Development Director or his designee prior to the final approval of the development.</p> <p>CUL-2: 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.</p> <p>CUL-3: In the event that Native American cultural resources are discovered during project development/construction, all work in the immediate vicinity of the find shall cease and a qualified archaeologist meeting Secretary of Interior standards shall be hired to assess the find. Work on the overall project may continue during this assessment period.</p> <p>CUL-4: If significant Native American cultural resources are discovered, for which a Treatment Plan must be prepared, the developer or his archaeologist</p>	

**Table 2.1
General Plan 2030**

Summary of Project Impacts, Mitigation Measures and Status After Mitigation

Potential Impacts	Mitigation Measures	Status After Mitigation
	shall contact the Morongo Band of Mission Indians ("Tribe"). If requested by the Tribe, the developer or the project archaeologist shall, in good faith, consult on the discovery and its disposition (e.g. avoidance, preservation, return of artifacts to tribe, etc.)	
GEOLOGY AND SOILS (See Section 5.6)		
Potential impacts related to earthquake faults and seismic-related shaking or ground failure; substantial soil erosion or the loss of topsoil; on-or off-site landslide, lateral spreading, subsidence, liquefaction or collapse; expansive soils; soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems; cumulative impacts related to geology and soils.	None required. Potential impacts are expected to be fully mitigated through proposed General Plan 2030 provisions and existing City policies.	Less than significant.
HAZARDS AND HAZARDOUS MATERIAL (See Section 5.7)		
Potential impacts related to the routine transport, use, or disposal of hazardous materials; reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment; presence of hazardous materials substances, or waste within one-quarter mile of an existing or	Potential impacts are expected to be partially mitigated through proposed General Plan 2030 provisions and existing City policies; plus recommended mitigation measures listed below: HAZ-I: Prior to the issuance of any grading permits, the applicant shall submit and, when acceptable, the City shall approve a Phase I environmental site assessment conducted in accordance with American Society of Testing and	Less than significant.

**Table 2.1
General Plan 2030**

Summary of Project Impacts, Mitigation Measures and Status After Mitigation

Potential Impacts	Mitigation Measures	Status After Mitigation
<p>proposed school; location on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5; be located within an airport land use plan; be located within the vicinity of a private airstrip; impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; cumulative impacts related to hazards and hazardous materials</p>	<p>Materials' "ASTM Standards on Environmental Site Assessments for Commercial Real Estate" or such other standard as may be acceptable to the City Engineer. The applicant shall also provide an updated groundwater sampling program in compliance with City requirements. If further investigative or remedial actions are identified therein, all such actions and/or such alternative actions as may be approved by the City Engineer shall be implemented to the satisfaction of the City Engineer prior to the issuance of any grading permits.</p> <p>HAZ-2: Because reducing the amount of waste generated in the City is an effective mechanism for reducing the potential impact of these wastes on the public health and safety and the environment, and because source reduction and "green" legislation encourages the reduction, to the extent feasible, of hazardous waste, the City shall encourage and promote practices that will, in order of priority: (1) reduce the use of hazardous materials and the generation of hazardous wastes at their source; (2) recycle the remaining hazardous wastes for reuse; and (3) treat those wastes that cannot be reduced at the source or recycled. Only residuals from waste recycling and treatment will be land disposed.</p> <p>HAZ-3: The City shall ensure closure and/or removal of the non-regulated private airstrip prior to issuance of any grading or building permits in areas adjacent to or within the general flight path area of the private airstrip.</p>	
<p>HYDROLOGY AND WATER QUALITY (See Section 58)</p>		

**Table 2.1
General Plan 2030**

Summary of Project Impacts, Mitigation Measures and Status After Mitigation

Potential Impacts	Mitigation Measures	Status After Mitigation
<p>Potential impacts related to violation of water quality standards or waste discharge requirements; substantial depletion of groundwater; substantially alteration of the existing drainage pattern resulting in erosion; substantially alteration of the existing drainage pattern resulting in flooding; contribute to runoff water which would exceed the capacity of existing or planning stormwater drainage systems or provide substantial additional sources of polluted runoff; place housing within a 100-year flood hazard area; place within a 100-year flood hazard area structures which 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 or mudflow; cumulative impacts related to hydrology and water quality.</p>	<p>Potential impacts are expected to be partially mitigated through proposed General Plan 2030 provisions and existing City policies; plus recommended mitigation measures listed below:</p> <p>HWQ-1: All local or private project drainage facilities to be constructed shall be evaluated on an individual basis by the City Engineering Department. The Department shall also determine the amount of responsibility for costs of improvements by the developers for local or private project facilities on private property.</p> <p>HWQ-2: All regional or public drainage facilities to be constructed shall be evaluated on an individual basis by the City Engineering Department. The Department shall also determine the amount of responsibility for costs of improvements to be borne by project proponents, whether public and/or private entities.</p> <p>HWQ-3: The City Engineering Department shall update the 1992 Master Plan of Drainage to incorporate the grow projections and land use patterns per General Plan 2030.</p>	<p>Less than significant.</p>
<p>LAND USE AND PLANNING (See Section 5.9)</p>		
<p>Potential impacts related to the physical division of an established community; conflict with local and regional plans and the proposed West</p>	<p>Potential impacts are expected to be partially mitigated through proposed General Plan 2030 provisions and existing City policies; plus Mitigation Measures BIO-1 through BIO-7, listed above.</p>	<p>Less than significant.</p>

**Table 2.1
General Plan 2030**

Summary of Project Impacts, Mitigation Measures and Status After Mitigation

Potential Impacts	Mitigation Measures	Status After Mitigation
Mojave Plan; and cumulative land use and planning impacts.		
MINERAL RESOURCES (See Section 5.10)		
Potential impacts related to the loss of availability of a known mineral resource; 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.	Potential impacts are expected to be partially mitigated through proposed General Plan 2030 provisions; plus recommended mitigation measure listed below: MR-1: Prior to any development occurring along the Mojave River corridor in the Northern Expansion Area, the applicant shall submit for City Development Services Director review and approval a geologic study identifying potential mineral resources. Every attempt shall be made to preserve these resources in place.	Less than significant.
NOISE (See Section 5.11)		
Potential impacts related to exposure of persons to or generation of noise levels in excess of established standards; exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels; substantial permanent increase in ambient noise levels; substantial temporary or periodic increase in ambient noise levels; impacts related to an airport land use plan; impacts related to a	Potential impacts are expected to be partially mitigated through proposed General Plan 2030 provisions and existing City policies; plus Mitigation Measure HAZ-3, listed above. However no mitigation measures are feasible to fully mitigate impacts relative to permanent increases in ambient noise and cumulative impacts.	Significant and unavoidable.

**Table 2.1
General Plan 2030**

Summary of Project Impacts, Mitigation Measures and Status After Mitigation

Potential Impacts	Mitigation Measures	Status After Mitigation
private airstrip; cumulative noise impacts.		
POPULATION AND HOUSING (See Section 5.12)		
Potential impacts relative to substantial population growth in an area; displacement of substantial numbers of existing housing; displacement of substantial numbers of people.	Potential impacts are expected to be partially mitigated through proposed General Plan 2030 provisions and existing City policies; however no mitigation measures are feasible to fully mitigate impacts relative to substantial growth and cumulative impacts.	Significant and unavoidable.
PUBLIC SERVICES (See Section 5.13)		
Potential impacts related to substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered government facilities, including: Fire protection; Police protection; Schools; Parks; Other public facilities	<p>Potential impacts are expected to be partially mitigated through proposed General Plan 2030 provisions and existing City policies; plus recommended mitigation measures listed below:</p> <p>PS-1: The City shall ensure that the San Bernardino County Fire Department updates its North Desert Division plans to ensure facilities and staffing continue to be able to accommodate the growth projected for buildout of the General Plan 2030. The first update shall occur within one year of approval of the General Plan 2030 and encompass a minimum period of 5 years. This information shall be incorporated into the City contracts with the County Fire Department and into the City capital improvement program process.</p> <p>PS-2: The City shall ensure that the City of Victorville Police Department updates its facility, equipment and personnel plans to accommodate the growth</p>	Less than significant.

**Table 2.1
General Plan 2030**

Summary of Project Impacts, Mitigation Measures and Status After Mitigation

Potential Impacts	Mitigation Measures	Status After Mitigation
	<p>projected for buildout of the General Plan 2030. The first update shall occur within one year of approval of the General Plan 2030 and encompass a minimum period of 5 years. The plans shall be incorporated into City contracts with the County of San Bernardino Sheriff and into the City capital improvement program process.</p> <p>PS-3: The City shall work with the Victor Elementary School District, Adelanto School District, Hesperia School District and the Victor Valley Union High School District to update their school facilities master plans to accommodate the growth projected for buildout of the General Plan 2030. Based on these master plan directives, the City shall work with the school districts to locate and plan for adequate school sites.</p> <p>PS-4: The City shall update its master plan for Parks at least once every five years, beginning in 2010. The master plan shall be based on the most current City population and Total dwelling unit projections and consider the spatial need for recreational facilities throughout the City. The master plan shall be incorporated into the City capital improvement program process.</p> <p>PS-5: The City shall update its planning for libraries and community centers at least once every five years, beginning in 2010. The plans shall be based on the most current City population and total dwelling unit projections and consider the spatial need for libraries and community centers throughout the City. The plans shall be incorporated into the City capital improvement program process.</p>	

**Table 2.1
General Plan 2030**

Summary of Project Impacts, Mitigation Measures and Status After Mitigation

Potential Impacts	Mitigation Measures	Status After Mitigation
RECREATION (See Section 5.14)		
<p>Potential impacts related to the increased use of existing parks or other recreational facilities; inclusion of recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse effect on the environment; cumulative impacts relative to recreation.</p>	<p>Potential impacts are expected to be partially mitigated through proposed General Plan 2030 provisions and existing City policies; plus Mitigation Measures PS-4, listed above.</p>	<p>Less than significant.</p>
TRANSPORATION/TRAFFIC (See Section 5.15)		
<p>Potential impacts related to an increase in traffic, which is substantial in relation to the existing traffic load and capacity; exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency; result in a change in air traffic patterns that results in substantial safety risks; roadway design hazards; parking capacity; alternative transportation; cumulative traffic impacts.</p>	<p>Potential impacts are expected to be partially mitigated through proposed General Plan 2030 provisions and existing City policies; plus recommended mitigation measures listed below; however no mitigation measures are feasible to fully reduce impacts to relative to exceedences of established traffic level of service thresholds and cumulative impacts:</p> <p><u>Planning Mechanisms</u></p> <p>TR-1: The City shall develop a program designating Deficient Roadway Segments that cannot feasibly meet the LOS C level of service standard for roadway segments.</p> <p>TR-2: The City of Victorville shall study the circulation system on an ongoing basis to determine what feasible improvements can be made to achieve an</p>	<p>Significant and unavoidable.</p>

**Table 2.1
General Plan 2030**

Summary of Project Impacts, Mitigation Measures and Status After Mitigation

Potential Impacts	Mitigation Measures	Status After Mitigation
	<p>acceptable level of service for segments and intersections. If an acceptable level of service cannot be achieved, feasible improvements will be identified that will improve, or mitigate the degradation of the level of service. The feasible improvements will be incorporated into the City's Capital Improvement Program.</p> <p>TR-3: The City shall incorporate the adopted Circulation Element and applicable General Plan Update goals into the SCLA Specific Plan as needed.</p> <p>TR-4: The City shall cooperate with San Bernardino Association of Governments (SCAG), the San Bernardino Association Governments (SANBAG), and the California Department of Transportation (Caltrans) to incorporate the adopted Circulation Element and applicable General Plan Update goals into the Interstate 15 Comprehensive Corridor Study when Alternative D or the Alternative C/E Hybrid is selected.</p> <p>TR-5: The City shall cooperate with California Department of Transportation (Caltrans) and the Federal Highway Administration to incorporate the adopted Circulation Element and applicable General Plan Update goals into the implementation plans for the proposed new interchange at Interstate 15 at La Mesa Road and Nisqualli Road.</p> <p>TR-6: The City shall cooperate with Caltrans, the San Bernardino Association Governments (SANBAG, and other agencies on the proposed realignment of US-395.</p>	

**Table 2.1
General Plan 2030**

Summary of Project Impacts, Mitigation Measures and Status After Mitigation

Potential Impacts	Mitigation Measures	Status After Mitigation
	<p>TR-7: The City shall cooperate with the Town of Apple Valley to incorporate the adopted Circulation Element and applicable General Plan Update goals into the implementation plans for the proposed High Desert Corridor project, and the Yucca Loma / Green Tree Blvd extension.</p> <p>TR-8: The City shall cooperate with the City of Hesperia to incorporate the adopted Circulation Element and applicable General Plan Update goals into the implementation plans for proposed interchange improvements on Interstate 15, including Eucalyptus Street, should that project be approved and funded.</p> <p>TR-9: The City shall cooperate with SANBAG to provide mitigation measures for existing and projected LOS deficiencies on the CMP network that are beyond the scope of the City of Victorville Circulation Element.</p> <p>TR-10: The City shall update its Capital Improvement Program every year to implement required roadway/intersection improvements.</p> <p>TR-11: The City shall coordinate and work with Victor Valley Transit Authority to expand service on the roadways expected to have substantial travel demands increases to connect existing and new trip generators.</p> <p>Funding Mechanisms</p> <p>TR-12: Applicants for development permits shall pay all applicable City of</p>	

**Table 2.1
General Plan 2030**

Summary of Project Impacts, Mitigation Measures and Status After Mitigation

Potential Impacts	Mitigation Measures	Status After Mitigation
	<p>Victorville traffic impact fees. Evidence of payment shall be provided to the Planning Department prior to issuance of a building permit.</p> <p>TR-13: Applicants for development permits with significant traffic impacts on the CMP system and on State and Federal Highways in the City of Victorville (i.e. pursuant to a certified CEQA/NEPA document) shall pay their fair share of mitigation improvements (if required) or construct improvements. Evidence of such payment (if required) shall be provided to the Planning Department prior to issuance of a building permit.</p>	
UTILITIES (Section 5.16)		
<p>Potential impacts related to exceedence of wastewater treatment requirements; 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; result in inadequate wastewater treatment capacity; require construction of new storm water drainage facilities or expansion of existing facilities; have sufficient water supplies; be served by a landfill with sufficient permitted capacity; comply with federal, state, and local statutes and regulations related to solid waste;</p>	<p>Potential impacts are expected to be partially mitigated through proposed General Plan 2030 provisions and existing City policies; plus Mitigation Measures HWQ-1 through HWQ-3, listed above.</p>	<p>Less than significant.</p>

**Table 2.1
General Plan 2030**

Summary of Project Impacts, Mitigation Measures and Status After Mitigation

Potential Impacts	Mitigation Measures	Status After Mitigation
cumulative impacts relative to utilities.		
ENERGY (Section 8.0)		
Potential impacts related to implementation of a Green Building Code.	<p>Potential impacts are expected to be partially mitigated through proposed General Plan 2030 provisions and existing City policies; plus recommended mitigation measures below:</p> <p>EC-1: The City shall inform applicants of the new Green Building Code standards and assist applicants to incorporate them into the planning review and approval process.</p> <p>EC-2: The City shall ensure that all new public facilities shall comply with relevant requirements of Chapter 5: Energy Efficiency of the Green Building Code. When existing equipment is replaced, it shall comply with any relevant requirements of Chapter 5 of the Green Building Code.</p>	Less than significant.

PROJECT DESCRIPTION

This Chapter describes the general features of the Project, including: location, project background, project components, General Plan goals, General Plan Land Use Plan and Circulation Plan, and public actions and approvals required.

3.1 PROJECT LOCATION

The City of Victorville is located in southwestern San Bernardino County, in the geographic subregion of the southwestern Mojave Desert known as the Victor Valley and commonly referred to as the "High Desert" due to its approximate elevation of 2,900 feet above sea level. The Victor Valley is separated from other urbanized areas in Southern California by the San Bernardino and San Gabriel mountains. The City's regional location is shown in Figure 3-1, Victorville General Plan Regional Location Map. Although the City is separated from larger urbanized areas of Southern California, it is easily accessible via Interstate 15, U.S. Highway 395, California State Highway 18 and historic Route 66.



Figure 3-1, Victorville General Plan Regional Location Map

3.2 PROJECT BACKGROUND

During the forty six years that it has been a City, Victorville has grown from a community of 8,110 residents and an area of 9.7 square miles to a community of 102,538¹, residents and an area of 74.16 square miles.

Incorporated as a general law city in September 21, 1962, Victorville began its transition to a modern day community in about 1885, known then as the “Town of Victor” after Jacob Nash Victor, a construction superintendent for the California Southern Railroad (Santa Fe Railroad). Victor established the town around the original railroad station, which was built approximately one mile northwest of the narrows of the Mojave River. With its abundance of potable water and rich bottom lands, new town residents established farms and agricultural production prospered. By 1901, the town was renamed “Victorville”, and large deposits of limestone and granite brought cement manufacturing to surrounding areas.

During World War II, Victorville Army Airfield, later renamed George Air Force Base, was constructed. At its peak capacity, the base employed approximately 6,000 civilian and military personnel. The base was deactivated on December 15, 1992; and on July 21, 1993, it was annexed into the City and has since been developed as the Southern California Logistics Airport (SCLA). With this change, Victorville’s economy began its transition from one largely based on defense spending, retirees and people who preferred the Mojave Desert environment to the major commercial center for the Victor Valley.

Today, Victorville is one of Southern California’s fastest growing communities. As of May 2007, Victorville’s population is estimated to be 102,538, making it the 246th most populated city in the United States. Most of this growth has occurred during the past two decades. From 1990-2007, Victorville’s population increased by 61,864 persons, 152%, over its 1990 population of 40,674.

Impetus for this growth is the fact that the Inland Empire’s valley areas are becoming built out and the High Desert is the next place with large tracts of modestly priced land. Victorville’s growth is further driven by its ready accessibility via Interstate 15, U.S. Highway 395, and California State Highway 18. SCLA, located in the northwest quadrant of the City, also facilitates the City’s growth. SCLA is currently used for airplane maintenance and other airport related and

¹ May 1, 2007 population estimate from the State of [California](#) Department of Finance.

industrial activities. Current City plans anticipate the continued expansion and transition of SCLA as a major air cargo and logistic center.

Future Victorville development is expected to expand into its northeastern quadrant, specifically in areas adjacent to the Interstate 15. Development in this quadrant is expected to include a mix of tourist commercial, regional commercial, industrial, residential and open space uses.

Faced with this significant growth, the City of Victorville began its General Plan update process in 2004. Since that time, the City has gained input from the community through a series of workshops. This input played an important role in understanding the City's existing character and the issues that will shape its future. Focus of the workshops included:

- What kind of city should Victorville be in the year 2030?
- What types and what densities of land uses should occur?
- What types of roads are needed and where should they go?
- What types of community facilities are needed?
- What types of community amenities are desired?

In addition to the workshops, the City has been carefully examining properties surrounding its boundaries to identify appropriate areas of expansion for its Sphere of Influence. To help understand and prepare for its growth, the City has undertaken preparation of numerous technical studies, including a city-wide traffic model, water and wastewater master plan, drainage master plan, sewer master plan, fiscal impact report, commercial zoning market analysis, and an economic issues and strategy report.

3.2 STATEMENT OF OBJECTIVES

The General Plan 2030 seeks to achieve the objectives identified through the community workshops and clarified through the various technical reports prepared in support of the project. These objectives are as follows:

- Update the General Plan to comply with applicable federal, state and regional policies.
- Prepare a General Plan that responds to Victorville's current planning context and its vision for future balanced growth.

- Promote logical and orderly development in already urbanized and currently undeveloped areas of the Victorville Planning Area.
- Establish community service priorities and promote cohesive master planning of infrastructure.
- Link land use, transportation, and infrastructure, and ensure that General Plan policies are mutually supportive, internally consistent.
- Preparing a General Plan that is easy to use.

3.3 PROJECT COMPONENTS

The Project consists of five primary components:

1. General Plan 2030 which would comprehensively update and supersede the City's current General Plan, with the most significant change to land use being the provision of larger commercial corners at major intersections, and a circulation plan to implement it; and
2. Rezoning of the City's existing northern sphere area to include 2,049 acres of land adjacent to the existing sphere. All of the proposed area is to be zoned Specific Plan upon annexation into the City; and
3. Extension of the City Sphere of Influence to include the Northern Expansion Area of approximately 30,000+ acres; and
4. Expansion of the Victorville Water District boundary to be coterminous with the northern sphere rezoning; extension of the Victorville Water District Sphere of Influence to be coterminous with the proposed City Sphere of Influence; and expansion of the Victorville Water District boundary within city limits south of Spring Valley Lake; and
5. Deletion of the Midtown and Southdown Industrial Specific Plans.

3.3.1 General Plan Contents

The General Plan 2030 would update and supersede the City's current General Plan, which was adopted in July 1997 and subsequently amended.

A General Plan is a community's planning "constitution" and is the single most important policy document in guiding land use and development decisions within the City. California law requires every general plan to cover, at minimum, seven major land use and development issues typical to most California cities and counties. These seven issues – land use, circulation, housing, conservation, open

space, noise and public safety – are addressed in different chapters of a general plan commonly known as “elements.”

Victorville’s General Plan 2030 will distill the City’s vision for the future into specific goals, policies and implementation measures that will guide the physical development of the City through the year 2030. The General Plan will cover the seven required issues in the following six elements:

1. Land Use Element
2. Circulation Element
3. Housing Element
4. Noise Element
5. Safety Element
6. Resource Element (incorporating two of the mandated elements, Open Space and Conservation).

Horizon year assumed by each element will be 2030, with the exception of the Housing Element, which has a planning horizon year of 2014 as established by the state of California Department of Housing and Urban Development.

Major components of each element will be as follows:

Land Use Element

As required by Section 65302(a) of the state Government Code, the Land Use Element will describe the proposed general distribution, location and extent of land uses within the City of Victorville, as well as their relationship to the all elements of the General Plan. Specifically, the Land Use Element will address the following issues:

1. Distribution of housing, business, and industry
2. Distribution of open space
3. Distribution of mineral resources and provisions for their continued availability
4. Distribution of recreation facilities and opportunities

5. Location of educational facilities
6. Location of public buildings and grounds
7. Location of future solid and liquid waste facilities
8. Identification of areas subject to flooding
9. Other categories of public and private uses of land.

Circulation Element

As specified in California Government Code (Section 65302(b)), a Circulation Element is required to identify the general location and extent of existing and proposed major thoroughfares, transportation routes, terminals, airports and other local public utilities and facilities in the City's Planning Area. The Circulation Element is intended to provide guidance to decisions that expand and improve the transportation system for local and regional trips, and to accommodate the diverse transportation needs of the residents of the Planning Area. The element will specify the City's policies for coordination of transportation infrastructure planning with planning of public utilities and facilities, where joint benefits can be achieved.

Housing Element

The Housing Element addresses the statewide goal of providing adequate housing for families and individuals of all economic levels. As specified in Section 65580(c) of the Government Code, the Housing Element will accomplish the following tasks:

1. Identify and analyze the current and projected housing needs of all economic segments of the community.
2. Evaluate the current and potential constraints to meeting those needs, including identifying the constraints that are due to the marketplace and those imposed by the government.
3. Inventory and assess the availability of land suitable for residential use.
4. Establish a series of goals, objectives, policies and programs aimed at responding to the identified housing needs, the market and governmental constraints, and the housing opportunities.

Noise Element

The Noise Element, governed by Section 65302 of the Government Code, is to be used as a guide for establishing a pattern of land uses that minimizes the exposure of community residents to excessive noise. Sources of noise to be considered in the element include:

1. Highways and freeways.
2. Primary arterials and major local streets.
3. Passenger and freight on-line railroad operations and ground rapid transit systems.
4. Commercial, general aviation, heliport, helistop, and military airport operations, aircraft overflights, jet engine test stands, and all other ground facilities and maintenance functions related to airport operation.
5. Local industrial plants, including, but not limited to, railroad classification yards.
6. Other ground stationary noise sources, including, but not limited to, military installations, identified by local agencies as contributing to the community noise environment.

Safety Element

The Safety Element is mandated by State Government Code (Section 65302(g)). It is intended to identify and, whenever possible, reduce the impact of natural and man-made hazards which may threaten the health, safety, and property of the residents living and working in the Victorville Planning Area. It emphasizes hazard reduction and accident prevention and responses for man-made hazards. In addition, the element emphasizes the importance of reducing risk, disaster prevention, and preparedness.

Natural hazards to be addressed in the Safety Element include:

1. Earthquakes and related ground failure hazards
2. Subsidence
3. Flooding

4. Slope Hazards
5. Release of Hazardous Materials
6. Aircraft Mishap
7. Wildland and Urban Fires
5. Emergency Planning (including Hazard Identification and Risk Assessment, Hazard Mitigation, and Emergency Response and Action)
6. Fire, Police, and Medical Services.

Resource Element

The Resource Element functions as a guide to the protection, use and maintenance of natural resources, open spaces and cultural resources within the City. The element will encompass the state mandated topics of the Conservation Element (governed by Section 65302(d) of the Government Code) and the Open Space Element (governed by Section 65302(e) of the Government Code). Accordingly, the Resources Element will be divided into two main components:

1. The Conservation Plan which addresses water, geologic resources, soils, air quality, and solid waste management; and
2. The Open Space Plan which addresses water courses and lakes, outdoor recreational areas, open space for public health and safety, biological, paleontological/archaeological, and cultural/historical resources.

3.3.2 Prezoning of the Northern Sphere Of Influence

The Project also includes the prezoning of the City Sphere of Influence in the North Mojave Planning Area to become "Specific Plan" upon annexation into the City. The City has been working on a Specific Plan for the area to the south, which is within city limits, but which includes the existing sphere of influence, in addition to 2,049 acres immediately adjacent to the sphere. It is the intent of the City to begin an application to the Local Agency Formation Commission shortly after completion of the General Plan Update for the proposed annexation. Figure 3-2, Proposed Northern Sphere Prezoning Annexation Map, graphically depicts the proposed rezoning.

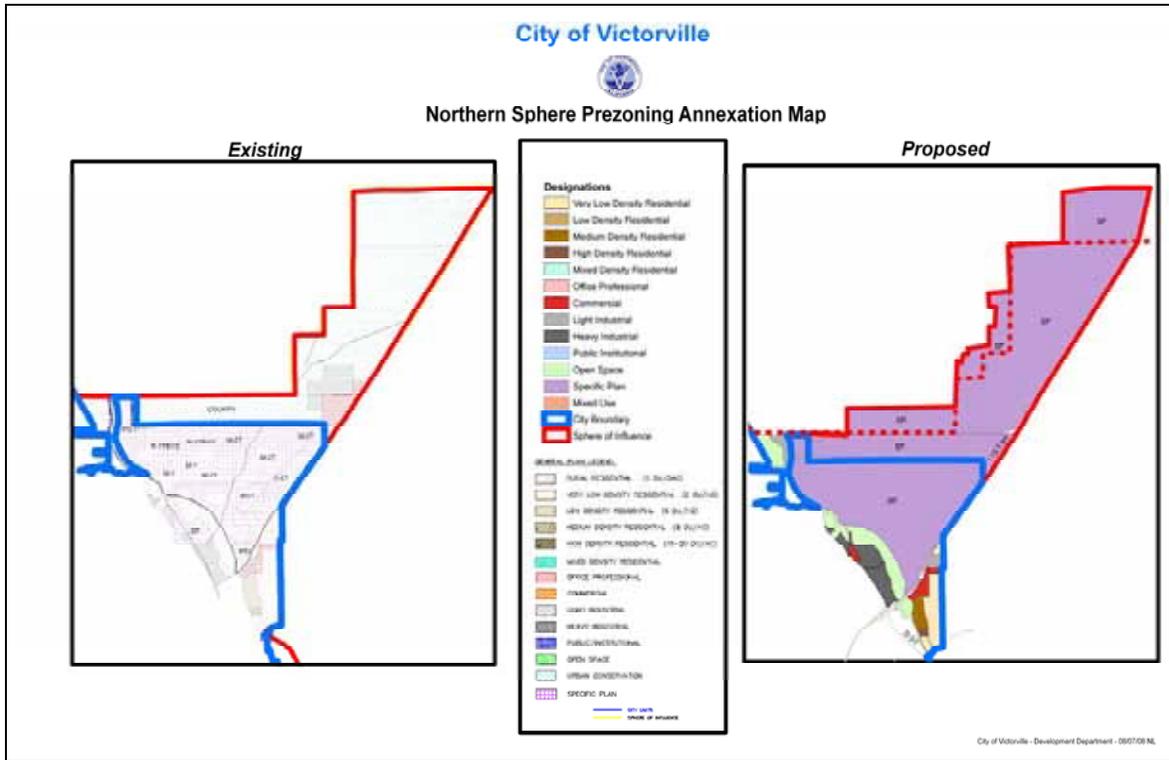


Figure 3-2, Proposed Northern Sphere Rezoning Annexation Map

3.3.3 Northern Expansion Sphere of Influence

The Project also includes the extension of the City Sphere of Influence to accommodate the reasonable extension of the City’s boundaries.

The City of Victorville, inclusive of its existing Sphere of Influence (SOI) totals 97.35 square miles, consisting of 74 square miles located within the City limits and the remainder in the unincorporated area. The General Plan 2030 recommends inclusion of the Northern Expansion Area into the City SOI. This expansion area would extend the City’s northern SOI boundary to include an additional 37,000± acres, of which about 20,000 acres are developable and the remainder is open space. The boundaries were chosen as they are coterminous with the City of Barstow sphere on the northeastern portion, and the Helendale Community Services District on the northwest. This SOI expansion is recommended to promote logical and orderly development, to allow a single multipurpose agency, the City, to establish community service priorities, and to promote cohesive master planning of infrastructure extension not only in the SOI expansion area but also in the City and its existing SOI. This expansion has been requested of the Local Agency Formation Commission and is identified as case number LAFCO 3082.

Figure 3-3, Proposed Victorville Northern Expansion Area, graphically depicts the area proposed for SOI expansion.

With the northern expansion, the City boundaries, inclusive of SOI would increase from about

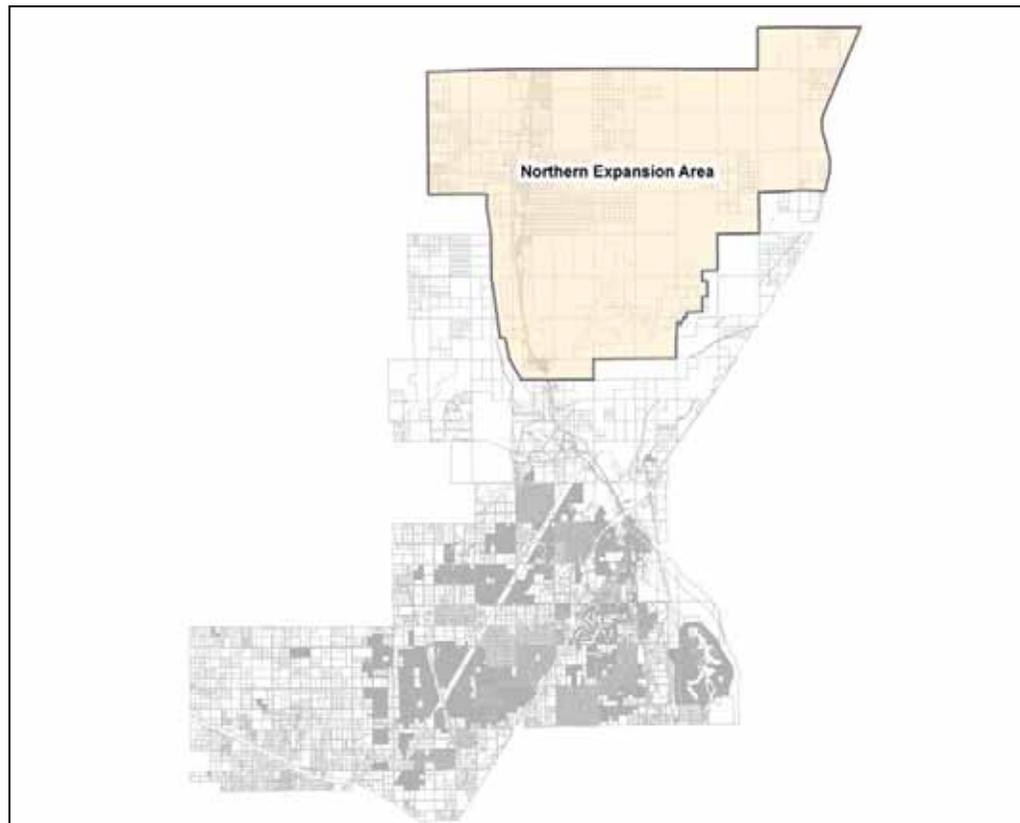


Figure 3-3, Proposed Victorville Northern Expansion Area

3.3.4 Victorville Water District Expansions

The Project also includes the extension of the Victorville Water District boundary to be coterminous with the Rezoning area discussed in 3.3.2. In addition, a proposal to expand the sphere of influence is included within LAFCO 3082 to be coterminous with the proposed City Sphere of Influence. In addition, an extension of the boundary is also proposed in the area south of Spring Valley Lake and north of Bear Valley Road. This area is currently within City limits, however, it is served by Community Service Area 64 and there is concern about sufficient water pressure to meet fire flow requirements for future development. The proposed sphere expansion would be included with LAFCO 3082 and it is the intent of the City to begin an application to the Local Agency Formation Commission shortly after

completion of the General Plan Update for the boundary extensions. Figure 3-4, Proposed Victorville Water District Sphere Expansion Area Map , graphically depicts the area proposed for Water District SOI expansion.



Victorville Water District Boundaries

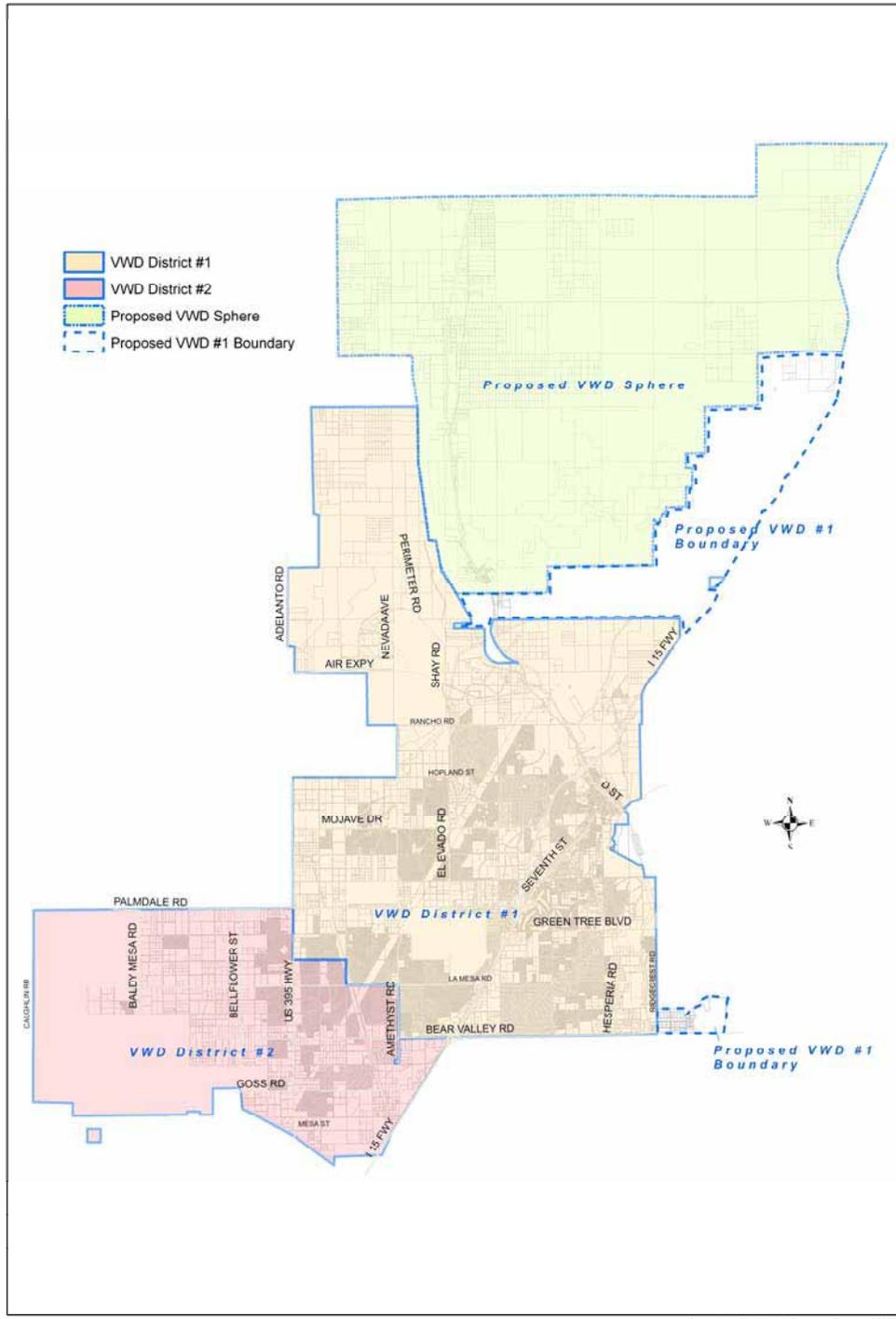


Figure 3-4, Proposed Water District Sphere Expansion Boundary Map

3.3.5 Deletion of the Midtown and Southdown Industrial Specific Plans

The proposed General Plan 2030 would delete the Midtown Specific Plan; however, the development plan component of the Specific Plan would remain in place. The land would be designated in a similar commercial manner as the Specific Plan. This Specific Plan was misguided from the beginning when it was discovered that half of the area proposed in the plan had been previously zoned by initiative.² In addition, previous deletions from the plan have resulted in only 40 acres remaining in the plan.

The proposed General Plan 2030 also would delete the Southdown Industrial Specific Plan boundaries and incorporate it into North Mojave Specific Plan Area, which would allow for a mix of industrial, commercial and residential land uses. The majority of the deleted Specific Plan would be included within the new Mojave Specific Plan; however, several parcels on the west side of the Mojave River will be designated Industrial and Commercial consistent with their designations under the Southdown Industrial Specific Plan.

3.4 GENERAL PLAN 2030 GOALS

Each of the six Elements of the proposed General Plan 2030 identifies goals for Victorville's future. These goals are presented below according to Element:

Land Use Element

GOAL #1: Balanced Land Uses – Provide for a Balanced Community with Residential, Commercial and Industrial Development.

GOAL #2: Economic Development – Encourage a Diversified Economic Base.

GOAL #3: Ample City Services – Ensure Provision of Adequate City Services and Infrastructure.

² In 1985, voters approved initiative zoning of R-1, Single Family Residential over approximately 1,500 acres which would later include the northern portion of land from the Midtown Specific Plan. Then, in 1986, voters approved Measure R with more specific zoning for the northern portion of what would be applied for with the Midtown Specific Plan.

GOAL #4: Beautify Victorville – Provide for an Aesthetically Pleasing Community.

Circulation Element

GOAL #1: Good Mobility – Provide a Safe, Efficient Transportation System that Enhances Mobility for Local Residents and Businesses, and Facilitates Regional Travel for Automobiles and Trucks.

GOAL #2: Efficient Multi-Modal Transportation Network – Meet Diverse Transportation Needs of Existing and Future Residents and Businesses in the Planning Area through Convenient, Safe, Multi-Modal Means.

GOAL #3: Adequate Infrastructure – Develop and Maintain Infrastructure that Supports the Transportation and Circulation Needs of the Community in a Cost-Effective and Environmentally Sensitive Manner.

Housing Element

GOAL #1: Housing Production and Housing Assistance – Encourage Provision of a Wide Range of Housing by Location, Type of Unit, and Price to Meet the Existing and Future Housing Needs In Victorville.

GOAL #2: Housing Production and Housing Assistance – Encourage the Proper Utilization of the Undeveloped Residential Areas of the City.

GOAL #3: Housing Production and Housing Assistance – Encourage Changes in State Housing Law to Accurately Reflect Community Housing Needs.

GOAL #4: Maintenance of Existing Housing Stock – Encourage Maintenance and Preservation of the Existing Housing Stock.

GOAL #5: Equal Opportunity Needs Housing – Provide Housing for All Persons Regardless of Race, Religion, Sex, Marital Status, Ancestry, National Origin, or Color.

Noise Element

GOAL #1: Noise Sensitivity – Identify significant noise sources that could adversely affect community.

GOAL #2: Noise Control – Manage the affects of noise emissions to help ensure reduction of adverse affects on the community.

Safety Element

GOAL #1: Protection from Hazards – Protect the Community Against Natural and Man-Made Hazards.

GOAL #2: Protection of Public Health and Safety – Integrate Public Health and Safety Issues into Planning and Development Policies.

Resources Element

GOAL #1: Sufficient, Safe Water Supply – Maintain Adequate Water Supply Resources and Water Delivery System to Support the Implementation of the City’s Land Use Policies and Fire Protection Standards, and to Meet Essential Needs during Emergencies and Severe Drought Conditions.

GOAL #2: Sufficient Park Land – Provide Sufficient Local, Community and Regional Park Land to Meet Current and Future Outdoor Recreation Needs of the Planning Area.

GOAL #3: Protection from Natural Hazards – Protect The Community From Flooding And Geologic Hazards.

GOAL #4: Conservation of Important Habitat – Preserve Land Containing Native Habitat that Sustains Rare, Threatened or Endangered Plants and Wildlife Species.

GOAL #5: Preservation of Important Cultural Resources - Protect Identified Archaeological, Paleontological Resources and Historic Resources within the Planning Area.

GOAL #6: Good Air Quality – Promote Clear Air with Low Pollutant Concentration that Does Not Adversely Affect Respiratory Health.

GOAL #7: Energy Conservation – Promote Energy Sustainability by Developing Alternative Power Supplies and Reducing Energy Use

3.5 GENERAL PLAN 2030 LAND USE AND CIRCULATION PLANS

While all Elements of the General Plan are equally important, the Land Use Plan of the Land Use Element is often the core around which all the General Plan elements develop. In concert with the Land Use Plan, the Circulation Plan provides the network of roads to support existing and future land uses. This section provides an overview of the primary characteristics of the Land Use Plan and Circulation Plan of General Plan 2030.

3.5.1 Land Use Plan

The Land Use Plan of the Land Use Element of General Plan 2030 reflects graphically the location and size of designated land uses. Figure 3-5, Draft General Plan Land Use Map, presents the proposed City of Victorville General Plan Land Use Plan. Boundaries of the Map include both the existing City boundaries, and existing and proposed SOI, inclusive of the Northern Expansion Area. These boundaries define the Planning Area addressed by the General Plan 2030 and this environmental document.

City of Victorville
Draft Proposed General Plan
Land Use Policy

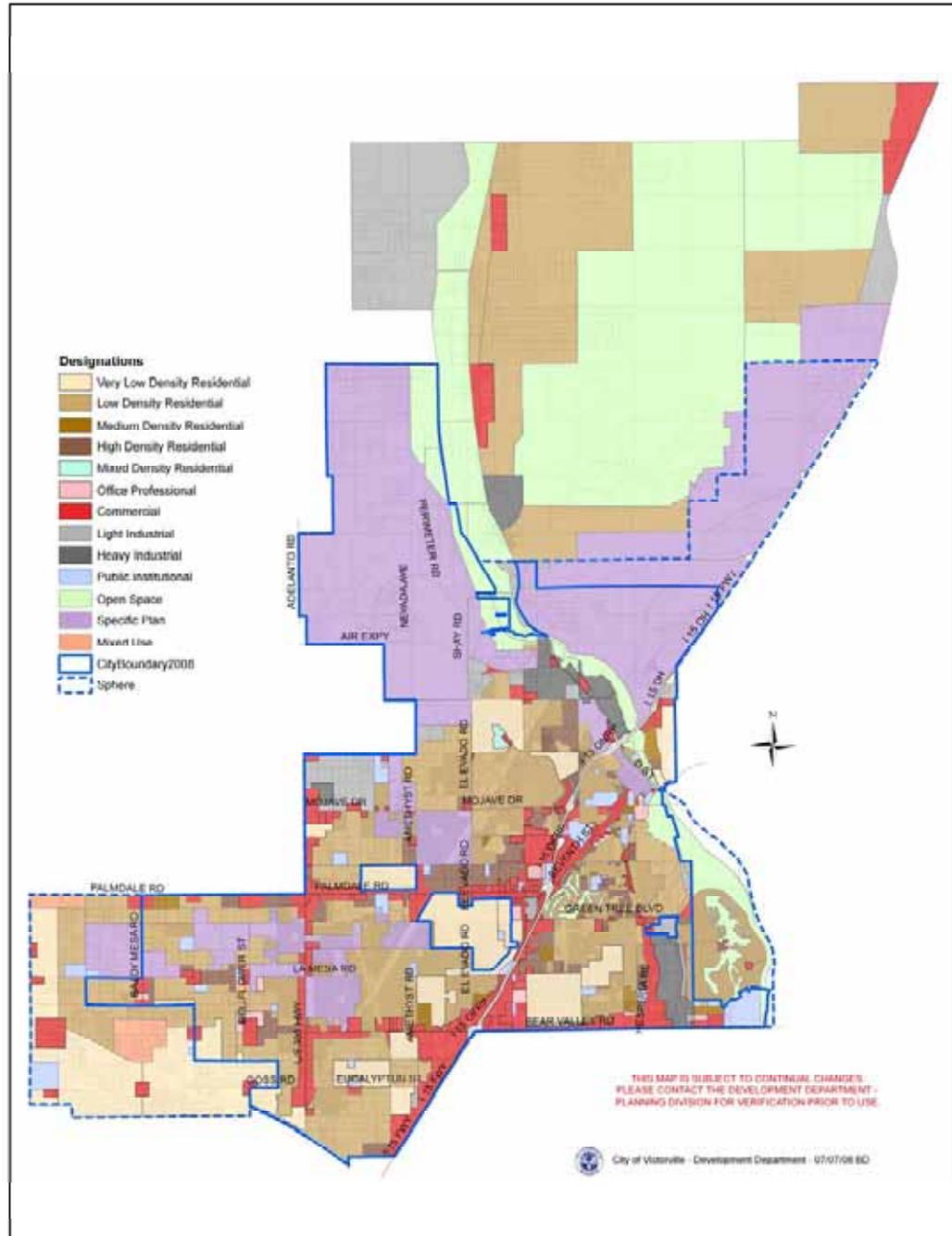


Figure 3-5 Proposed General Plan Land Use

Permitted Land Uses

Physical development in the City of Victorville is classified according to land use type such as residential, mixed use, commercial, or industrial. Each land use designation depicted in the Land Use Plan is defined in Table 3-1 in terms of permissible uses and intensity of physical development.

Table 3-1		
GENERAL PLAN LAND USE MAP LAND USE DESIGNATIONS		
BY DEFINITION AND DEVELOPMENT STANDARDS		
Designation	Definition	Development Standards
RESIDENTIAL [1]		
Very Low Residential (VLR)	This category of residential land use is characterized by single-family detached homes located on lots with a minimum area of one half acre which allows for a maximum density of two dwelling unit per acre.	2 du/ac*; maximum height of a principal building is 30 feet and 25 feet for an accessory; maximum lot coverage is 40%
Low Density Residential (LDR)	This residential land use category is characterized by single-family detached residential development.	5 du/ac; maximum height of a principal building is 30 feet and 20 feet for an accessory; maximum lot coverage is 40%
Medium Density Residential (MEDR)	Residential development in this category is typified by multi-family attached townhome units or garden type multifamily development.	8-12 du/ac; maximum height of a principal building is 30 feet and 20 feet for an accessory; maximum lot coverage is 40%
High Density Residential (HDR)	Residential development in the High Density Residential land use category corresponds to multiple family development characterized by apartments and condominiums.	12-20 du/ac; maximum height of principal building is 35 feet and 25 feet for an accessory; maximum lot coverage is 40%
Mixed Density Residential (MDR)	This Mixed Density Residential land use category is intended to facilitate single-family infill development in the event that extraordinary developmental constraints, such as a lack of required sewer infrastructure, make the continued development of the permitted high-density uses impractical or infeasible. Residential development in the Mixed Density Residential land use category ranges from single-family detached units to multi-family attached units, such as apartments. The MDR (Mixed Density Residential) zone district	1-15 du/ac for infill; maximum height is 35 feet; maximum lot coverage is 40%

Table 3-1

**GENERAL PLAN LAND USE MAP LAND USE DESIGNATIONS
BY DEFINITION AND DEVELOPMENT STANDARDS**

Designation	Definition	Development Standards
	corresponds to this General Plan land use designation.	
MIXED USE [2]		
Mixed-Use High Density Residential (MU)	This Mixed-Use High Density Residential land use category is intended to facilitate well integrated multi-family and commercial developments, located adjacent to retail development. Permitted mix of uses multi-family residential up to a density of 60 du/ac; retail, office, civic, open space and other similar uses as defined through the PUD process.	Maximum density 60du/ac; maximum lot coverage is 50%; residential may occupy 50% of the site area; requires PUD with open space elements and pedestrian linkages. Maximum building height is 150 feet; except when within 500 feet of a residentially designated land use area, in which case maximum height is 35 feet.
COMMERCIAL		
Commercial (COM)	This Commercial district corresponds to a wide range of retail commercial, service commercial, and office commercial activities.	Maximum lot coverage is 40% - 60%. Maximum height 120 feet; except when within 500 feet of a residentially designated land use area, in which case maximum height is 35 feet.
Office Professional (OP)	The Office Professional district is established to provide for the location of offices for professional services and for business activities which involve a relatively low volume of direct consumer contact and to regulate such development. Limited retail and assembly that supports office/professional uses is permitted	Maximum site coverage is 50% of the area of the property. Maximum building height is 150 feet; except when within 500 feet of a residentially designated land use area, in which case maximum height is 35 feet.
INDUSTRIAL		
Light Industrial (LI)	This category of land use is characterized by industrial development either located in industrial and/or business parks or in mixed-use areas. The main feature of industrial activities in this category is that they do not require any significant site or structure requirements that are so specialized that would limit future use of the structures and/or site by another industrial activity. There are two zone	The maximum development density for the IPD zone is governed by lot coverage requirements which permit structures to cover up to 60% of the total site area. The M-1 Zone District does not have a maximum lot coverage. The

Table 3-1

GENERAL PLAN LAND USE MAP LAND USE DESIGNATIONS

BY DEFINITION AND DEVELOPMENT STANDARDS

Designation	Definition	Development Standards
	districts that implement the Light Industrial land use designation including the I.P.D. zone (Industrial Park District), and M-1 zone (Light Industrial).	maximum building height within this land use district is 50 feet; except when within 250 feet of a residentially designated land use area, in which case maximum height is 35 feet.
Heavy Industrial (HI)	The Heavy Industrial land use category refers to industrial and manufacturing uses that are more specialized in nature and require special consideration in terms of use of the property as well as impacts on adjacent properties.	There is no maximum lot coverage. The maximum building height within this land use district is 50 feet; except when within 250 feet of a residentially designated land use area, in which case maximum height is 35 feet.

PUBLIC, INSTITUTIONAL AND OPEN SPACE

Public/Institutional (P-I)	This General Plan land use designation refers to those land uses and activities that are predominately used for public purposes or owned or operated by a public entity. Activities within this category include city and county buildings, public and private schools, colleges, and public utilities and city yards.	The maximum lot coverage for development in this category is 40%. The maximum building height within this land use district is 50 feet; except when within 250 feet of a residentially designated land use area, in which case maximum height is 35 feet.
Open Space (OS)	The Open Space land use designation refers to: land that is to remain undeveloped due to severe development constraints, lake or river bodies and floodplains; and reserved public open space in parks and golf courses. The purpose of this district is to provide for the protection of the public health, safety and general welfare in those areas of the city which, under present conditions, are subject to periodic flooding and accompanying hazards and to conserve natural resources of benefit to the general public interest.	In the AE district, one single family dwelling is allowed on a five acre minimum lot.

SPECIFIC PLAN

Table 3-1

**GENERAL PLAN LAND USE MAP LAND USE DESIGNATIONS
BY DEFINITION AND DEVELOPMENT STANDARDS**

Designation	Definition	Development Standards
Specific Plan	The land use policy provides for a number of specific plans within the city. The specific plans identify the location, extent, and density of new development and also indicate specific development standards that are applicable.	All land use regulations and development standards shall be those as set forth in the adopted specific plan.

Notes:

[1] No institutional or commercial uses permitted in any residentially designated districts, including VLR, LDR, MEDR, HDR, MDR.

[2] No institutional uses permitted in the MU district.

Abbreviations:

* du/ac = dwelling unit per acre

Land Use Intensity

The type and amount of physical development that could occur in the City is governed by the General Plan 2030 Land Use Map and Table 3-1, General Plan Land Use Designations. Table 3-2, Land Use Acreage Designations by Acreage and Development Intensity – City Boundaries, projects the development intensity of the Land Use Plan. It estimates the maximum amount of dwelling units and employment square footage that could occur in the City’s currently incorporated boundaries.

Table 3-3, General Plan 2030 Land Use Acreage Designations by Acreage and Development Intensity – Existing Sphere, projects the development intensity of the Land Use Plan. It estimates both the maximum amount of dwelling units and employment square footage that could occur in the City existing sphere of influence.

Table 3-4, General Plan 2030 Land Use Acreage Designations by Acreage and Development Intensity – Proposed Sphere (Northern Expansion Area), projects the development intensity of the Land Use Plan. It estimates both the maximum amount of dwelling units and employment square footage that could occur in the proposed Northern Expansion Area.

Table 3-5, General Plan 2030 Land Use Acreage Designations by Acreage and Development Intensity – City Boundaries + Existing Sphere + Proposed Sphere (Northern Expansion Area), projects the development intensity of the Land Use Plan. It estimates both the maximum amount of dwelling units and employment square footage that could occur in the City, inclusive of both the City’s currently incorporated boundaries and SOI.

Table 3-2					
General Plan 2030 Land Use Acreage Designations by Acreage and Development Intensity					
CITY BOUNDARIES					
	Acres	Square Feet	Total Dwelling Units	Single Family Units	Multi-family Units
Very Low Density Residential	3,280		3,071	3,071	
Low Density Residential	13,967		26,151	26,151	
Medium Density Residential	525		2,212		2,212
High Density Residential	2,242		15,742		15,742
Mixed Density Residential	78		183	183	
Mixed Use	47	32,927	715		715
Commercial	5,108	7,164,574			
Office Professional	352	470,541			
Light Industrial	1,235	2,078,061			
Heavy Industrial	1,228	2,067,592			
Open Space	2,211				
Public Institutional	964	1,081,239			
Specific Plan	15,556	4,835,282	36,674	19,509	17,165
TOTALS	46,791	17,730,215	84,746	48,913	35,833

Table 3-3 General Plan 2030 Land Use Acreage Designations by Acreage and Development Intensity EXISTING CITY SPHERE OF INFLUENCE					
	Acres	Square Feet	Total Dwelling Units	Single Family Units	Multi-family Units
Very Low Density Residential	4,786		4,624	4,624	
Low Density Residential	2,402		4,497	4,497	
Medium Density Residential	0				
High Density Residential	14		98		98
Mixed Density Residential	0				
Mixed Use	562	1,407,692	8,549		8,549
Commercial	400	1,999,853			
Office Professional	0	-			
Light Industrial	203	1,216,503			
Heavy Industrial	0	-			
Open Space	1,202				
Public Institutional	267	1,068,766			
Specific Plan	5,423	5,976,041	12,692	6,752	5,940
TOTALS	15,260	11,668,853	30,461	15,873	14,588

Table 3-4 General Plan 2030 Land Use Acreage Designations by Acreage and Development Intensity PROPOSED SPHERE OF INFLUENCE – NORTHERN EXPANSION AREA					
	Acres	Square Feet	Total Dwelling Units	Single Family Units	Multi-family Units
Very Low Density Residential					
Low Density Residential	10,604		20,884	20,884	

Table 3-4
General Plan 2030 Land Use Acreage Designations by Acreage and Development Intensity

PROPOSED SPHERE OF INFLUENCE – NORTHERN EXPANSION AREA

	Acres	Square Feet	Total Dwelling Units	Single Family Units	Multi-family Units
Medium Density Residential					
High Density Residential					
Mixed Density Residential					
Mixed Use					
Commercial	1,115	7,547,663			
Office Professional					
Light Industrial	3,800	22,827,655			
Heavy Industrial	343	2,062,951			
Open Space	18,935				
Public Institutional					
Specific Plan	2,049	1,190,256	2,528	1,345	1,183
TOTALS	36,847	33,628,525	23,411	22,228	1,183

Table 3-5
General Plan 2030 Land Use Acreage Designations by Acreage and Development Intensity

CITY BOUNDARIES + EXISTING SPHERE OF INFLUENCE + PROPOSED SPHERE OF INFLUENCE
(NORTHERN EXPANSION AREA)

	Acres	Square Feet	Total Dwelling Units	Single Family Units	Multi-family Units
Very Low Density Residential	8,152		7,695	7,695	
Low Density Residential	27,523		51,532	51,532	
Medium Density Residential	525		2,212		2,212

Table 3-5
General Plan 2030 Land Use Acreage Designations by Acreage and Development Intensity
CITY BOUNDARIES + EXISTING SPHERE OF INFLUENCE + PROPOSED SPHERE OF INFLUENCE
(NORTHERN EXPANSION AREA)

	Acres	Square Feet	Total Dwelling Units	Single Family Units	Multi-family Units
High Density Residential	2,256		15,840		15,840
Mixed Density Residential	78		183	183	
Mixed Use	609		9,264		9,264
Commercial	7,014	1,525,287			
Office Professional	352	35,135,280			
Light Industrial	5,234	1,680,504			
Heavy Industrial	1,572	31,465,805			
Open Space	22,536	-			
Public Institutional	1,230	4,930,332			
Specific Plan	22,172	24,435,162	51,891	27,604	24,287
TOTALS	99,253	99,172,369	138,617	87,014	51,603

Planning Sub-Areas

Given the wide range of existing and planned development, the diversity of the natural environment and the large area encompassed by the Victorville Planning Area, the proposed General Plan 2030 will divide the City and SOI areas into ten planning sub-areas. The boundaries of the ten planning sub-areas are delineated using topographic features, man-made features, and land use characteristics.

Primary purpose of the planning areas is to organize and track General Plan and Zoning land use data. Goals, policies and implementation measures of General Plan 2030 are intended to reach citywide, and generally are not planning area specific.

The planning sub-areas are indicated in Figure 3-6, City of Victorville Proposed Land Use Plan Planning Sub-Areas.

City of Victorville
Draft Proposed General Plan
Land Use Planning Areas

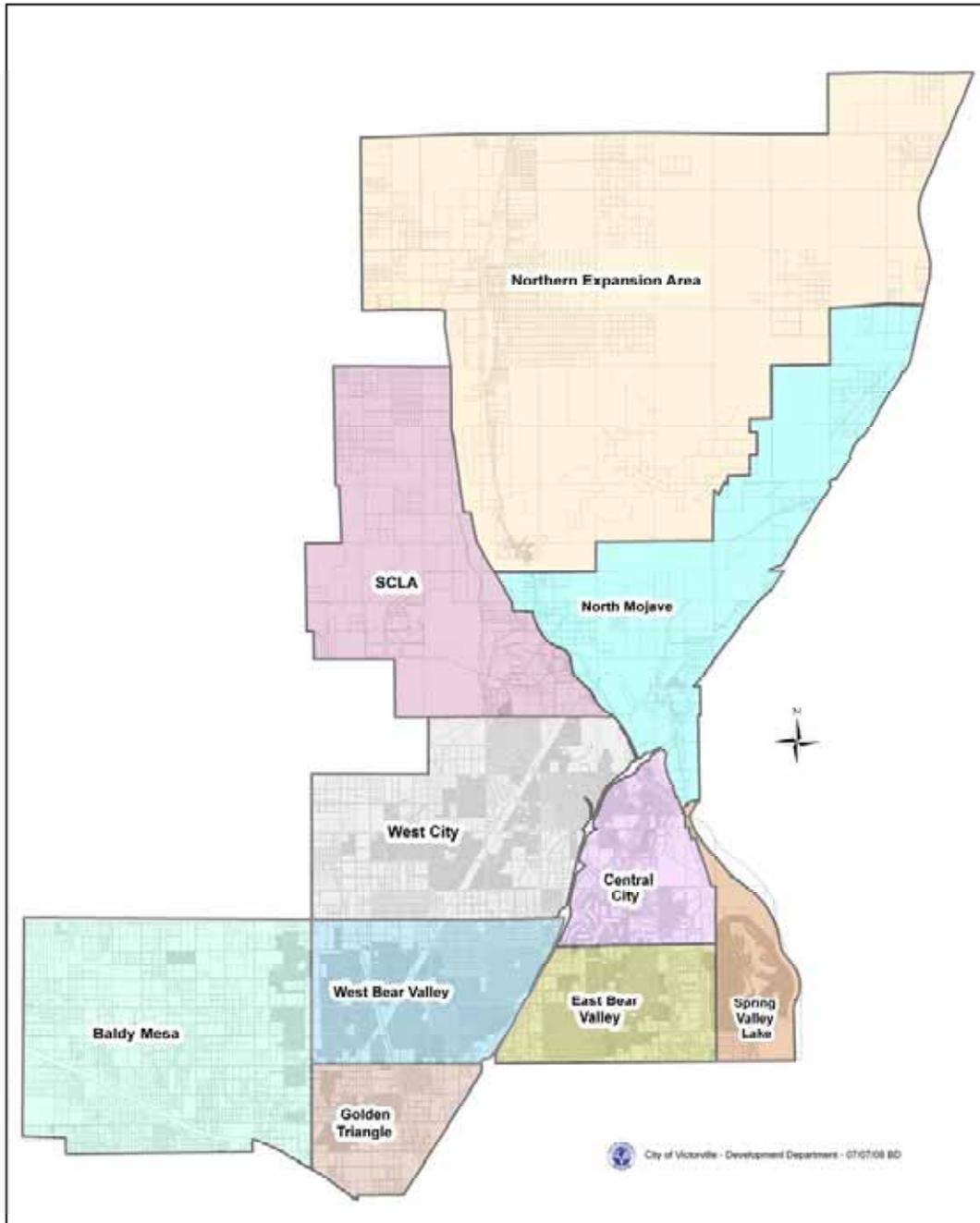


Figure 3-6 Proposed Land Use Plan Planning Sub-Areas

The planning areas are as follows:

Baldy Mesa Planning Area: Includes incorporated and unincorporated land west of U.S. Highway 395 and south of Palmdale Road. Boundaries and acreages by land use are depicted in Figure 3-7.

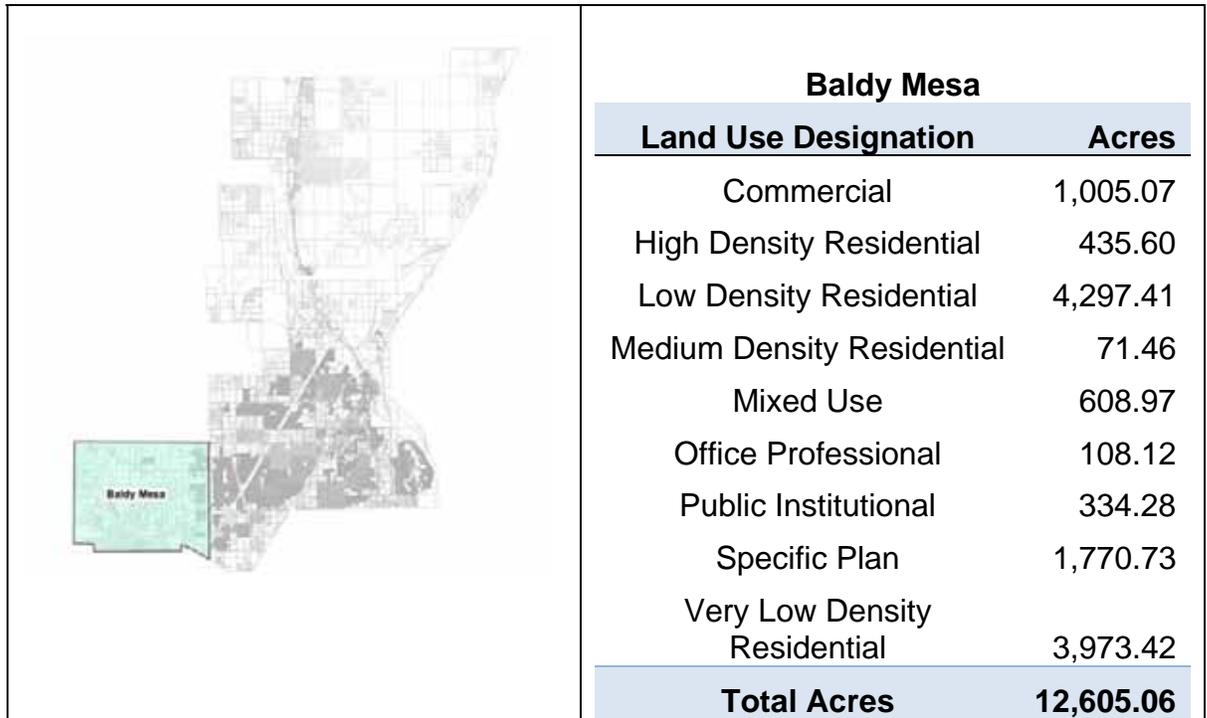


Figure 3-7. Baldy Mesa Planning Area

Central City Planning Area: Includes land east of Interstate 15, north of Yates Road/Green Tree Boulevard, west of the Atchison Topeka and Santa Fe railroad line, and south of the Mojave River. Boundaries and acreages by land use are depicted in Figure 3-8.

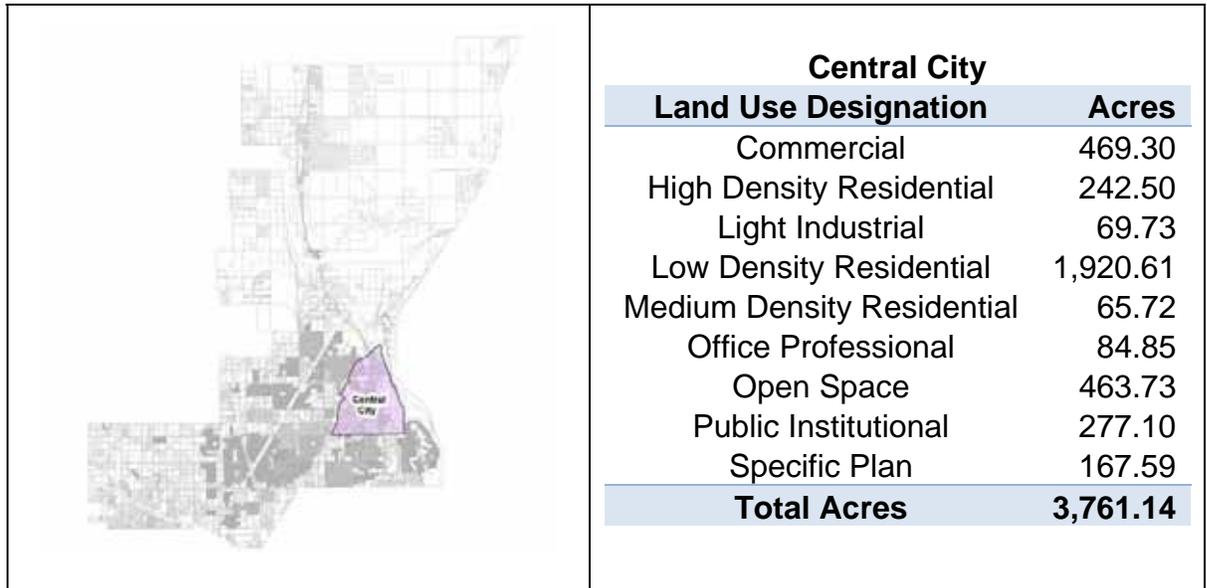


Figure 3-8. Central City Planning Area

East Bear Valley Planning Area: Includes land east of Interstate 15, north of Bear Valley Road, west of the Ridgecrest Road, and south of Yates Road/Green Tree Boulevard. Boundaries and acreages by land use are depicted in Figure 3-9.

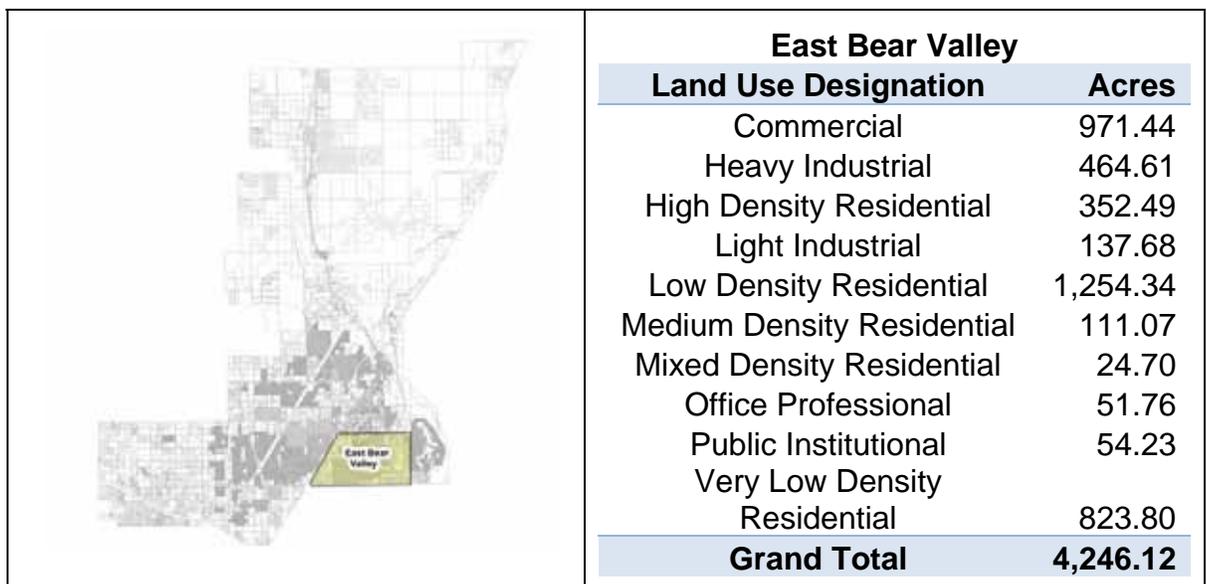


Figure 3-9. East Bear Valley Planning Area

Golden Triangle Planning Area: Includes land north of the California Aqueduct, south of Bear Valley Road, east of U.S. Highway 395, and west of Interstate 15. Boundaries and acreages by land use are depicted in Figure 3-10.

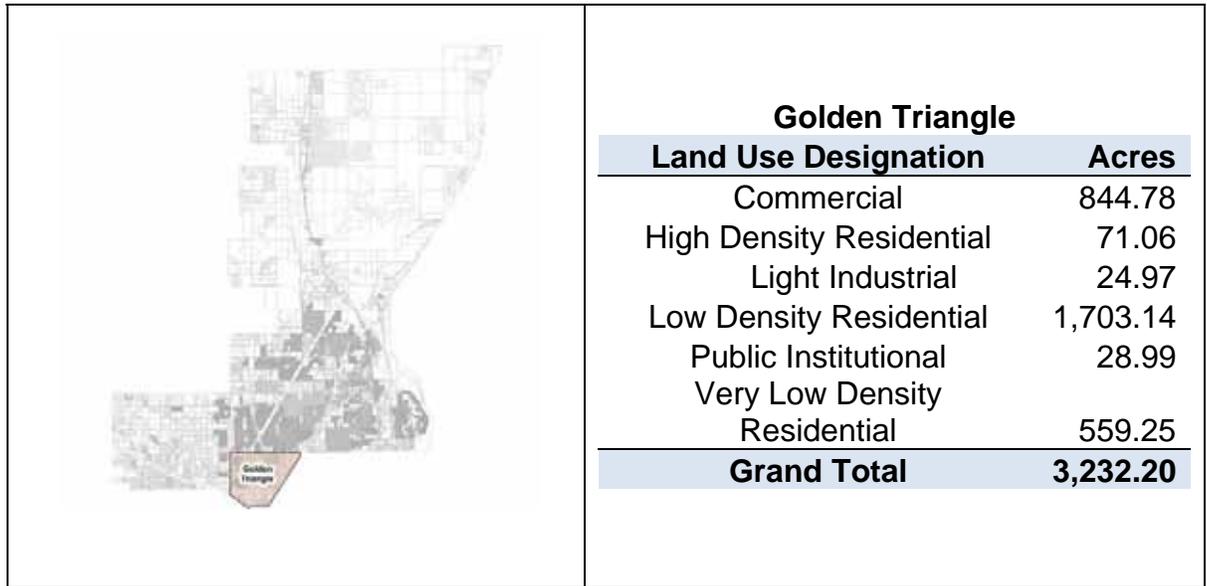


Figure 3-10. Golden Triangle Planning Area

North Mojave Planning Area: Includes incorporated and unincorporated land generally northeast of National Trails Highway and northwest of Interstate 15. A portion of this planning area extends southeast of Interstate 15 and northeast of the Mojave River. Boundaries and acreages by land use are depicted in Figure 3-11.

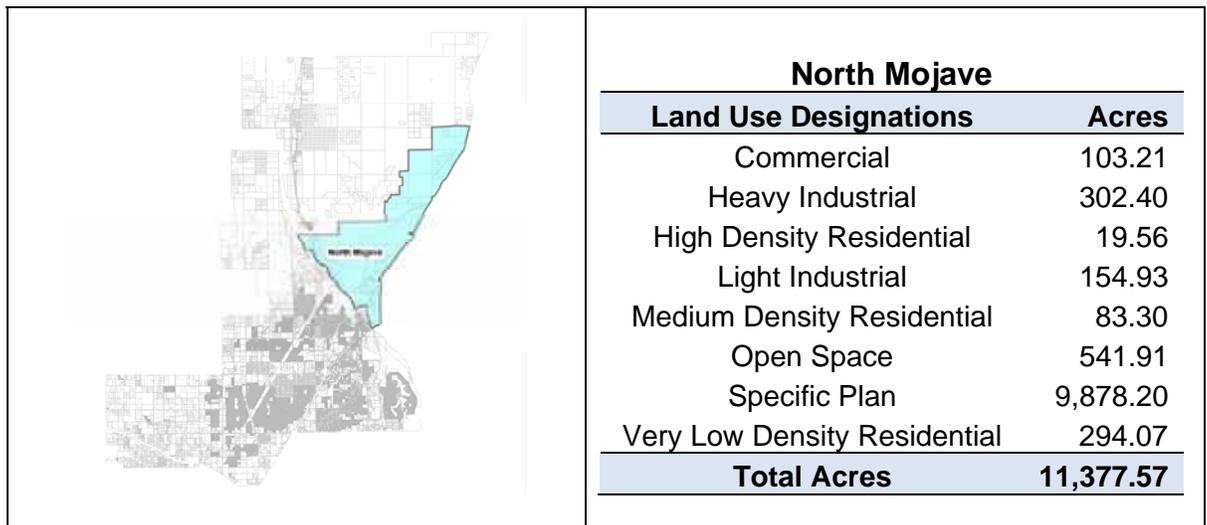


Figure 3-11. North Mojave Planning Area

Southern California Logistics Airport Planning Area (SCLA): Includes all the land within the former George Air Force Base and an area north to the existing City boundary, and east towards the Mojave River and along the north side of Air Expressway of the former base. Boundaries and acreages by land use are depicted in Figure 3-12.

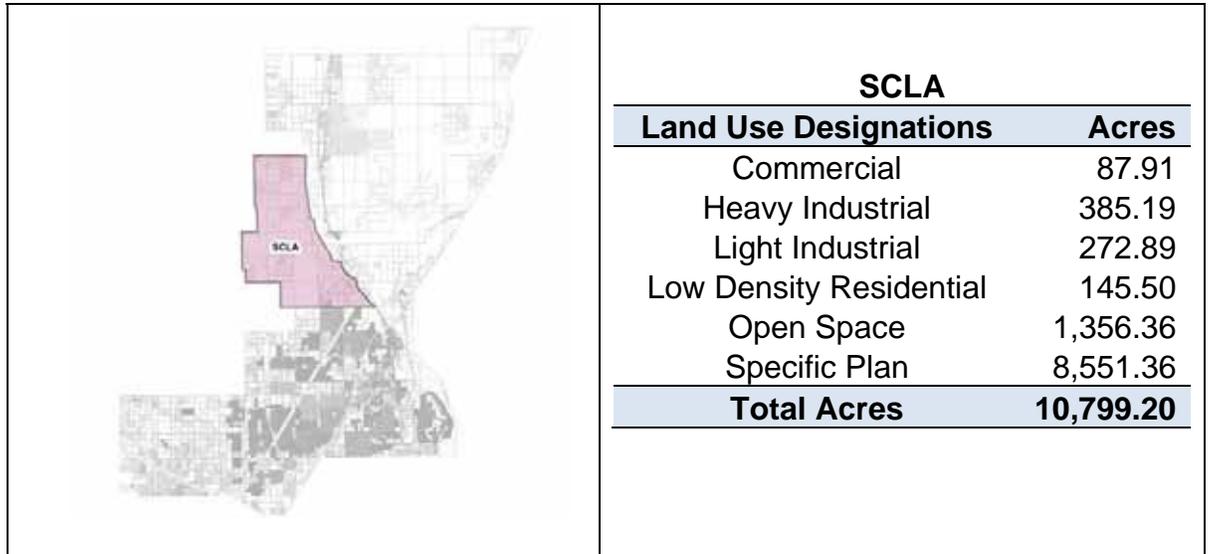


Figure 3-12. SCLA Planning Area

Spring Valley Lake Planning Area: Includes incorporated and unincorporated land north of Bear Valley Road, south of and west of the Mojave River and east of Ridgecrest Road and the Atchison, Topeka, and Santa Fe Railroad line. Boundaries and acreages by land use are depicted in Figure 3-13.

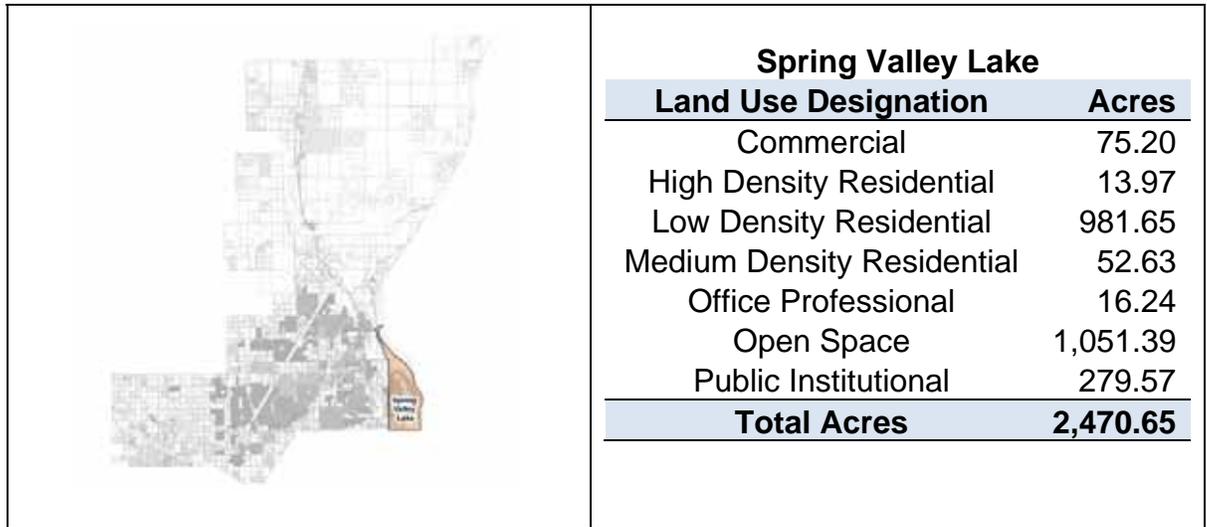


Figure 3-13. Spring Valley Planning Area

West City Planning Area: Includes land generally north of Palmdale Road, south of Rancho Road, east of U.S. Highway 395, and west of El Evado Road. A small portion of this planning area is located at the southwest corner of Palmdale Road and El Evado Road. Boundaries and acreages by land use are depicted in Figure 3-14.

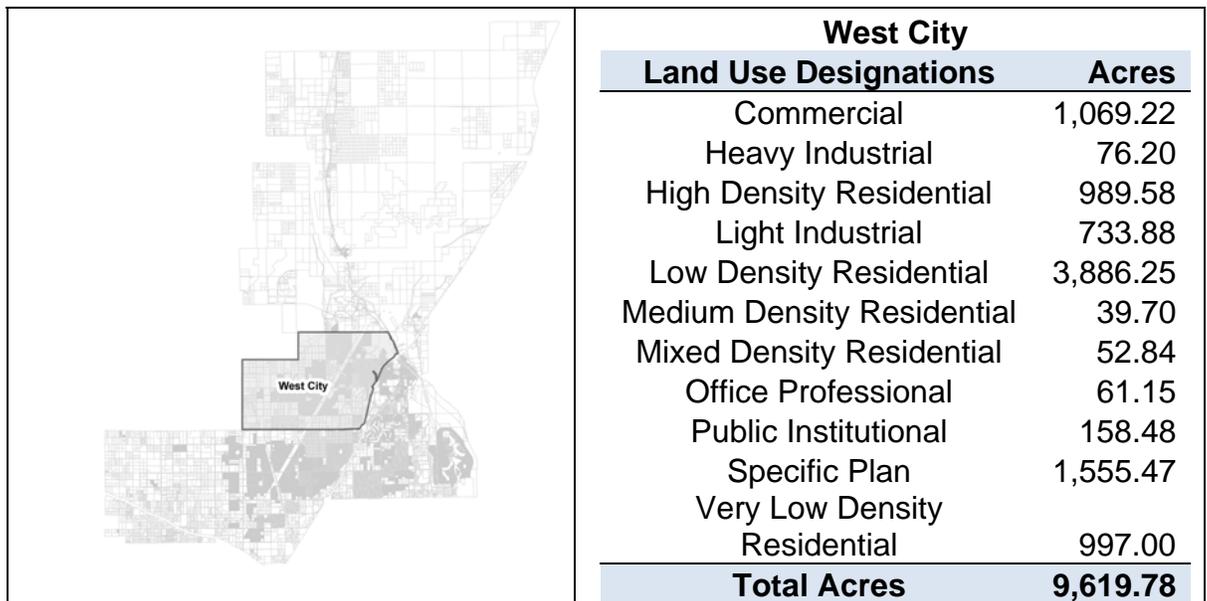


Figure 3-14. West City Planning Area

West Bear Valley Planning Area: Includes land north of Bear Valley Road, south of Palmdale Road, east of U.S. Highway 395, and west of Interstate 15 and Amargosa Road. Boundaries and acreages by land use are depicted in Figure 3-15.

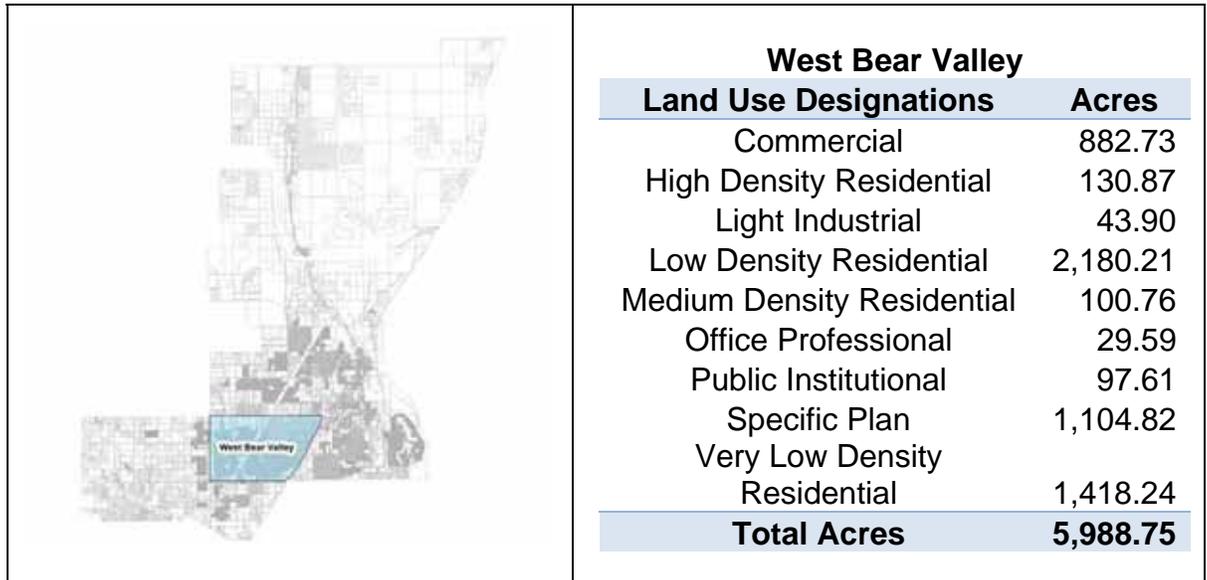


Figure 3-15. West Bear Valley Planning Area

Northern Expansion: Includes unincorporated land north of the North Mojave Planning Area, east of the Mojave River and west of Interstate 15. Boundaries and acreages by land use are depicted in Figure 3-16.

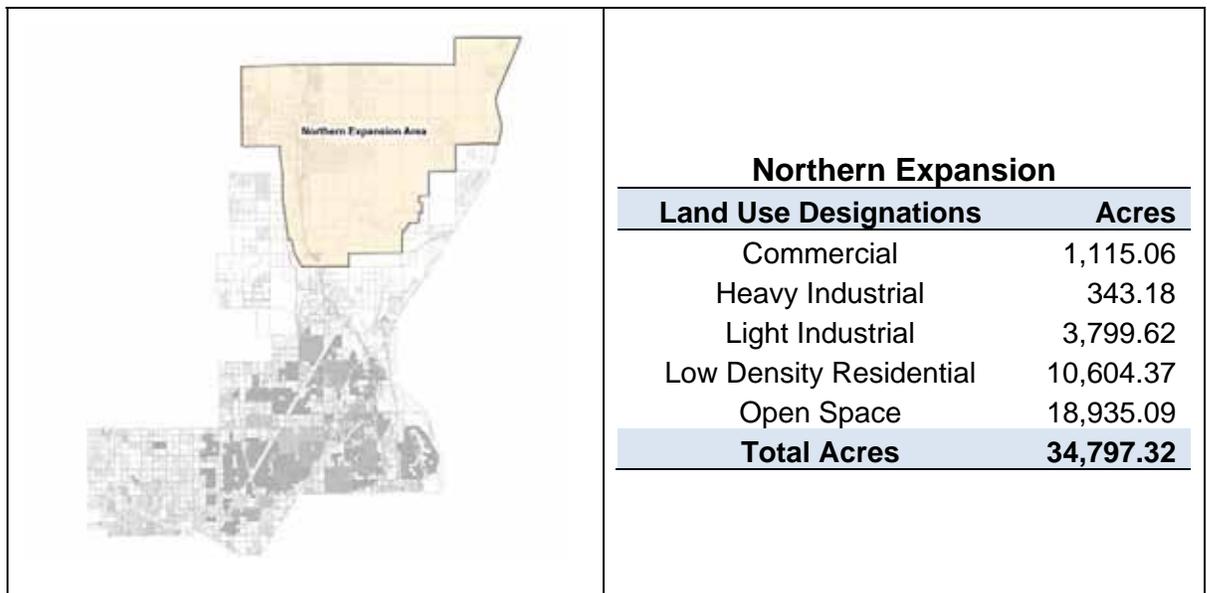


Figure 3-16. Northern Expansion Planning Area

Key Changes to the Land Use Plan

The General Plan 2030 Land Use Plan would update and supersede the City's current General Plan Land Use Plan, which was adopted in July 1997 and subsequently amended. Primary changes between the existing and proposed 2030 Land Use Plan are summarized below:

■ Baldy Mesa

The General Plan 2030 Land Use Map incorporates the City's annexation proposal for the Baldy Mesa Planning Area from Baldy Mesa Road west to Caughlin Road and north from Lindero Road to Palmdale Road. The majority of the previously un-incorporated area of Baldy Mesa is designated for residential use, and would be unchanged by the General Plan 2030 Land Use Plan. Environmental review and processing of the incorporation of the Baldy Mesa SOI is currently being processed through a separate environmental document with the Local Agency Formation Commission (LAFCO) as lead agency.

■ Commercial Nodes

According to the *Strategic Market Analysis of Victorville's Commercial Zoning*, prepared by The Concord Group, January 20, 2005, in support of the General Plan, Victorville's existing General Plan has a surplus of commercially designated land³ relative to population. To remedy this imbalance, commercial development would be focused into strategic nodes located along arterial roadways, and specifically intersections of arterial roadways. Existing commercially zoned properties located away from arterials and mid-block should be redesignated for residential use or downzoned to neighborhood commercial use.

In response to this recommendation, the General Plan 2030 Land Use Plan concentrates commercially designated area along the I-15, U.S. 395, Bear Valley Road, Palmdale Road and at key intersections.

³ Correspondence from John R. Shumway, THE CONCORD GROUP, LLC, and David Tausig, David Tausig & Associates, Inc., to Bill Webb, City of Victorville, dated January 20, 2005; available at Development Department offices.

■ **Mixed-Use High Density**

To support the proposed commercial nodes, the General Plan 2030 Land Use Plan creates a new Mixed -Use High Density Residential designation. This land use category is intended to facilitate well integrated multi-family and commercial developments, located adjacent to retail development. Permitted mix of uses includes multi-family residential up to a density of 60 du/ac; retail, office, civic, open space and other similar uses as defined through the City Planned Unit Development (PUD) process. Development standards for this land use category specify a maximum lot coverage of 50%, a maximum building height of 150 feet, a residential component that occupies 50% of the site area, open space elements and pedestrian linkages.

These Mixed Use-High Density areas are located in the Baldy Mesa planning area, in the western portion of the City, at Palmdale Road and Caughlin Road, and at Baldy Mesa Road and Bear Valley Road. In addition, a Mixed-Use Overlay is being proposed on two developed areas within the City to allow the redevelopment of these areas into mixed use projects. The areas are located at the intersection of Bear Valley Road and Cottonwood, and on Seventh and Victor Streets.

■ **Rural Residential to Open Space**

Under the existing General Plan, approximately 357 acres are designated as Rural Residential. This designation allows for development of one dwelling unit per five acres, and is mostly located along the Mojave River corridor. No development standards are specified for the designation. To date, only about 4% of these Rural Residential acres have developed.

To help protect the Mojave River corridor, the General Plan 2030 Land Use Plan removes the Rural Residential designation and replaces it with an Open Space designation. The Open Space land use designation refers to:

Land that is to remain undeveloped due to severe development constraints, lake or river bodies and floodplains; and reserved public open space in parks and golf courses. The purpose of this district is to provide for the protection of the public health, safety and general welfare in those areas of the City which, under present conditions, are subject to periodic flooding and accompanying hazards and to conserve natural resources of benefit to the general public interest.

Residential is permitted in certain areas when the underlying zone district is AE (Exclusive Agriculture). Under the AE zone, residential development may occur

at a density of one dwelling unit per five acres, similar to the existing Rural Residential designation.

■ **North Mojave Specific Plan Area**

The North Mojave Planning Area, located in the northeast quadrant of the City, is the last expanse of undeveloped land in the City, comprising over 10,000 acres. It is traversed by the I-15, offering potential for regional commercial development. It is also bordered by the Mojave River on the west, offering potential for open space uses. To ensure that future development of this northeast area maximizes its commercial and open space potential and coordinates installation of infrastructure, the General Plan 2030 Land Use Plan designates the majority of the North Mojave Planning Area as Specific Plan. This designation will require that prior to development, a unique set of land use and development standards are proposed and subsequently adopted by the City.

The North Mojave Specific Plan would be required to conform to the General Plan. It would include a land use plan, circulation plan, infrastructure plan, development standards, design guidelines, phasing plan, financing plan, and implementation plan.

■ **Deletion of Midtown Specific Plan and Southdown Industrial Specific Plan**

The proposed General Plan 2030 would delete the Midtown and Southdown Industrial Specific Plans, as discussed in Section 3.3.5, above.

■ **Northern Expansion Planning Area**

The General Plan 2030 Land Use Plan includes the Northern Expansion Planning Area, located north of the City's existing boundaries, east of the Mojave River and west of Interstate 15. This expansion area would expand the City SOI and the influence of the Victorville General Plan over 37,000± acres, approximately 57.8 square miles. This represents a 59% increase over the existing 98.5 square miles of City influenced territory (existing City boundaries plus existing SOI).

As discussed in Section 3.3.2, this Northern Expansion SOI is recommended to promote logical and orderly development, to establish community service priorities, and to promote cohesive master planning of infrastructure extension. One of the major concerns is the land use planning to occur north of SCLA, and to protect the airport from future conflicts. Planned land uses in this planning area are 54% Open Space, 30% low density residential, 12% light industrial and 4% commercial.

Upon completion of the General Plan update, an application will be submitted to the Local Agency Formation Commission (LAFCO) in San Bernardino County for consideration.

■ **Changes in General Plan Acreages**

Table 3-6 compares acreages by land use of the General Plan 2030 Land Use Plan with that permitted under the existing General Plan, inclusive of the existing and proposed northern SOI expansion.

Table 3-6			
COMPARISON OF GENERAL PLAN 2030 LAND USES TO EXISTING GENERAL PLAN LAND USES			
BY AMOUNT OF ACREAGE AND PERCENT OF ACREAGE			
Land Use Category	General Plan 2030	Existing General Plan *	Difference (General Plan 2030 – Existing General Plan)
Rural Residential	-	357	(357)
Very Low Density	8,152	5,260	2,892
Low Density	27,523	14,239	13,284
Medium Density	525	874	(349)
High Density	2,256	1,724	532
Mixed Density	78	0	0
Subtotal Residential	38,534	22,454	16,002
Office Professional	352	433	(81)
Commercial	7,014	5,603	1,411
Subtotal Commercial	7,366	6,036	1,330
Light Industrial	5,234	2,194	3,040

Table 3-6

COMPARISON OF GENERAL PLAN 2030 LAND USES TO EXISTING GENERAL PLAN LAND USES

BY AMOUNT OF ACREAGE AND PERCENT OF ACREAGE

Land Use Category	General Plan 2030	Existing General Plan *	Difference (General Plan 2030 – Existing General Plan)
Heavy Industrial	1,572	1,671	(99)
Subtotal Industrial	6,806	3,865	2,941
Mixed Use-High Density	609	-	609
Public/Institutional	1,230	708	522
Open Space	22,536	1,405	21,131
Subtotal Public Institutional & Open Space	23,766	2,113	21,653
Specific Plan	22,172	11,941	10,231
TOTAL ACREAGES	99,253	46,409	52,766
Percent of Residential to Total Acres	39%	48%	-10%
Percent of Commercial to Total Acres	7%	13%	-6%
Percent of Industrial to Total Acres	7%	8%	-1%
Percent of Public Institutional & Open Space to Total Acres	24%	5%	19%
Percent of Specific Plan to Total Acres	22%	26%	-3%
* Reference Chapter 4.1 for a description of the existing General Plan permitted land uses by acres.			

3.5.2 Circulation Plan

The recommended Circulation Plan for General Plan 2030, Figure 3.17, represents the changes and modifications planned to the City of Victorville’s vehicular

circulation network and the recommended roadway classifications based on the expected 2035, build out travel demands.

3.6 PUBLIC ACTIONS AND APPROVALS REQUIRED

The City is the lead agency with the authority to carry out or approve the proposed Project. The City's project approvals include certification of the EIR for the proposed Project, as well as adoption of the General Plan Update. This EIR is intended as a Program EIR, and specific development proposals made in the City would be subject to separate environmental clearance/review.

In addition to the City, federal, regional, and state responsible agencies have discretionary authority over certain aspects of future development projects. These agencies are expected to include:

- **Local Agency Formation Commission (LAFCO):** LAFCO is responsible for approving the following Project components: (1) Extension of the City Sphere of Influence to include the Northern Expansion Area; (2) Rezoning of the City's existing Sphere of Influence; (3) Extension of the Victorville Water District Sphere of Influence.
- **County of San Bernardino:** The County may need to provide approval to modify master plans for roads, flood control, regional parks/trails, and other County General Plan designations to be consistent with the City General Plan.
- **School Districts:** The Districts would need to provide approval to select new school sites as well as construction of new schools within the Planning Area.
- **U.S. Army Corps of Engineers:** The implementation of the proposed General Plan may require U.S. Army Corps of Engineers (USACE) Section 404 permits should areas classified as "waters of the United States" may be developed. The USACE has jurisdiction over developments in or affecting waters of the United States. A USACE permit is required prior to discharging any dredge or fill material into United States water, pursuant to Section 404 of the Clean Water Act.
- **California Department of Fish and Game:** The implementation of the proposed General Plan may require a California Department of Fish and Game Streambed Alteration Agreement pursuant to Section 1603 of the California Department of Fish and Game Code associated with the disturbance of wildlife habitats. A written agreement is required prior to

allowing development that may threaten, harm, or destroy existing wildlife habitats areas of jurisdiction.

- **State of California, Regional Water Quality Control Board:** Pursuant to the Federal Clean Water Act (Section 402[g]) and regulations governing State General Construction Activity Storm Water Permits, a National Pollution Discharge Elimination System Permit (NPDES) would be required for individual projects. Pursuant to Section 401(a)(1) of the Clean Water Act, a Section 401 water quality certification or waiver would be required for the Project before any Federal permit can be issued.

EXISTING SETTING

This Chapter provides an overview of the existing environmental setting for the Project in terms of: the existing General Plan, existing land uses, existing circulation system, existing infrastructure, existing geologic conditions, existing biological, cultural resources, and a summary of major cumulative projects considered.

The purpose of this Chapter is to provide a description of the physical environmental conditions in the vicinity of the Project from both a local and a regional perspective, pursuant to CEQA. This environmental setting, in conjunction with the existing conditions sections for each environmental topic presented in Section 5.0, provides a set of baseline physical conditions from which the lead agency will determine the significance of environmental impacts resulting from the proposed Project.

4.1 EXISTING GENERAL PLAN

Physical development in the City of Victorville is currently governed by the City's existing (1997, and as amended) General Plan. The existing General Plan disaggregates the City and its sphere of influence according to the land use designations listed in Table 4-1, which summarizes the current distribution of Victorville area by existing General Plan land use designation and by percent of City total acreage. Within the City boundaries, there are three of unincorporated County islands; these and the existing sphere of influence are also summarized in the Table.

Residential is the predominant land use, comprising 22,532 acres (48%) of General Plan designated land plus an estimated 73.0% of the Specific Plan designated land. Residential also comprises over 57% of the County island land located within the City boundaries.

Specific Plan is the next prevalent land use, comprising 12,245 (26%) of the existing General Plan area.

Commercial, the third most prominent land use, comprises 5,603 acres (12%) of General Plan land within the City boundaries, plus 39 acres within the County islands.

Table 4-1
Existing General Plan Land Use by Designation, Acreage and % of Total Acreage
For City and County Islands

Land Use Category	Existing General Plan Acres	% of Existing General Plan Land Use to Total Existing General Plan	Existing SOI + County Islands	% of Existing SOI + Co. Islands Land Use to Total Existing SOI + Co. Islands
Rural Residential	357	1%	0	0%
Very Low Density	5,260	11%	7,636	50%
Low Density	14,239	30%	991	6%
Medium Density	874	2%	0	0%
High Density	1,724	4%	12	0%
Mixed Density	78	0%	0	0%
Subtotal Residential	22,532	48%	8,639	57%
Office Professional	433	1%	0	0%
Commercial	5,603	12%	39	0%
Subtotal Commercial	6,036	13%	39	0%
Light Industrial	2,194	5%	98	1%
Heavy Industrial	1,671	4%	0	0%
Subtotal Industrial	3,865	8%	98	1%
Mixed Use-High Density	-	0%	0	0%
Public/Institutional	708	2%	176	1%
Open Space	1,405	3%	1,903	12%
Subtotal Public Institutional & Open Space	2,113	5%	2079	14%
Specific Plan	12,245	26%	0	0%
Urban Conservation	0	0	4,405	29%
TOTAL ACREAGES	46,791	100%	15,260	100%

4.2 EXISTING LAND USE

Approximately 48% of the incorporated City area is currently developed. Table 4-2, below, summarizes the currently developed Victorville land by existing General Plan land use designation, acreage and by percent of total area currently developed.

Existing General Plan Land Use Designation	Existing Developed Acreage	% of Total Current Developed Acreage
Rural Residential	97.4	0.4%
Very Low Density Residential	4067.5	18.0%
Low Density Residential	4276	18.9%
Medium Density Residential	250.1	1.1%
High Density Residential	590.2	2.6%
Mixed Density Residential	53.0	0.2%
Subtotal	9281.2	41.3%
Office Professional	50.9	0.2%
Commercial	1403.8	6.2%
Light Industrial	130.3	0.6%
Heavy Industrial	393.8	1.7%
Public/Institutional	700.6	3.1%
Open Space	1281.8	5.7%
Specific Plan (SP)	9281.2	41.1%
Urban Conservation	0.0	0.0%
Totals	22,576.6	100.0%

4.3 CIRCULATION

The City's existing circulation system consists of freeway, roads and transit (bus).

4.3.1 Freeways

Freeways provide regional access, and include:

Interstate 15: The I-15 provides access to and from Riverside County to the south and Barstow, continuing to Nevada, to the north. Also called the Mojave Freeway, this is a major north-south corridor having three lanes in each direction. According to the California Department of Transportation (Caltrans), this section of the I-15 carried an annual average daily traffic (AADT) of 60,000 to 100,000 vehicles in 2005, of which, approximately 24% comprised of truck traffic. Seven full interchanges with the I-15 currently provided at the

following streets:

- Bear Valley Road
- Palmdale Road (SR-18) / 7th Street
- Roy Rogers Drive / La Paz Drive
- Mojave Drive
- National Trails Highway / D Street
- E Street
- Stoddard Wells (south).

United States Federal Highway 395: US-395 is another north-south highway that passes through the western part of the City. Predominantly a two-lane highway, this facility has a stretch of four lanes just south and north of its intersection with Palmdale Road. Caltrans traffic data shows that in 2005, this facility carried an AADT of approximately between 16,000 and 25,000 vehicles, of which about 17% was truck traffic. With the southern terminus of this facility at its junction with I-15 in the City of Hesperia, this facility connects the City of Victorville to the City of Adelanto and unincorporated northwestern San Bernardino County, before continuing onto adjacent Kern County. Currently it has five at-grade intersections with the following arterials:

- Bear Valley Road / Duncan Road
- Luna Road
- Palmdale Road (SR-18)
- Mojave Drive
- Cactus Road

State Route 18: The existing SR-18 is a two-lane divided street with a continuous center turn lane in the City of Victorville (D Street) and an unpaved center median in the Town of Apple Valley, where it also called Happy Trails Highway. When SR-18 junctions with I-15, travelers must follow I-15 south to Palmdale road, where SR-18 proceeds west and is called Palmdale Road. A designated truck route within the City of Victorville, this facility carried an AADT of 17,000 to 46,000 vehicles in 2005, according to Caltrans traffic data, of which, close to 9% was truck traffic. For the City, it provides access to and from Antelope Valley to the west and the Town of Apple Valley, continuing further eastward to Lucerne Valley.

Historic Route 66: One of the original federal routes, Route 66 or Will Rogers Highway was established in 1926. Today, from the southern limit of the City of Victorville, Route 66 follows the current alignment of I-15 to the freeway's interchange with Palmdale Road (SR-18) / 7th Street. North of this interchange, Route 66 follows the alignment of 7th Street D Street. Continuing westward on D Street it follows National Trails Highway alignment into the community of Oro Grande on the north-western edge of the City.

4.3.2 Arterials / Local Roadways

Arterials provide access from freeways, other arterials and local roadways. Local roadways provide access to residential neighborhoods, commercial districts, industrial areas, and to institutional and open space land uses.

There are several different types of roadways maintained by the City of Victorville that range from two lane, undivided collectors to super arterials with six lanes and a positive separation (raised median).

- Super Arterials: Currently, this category includes US-395, Palmdale Road and Bear Valley Road east of Petaluma Road.
- Parkways: Currently, there are no streets designated as Parkways.
- Residential Arterials: La Mesa Road west of Amethyst Road is the only designated Residential Arterial.
- Major Arterials: Some of the existing facilities included in this category are Amethyst Road, El Evado Road, Green Tree Boulevard, 7th Avenue, 7th Street, Hesperia Road, La Mesa Road, Mojave Drive and parts of Bear Valley Road, west of I-15, etc.
- Arterials: Some of the Arterials in Victorville include Eucalyptus Street, Eagle Ranch Parkway, Mesa Linda Avenue, Topaz Road, Hook Boulevard, Village Drive, portions of El Evado Road, Bear Valley Road, etc.

4.3.3 Public Transportation

Public transportation serves an alternative means of travel to the automobile and provides improved mobility choices, while making more efficient use of available roadway capacity. In comparison to the base service in 1998, transit service in the Victor Valley transit service area has expanded from providing approximately 4,480,200 passenger miles to approximately 11,055,700 passenger miles in 2003, with the number of average weekday transit trips rising from about 2,579 daily trips in 1998 to roughly 3,766 average weekday transit trips in 2003. This growth in transit services correlates to associated growth in Victorville and surrounding areas.

4.3.4 Passenger Rail

Passenger rail service to the City is provided by Amtrak. Located on the north side of D Street, between 2nd Street and 6th Street, in the northeastern section of the City, the Victor Valley Transportation Center offers travelers multi-modal services and facilities. Amtrak's Southwest Chief Liner connecting Chicago, Illinois with Los Angeles, California, via Arizona, New Mexico, Colorado, Kansas and Missouri, offers daily service from the City of Victorville to Los Angeles. This train offers a morning and an evening commute to and from Los Angeles. Westbound, travelers can connect to the Coast Starliner in Los Angeles and the Pacific Surfliner

in Fullerton. In addition, Amtrak Motor Coach service to and from San Joaquin trains in Bakersfield also provides Victorville with two daily round trips.

4.3.5 Goods Movement

Goods movement is important to the vitality of businesses and in providing services to residents in the City of Victorville. In addition to rail freight, the basic mode of transporting goods within the City is trucking and vehicular delivery services. Pursuant to the City's General Plan, truck routes are designated on those arterials that minimize disturbance to noise sensitive land uses, such as residences, hospitals, churches, schools, etc. Chapter 12.36 of the Victorville Municipal Code institutes truck route regulations for commercial vehicles exceeding a maximum gross weight limit of 12,000 pounds. With the exception of making pickups or deliveries of goods, wares and merchandise from or to any building or structure located on non-truck routes, or for building construction or repair in these locations, trucks exceeding the specified weight limit are mandated to drive on City arterials that are clearly marked as a 'Truck Traffic Route'. The following streets are designated as truck routes within the City of Victorville:

- Air Expressway
- National Trails Highway / D Street
- Hesperia Road from Bear Valley Road to D Street
- Green Tree Boulevard from 7th Street to Hesperia Road
- Mariposa Road from Bear Valley Road to Green Tree Boulevard
- Bear Valley Road within the City limits
- Amargosa Road from Bear Valley Road to Palmdale Road.

4.3.6 Freight Operations

In addition to passenger rail, the City serves as a major hub to freight transportation. The Burlington Northern Santa Fe BNSF operates freight rail services through the City of Victorville. The services offered include transporting containers, trailers, and chemical/oil tankers. Existing major inter-modal cargo loading facilities are located in ports of Long Beach and Los Angeles and in the future, with the expansion of the SCLA, the City will serve as a major hub for inter-modal cargo transfer and distribution.

4.3.7 Existing Traffic Conditions

The existing City Circulation Element measures traffic levels in terms of levels of service (LOS), which is a qualitative measure of the effect of several factors, including speed and travel time, traffic interruptions, freedom to maneuver, safety, and driving comfort and convenience. Levels of service are designated by grades of 'A' (excellent, free flow) through 'F' (failure, jammed conditions). According to the existing Circulation Element, the accepted threshold for roadway segments is LOS C or better. A LOS C indicates that a roadway is operating at between 0.71-0.80 of capacity, and that traffic conditions are generally moderate, with freedom for vehicles to maneuver without noticeable restrictions. A LOS of E or F is typically considered unacceptable.

A LOS E indicates that a roadway is operating at between 0.91-100 of capacity, and that traffic conditions are generally poor with extremely heavy volumes, with vehicles maneuverability poor. A LOS F indicates that a roadway is operating above 100 percent of its capacity, and that traffic conditions are extremely poor, with slow speeds, tremendous delays and increasing queue lengths.

A number of arterial segments and intersections in the City currently operate at LOS E or F during peak hours. Preliminary traffic studies conducted on behalf of the General Plan 2030 indicate that the following five intersections currently operate at deficient levels during both peak hours:

- Ridgecrest Road at Bear Valley Road
- 7th Avenue / Arrowhead Drive at Nisqualli Road
- Hesperia Road / 9th Street at D Street
- I-15 NB Ramps at Mojave Drive
- I-15 SB Ramps at Palmdale Road (SR-18).

4.4 INFRASTRUCTURE

Sewer and water are the primary components of the existing City's infrastructure system.

4.4.1 Sewer

The Victor Valley Wastewater Reclamation Authority (VWRA) reclamation plant which is located at the north end of Shay Road, has a current processing capacity of approximately 12.5 million gallons a day (MGD). Upgrades to the facility are currently underway to increase the capacity of the treatment plant. The VWRA expects that current improvements will increase capacity to 18 MGD. Both the VWRA and City own sewer lines that run through the City and connect to the reclamation plant.

4.4.2 Water

Previously, the City of Victorville had obtained its water from the two separate districts: the Baldy Mesa Water District (BMWD) and the Victor Valley Water District (VVWD). Under the Local Agency Formation Commission (LAFCO) Agreement, the City of Victorville recently annexed these two districts and established the Victorville Water District, per Resolution No. 2959 approved and adopted by LAFCO, County of San Bernardino in May 2007.

4.5 GEOLOGY

4.5.1 Soils

The prevailing soils types within the Planning Area include:

- Bryman loamy fine sand. This very deep, well drained soil is on terraces and old alluvial fans. It formed in alluvium derived dominantly from granitic material.
- Cajon sand. This very deep, somewhat excessively drained soil is on alluvial fans. It formed in alluvium derived dominantly from granitic material.
- Cajon gravelly sand. This very deep, somewhat excessively drained soil is on alluvial fans. It formed in alluvium derived dominantly from granitic material.
- Haplargids-Calciorthids complex. This map unit is on terrace escarpments, dissected hills, and terrace remnants that lie mainly between flood plains of the Mojave River and higher terraces. Most areas are dissected by shallow to deep intermittent drainages.
- Helendale loamy sand. This very deep, well drained soil is on alluvial fans and terraces. It formed in alluvium derived dominantly from granitic material.
- Kimberlina loamy fine sand, cool. This very deep, well drained soil is on alluvial fans. It formed in alluvium derived from mixed sources.
- Mojave Variant loamy sand. This very deep, well drained soil is on terraces. It formed in alluvium derived dominantly from granitic material.
- Riverwash. This map unit consists of areas in the Mojave River bed and in beds of intermittent streams. It consists of areas of unstable sandy and gravelly alluvium that is frequently removed, resorted, and redeposited.
- Rock outcrop-Lithic Torriothents complex. This map unit is on mountains and hills. Rock outcrops on mountainsides, ridges, and rugged hills and generally dominates the landscape. Lithic Torriothents are between the areas of rock outcrop in small depressional areas and on relatively stable hillsides. Slopes are hilly or steep.
- Victorville sandy loam. This very deep, moderately well drained soil is on low river terraces and on flood plains along the Mojave River. It formed in alluvium derived dominantly from granitic material.
- Villa loamy sand. This very deep, moderately well drained soil is on flood plains and on low river terraces along the Mojave River. It formed in alluvium derived dominantly from granitic material.

4.5.2 Earthquakes

Five fault systems which could affect the Victorville Planning Area include the San Andreas, Helendale, North Frontal, Landers, and San Jacinto. The San Andreas Fault is located approximately twenty-four miles south of the Planning Area and is considered most likely to

produce a major earthquake within the planning period. Geologic evidence suggests that the San Andreas Fault is likely to produce a major earthquake (up to 8.3 Richter magnitude). The Helendale Fault, located approximately nine miles northeast of the Planning Area, could also be responsible for a moderate earthquake with a Richter magnitude of approximately 5.9.

A third major fault system, the San Jacinto Fault, is located approximately twenty-six miles south of the Planning Area and runs parallel to the San Andreas Fault. The North Frontal fault zone of the San Bernardino Mountains is located approximately five and one-half miles southeast of the Planning Area along the base of the Ord Mountains. This active fault has the potential to produce a moderate earthquake with a Richter magnitude of 6.2. The Landers fault is located approximately fifty miles southeast of the Planning Area. The Landers Fault was discovered as a result of a 7.4 Richter magnitude sized 1992 earthquake.

4.5.3 Liquefaction

Portions of the Planning Area, especially those areas along the Mojave River, are susceptible to liquefaction. Liquefaction results when water-saturated, sandy unstable soils are subject to intense shaking, such as that caused by an earthquake. These soils lose cohesiveness, causing unreinforced structures to fail. The primary factors for increased liquefaction susceptibility include areas subject to high seismicity, shallow groundwater, and young, poorly consolidated sandy alluvium. When this type of sandy alluvium is present, liquefaction susceptibility is generally considered high if groundwater depth is less than ten feet beneath the ground surface, moderate if ground water depth is between ten and thirty feet, and low if groundwater is between thirty and fifty feet deep. Liquefaction is usually not considered a hazard if the groundwater table is greater than fifty feet in depth.

4.5.4 Flooding

A major portion of the Victorville Planning Area is located on top of a gently sloping alluvial fan situated to the northeast of the San Bernardino Mountains. Local hydrology is dominated by the Mojave River which drains the mountainous areas located to the south. Several smaller intermittent streams located within the Planning Area drain into the Mojave River. The Mojave River originates in the San Bernardino Mountains and flows northeast approximately eighty miles where it empties into Soda Lake. The surface flow of the river fluctuates seasonally though it carries discharges from Lake Arrowhead, Silverwood Lake, and Mojave Forks Reservoir. The drainage area of the river is approximately 4,700 square miles. The average annual discharge is 51,440 acre feet and average monthly flow is 71 cubic feet per second near the Planning Area.

4.5.6 Slope Hazards

The topography within the Victorville Planning Area varies considerably from gently sloping topography occasionally dissected by an intermittent stream channel to nearly vertical slopes adjacent to the Mojave River. The major environmental factors controlling stability of the

steeper hillsides include precipitation, topography, geology, soils, vegetation, and man-made alternatives of the natural topography.

4.6 BIOLOGICAL RESOURCES

4.6.1 West Mojave Plan

The West Mojave Plan is a regional strategy for conserving plant and animal species and their habitats and for defining an efficient, equitable, and cost-effective process for complying with threatened and endangered species laws. The plan consists of two components: a federal component that amends the existing 1980 California Desert Conservation Area Plan, and a Habitat Conservation Plan (HCP) that covers development on private lands. Released in December 2004, the plan is a result of a joint effort by the federal Bureau of Land Management (BLM) and 27 other federal and state agencies, cities and counties. The plan provides a comprehensive framework for the conservation of the Desert Tortoise, the Mojave Ground Squirrel, and nearly 100 other sensitive plant and wildlife species—and the natural communities of which they are a part—while providing a streamlined program for complying with the requirements of the California and federal Endangered Species Acts. The West Mojave Plan covers the 6.2 million acre West Mojave Plan Area (WMPA) including 3.2 million acres of public land and 3.0 million acres of private land in portions of San Bernardino, Inyo, Kern and Los Angeles counties. The City of Victorville lies within the WMPA.

4.6.2 Floral Resources

Within the City boundaries, the following plant communities occur: Creosote Bush Scrub, Mojave Desert Saltbush Scrub, Rabbitbrush Scrub, ruderal (disturbed) communities, Joshua tree woodland, and riparian communities associated with the Mojave River and its flood plain, which includes transmontane alkali and freshwater marsh, Mojave riparian forest, and southern willow scrub. The noted riparian communities are classified as "communities of highest inventory priority" by the California Department of Fish and Game. Joshua trees are protected by the "California Desert Plant Protection Act", which requires a tag through the Department of Food and Agriculture if five or more trees are to be removed. In addition, Joshua trees are protected by Chapter 13.33 of the Victorville Municipal Code, which prohibits the destruction or removal of Joshua trees without written consent from the Director of Community Services.

4.6.3 Faunal Resources

Within the City boundaries, seven wildlife species considered threatened or endangered as listed by either or both the California Department of Fish and Game (CDF&G) and the United States Fish and Wildlife Service (USF&WS) occur. Three of the species, all birds (Yellow-billed Cuckoo, Willow Flycatcher, Least Bell's Vireo), are found within the riparian habitat of the Mojave River.

The Desert Tortoise is classified as a threatened species and is covered by a federal species recovery plan (USFWS 1994). Desert Tortoises have occurred within Victorville's city limits historically, but have not been found there in recent years. The species' recovery plan recommends conservation and management of several tortoise-occupied areas covering approximately 1610 km² each, but none of the proposed areas extend into the City of Victorville.

In recent years, most biological reports completed for CEQA compliance in the City have focused on five sensitive wildlife species: Desert Tortoise, Mohave Ground Squirrel, Burrowing Owl, Sharp-shinned Hawk, and Loggerhead Shrike. This list of species of conservation concern was developed by the California Department of Fish and Game, which requested in letters responding to the City of Victorville recent Notices of Preparation for various development projects that the City concentrate on these five species.

4.7 CULTURAL RESOURCES

An estimated 178 historical/archaeological sites have been formally recorded within the Planning Area, three of which are listed as California Historical Landmarks. Ten sites in the Planning Area have been previously evaluated and determined eligible for listing in the National Register of Historic Places. Seventeen sites are recognized by the Victorville Chamber of Commerce as historic sites of local interest, all of which are located in the downtown area. A total of 50 sites are prehistoric—i.e., Native American—in nature, which occur predominantly near the banks of the Mojave River and near other natural water sources. The majority of the known sites are from the historic period, reflective of the efforts of early settlers to establish roads and homesteads in the valley and along the Mojave River. The historic-period buildings recorded in the Planning Area were notably concentrated in and near the city's historic downtown core, as would be expected.

4.7.1 Paleontological Resources

The Planning Area contains ancient lake bed deposits estimated to date back to the Pleistocene Epoch (10,000 to 900,000 years ago). These lake beds contain numerous mammalian fossils, including teeth, limb fragments, phalanges and metacarpal from horses, camels and other large animals. As a result of requiring monitoring during previous earth disturbance activities, several resources have been identified and recovered. The most recent significant find was a mammoth discovered in June of 1993.

All of the Planning Area, excepting those areas above the 2,985 foot contour or below the 2,727 foot contour, is located upon fossil bearing strata. The entire Planning Area is considered to be sensitive regarding paleontological resources due to the existence of recovery sites throughout.

4.7.2 Archeological Resources

Areas along the Mojave River and its tributaries, namely the Oro Grande Wash and the Bell Mountain Wash, and around the drainages and springs near Turner Springs appear to be highly sensitive for prehistoric and historic-period archaeological resources. Areas approximately 1-2 miles from these natural water sources are moderately sensitive for such resources. The valley floor, making up the balance of the Planning Area, while low in sensitivity for prehistoric archaeological remains, exhibits a moderate sensitivity for historic-period sites. The downtown area also demonstrates a moderate sensitivity for archaeological resources from the historic period, mostly due to the possibility of unknown subsurface artifact deposits that may be present.

4.7.3 Historic Resources

For historic-period buildings and other features of built environment, the downtown area bounded by A, E, I st, and I I th Streets and the corridors extending southwest along 6th Street, 7th Street, Yucca Avenue, and Forrest Avenue showcase the densest concentration of early 20th century residences and historic-period commercial buildings. National Trails Highway between Air Expressway and the Interstate 15 freeway hosts a number of historic-period commercial and industrial buildings. The neighborhoods to the southwest of the downtown area feature a relatively high percentage of mixed-vintage residences from the early and mid-20th century, including some buildings that are now approaching the age threshold to be considered potentially historic.

4.8 CUMULATIVE PROJECTS

CEQA requires that EIRs discuss cumulative impacts, in addition to project-specific impacts. In accordance with CEQA, the discussion of cumulative impacts must reflect the severity of the impacts and the likelihood of their occurrence; however, the discussion need not be as detailed as the discussion of environmental impacts attributable to the project alone. Further, the discussion is guided by the standards of practicality and reasonableness.

According to Section 15355 of the CEQA Guidelines: “Cumulative impacts” refer to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.

Because the scope of the Project encompasses build-out of the Planning Area, the cumulative analyses presented throughout this EIR attempt to incorporate all current and future projects within the Planning Area, as well as major projects currently proposed in adjacent communities. Cumulative projects considered in the preparation of the City traffic model and used as the basis for the traffic, air quality and noise assessments presented in this EIR, also encompass planned Victor Valley and regional growth.

Major current projects identified in and adjacent to the Planning Area and expected to contribute to the Project's cumulative effects are listed below. This list, which is provided for the general information of the reader, identifies expected cumulative projects that are over 200,000 square feet in space or of a regional nature:

- **Desert Xpress:** The Desert Xpress¹ is a proposal to build a privately funded passenger train from Victorville, California, to Las Vegas, Nevada, using high-speed rail technology. The proposal was initiated to provide an alternative to automobile travel between the Los Angeles area and Las Vegas along I-15. The train would travel up to 125 miles per hour and would make the 190-mile trip from Victorville to Las Vegas in about 1 hour 45 minutes, taking approximately 2 hours off the typical automobile travel time. The Victorville station is expected to be located in the northeastern quadrant of the City.
- **SCLA Industrial:** As of March 2008, work has begun on what is being called the largest speculative industrial project ever built in the High Desert². Stirling Capital Investments is developing the 1-million-square-foot warehouse-distribution building at SCLA in Victorville.
- **SCLA Rail Spur:** Construction of the first phase of rail line has begun to tie the planned intermodal rail facility to the existing BNSF lines. The multi-modal facility will allow the transfer of goods from truck-to-train and train-to-train in addition to the close proximity to the runway facility for airplane transfers.
- **Hybrid Gas and Solar Power plant:** Victorville is planned to become the home to the San Bernardino County's first hybrid gas and solar facility, and possibly the largest of its kind in the world³. Inland Energy Inc. is in the final stages of permitting for the plant. Victorville 2 is located near the SCLA. Company officials expect to break ground this spring and be operating in the summer of 2010. The plant will include 250 acres of solar panels that will generate 50 megawatts of energy and a gas-power "combined cycle" plant that will produce 500 megawatts of natural gas.
- **Wal-marts:** Five Wal-Mart Supercenters are currently planned or proposed in the Victor Valley⁴. Three stores are proposed for Victorville, one for Apple Valley and one for Hesperia. The stores planned for Victorville are located at Bear Valley Road and Amargosa Road (southwest corner); Palmdale Road and Highway 395 (northeast corner); and Bear Valley Road and Tamarisk Road (northeast corner).
- **Victorville Pavilion Retail Center:** A new 250,000 square-foot, 20 shop regional retail center is under construction at Bear Valley Road and Mall Boulevard in

¹ Department of Transportation, Federal Railroad Administration, Environmental Impact Statement: DesertXpress High Speed Train between Victorville, California and Las Vegas, Nevada; Issued in Washington, DC, on July 11, 2006

² Victorville Daily Press, March 9, 2008

³ Victorville Daily Press, January 18, 2008

⁴ Victorville Daily Press, January 20, 2008

Victorville⁵. The Victorville Pavilion is expected to be occupied by major clothing and house ware stores.

⁵ Victorville Daily Press, May 21, 2005

EXISTING SETTINGS, IMPACTS AND MITIGATION MEASURES

This Chapter describes the existing settings, potential significant adverse impacts, and mitigation measures related to the project. Specifically, this section focuses on relevant issues associated with the following environmental topics:

- 1) Aesthetics
- 2) Agricultural Resources
- 3) Air Quality
- 4) Biological Resources
- 5) Cultural Resources
- 6) Geology and Soils
- 7) Hazards and Hazardous Materials
- 8) Hydrology and Water Quality
- 9) Land Use and Planning
- 10) Mineral Resources
- 11) Noise
- 12) Population and Housing
- 13) Public Services
- 14) Recreation
- 15) Transportation/Traffic
- 16) Utilities and Service Systems.

Each environmental factor is discussed separately under its own section. Each discussion begins with a description of the existing settings of the Planning Area relative to the specific environmental factor. This setting information is critical to accurately assess the Project's impacts.

Next, the threshold of significance used to measure potential Project impacts is identified. Thresholds of significance are based on the CEQA Guidelines, information provided by the Project Initial Study (Appendix A) and other regulatory requirements as appropriate.

The potentially significant environmental impacts of the project are then discussed and evaluated against each threshold of significance. For each significant impact, appropriate mitigation measures are presented. Any significant impact that cannot be fully mitigated is identified and discussed.

Finally, any cumulative impacts associated with the specific environmental factor are identified. Where appropriate, measures to mitigate any cumulative impacts are presented, and any cumulative significant impact that cannot be fully mitigated is identified and discussed.

5.1 AESTHETICS RESOURCES

This section addresses issues related to existing aesthetics and visual resources currently found within the Planning Area. The visual resources of an area include the features of its landforms, vegetation, water surfaces and cultural modifications (physical changes caused by human activities) that give the landscape its visually aesthetic qualities. Landscape features, natural appearing or otherwise, form the overall impression of an area. This impression is referred to as “visual character.” Visual character is studied as a point of reference to assess whether a given project would appear compatible with the established features of the setting or would contrast noticeably and unfavorably with them.

Visual resources also have a social setting, which includes public expectations, values, goals, awareness and concern regarding visual quality. This social setting is addressed as “visual sensitivity,” the relative degree of public interest in visual resources and concern over adverse changes in the quality of that resource. As applied to visual impact analyses, sensitivity refers to public attitudes about specific views, or interrelated views, and is key to identifying critical public views, assessing how important a visual impact may be, and whether or not it represents a significant impact.

5.1.1 Existing Conditions

The City of Victorville is located in southwestern San Bernardino County, and is generally characterized by a relatively flat topography which ranges between approximately 2,600 to 2,875 feet above sea level. This area is a geographic subregion of the southwestern Mojave Desert known as the Victor Valley and commonly referred to as the "High Desert". Victorville's motto is Key City of the High Desert as it is surrounded by the cities of Adelanto, Hesperia, and the Town of Apple Valley. The Victor Valley is separated from other urbanized areas in Southern California by the San Bernardino and San Gabriel Mountains.

Surrounding areas of high aesthetic sensitivity that provide southerly vistas to the City of Victorville (but not located within the City) are the San Bernardino and San Gabriel Mountain ranges located approximately ten miles to the south. The North Sphere Expansion Area is dominated by Quartzite Mountain, which rises to 4,025 feet above sea level. As such, the developed/urbanized area is generally flat or moderately sloping desert terrain characterized by a gradual incline from the Mojave River towards the San Bernardino Mountains to the south, and from the Mojave River to the mountains in and surrounding the northern part of the City, including Quartzite Mountain.

Areas of high visual sensitivity within/adjacent to the City include the Mojave River, the rocky bluffs of the Narrows, and the Mojave Narrows Regional Park.

The City of Victorville is located primarily on the broad surface of a large alluvial fan referred to as the Cajon Fan (or Victorville Fan). The Mojave River runs along the fan's eastern

margin and is the City's most notable topographic feature. The Mojave River crosses the City from the southeast to the northwest conveying runoff out of the San Gabriel and San Bernardino Mountains. The river is a perennial desert river containing a variety of vegetation and irregular rocky bluffs and terraces in some areas. The river channel is heavily wooded in the northern portion of the Planning Area, while grasses and smaller trees dominate the flood plain areas. The river's natural floodplain is up to a mile wide, and its waters flow below the surface for most of its length except following storms. The river is used as a flyway stopover for some migratory birds, most notably turkey vultures and Swainson's hawks. These raptors can be seen in the spring and fall using the Regional Park as a night roost.

At Mojave Narrows, the terrain becomes steep and predominately rocky, and the river encounters an impenetrable layer of bedrock that forces water to the surface even during dry periods. The Narrows is a unique topographical and visual point of interest that separates the City of Victorville from the Town of Apple Valley to the east. The artificial Spring Valley Lake (which lies outside of the Planning Area's limits) appears to have been established in the river's historic bed. Oro Grande Wash, the City's second-largest drainage course, conveys flows only following intense storms. It parallels Interstate 15, becomes channelized at Bear Valley Road and crosses beneath the freeway in a culvert between La Mesa Road and Olivera Road. The wash passes through the Victorville Municipal Golf Course in a culvert, and is eventually dispatched into an underground culvert in Center Street Park, near Hesperia Road at Verde Street.

Mojave Narrows Regional Park, located on the City's southeastern border, supports extensive native riparian woodlands dominated by Fremont Cottonwood, Black Willow, and Honey Mesquite. Other native tree species found locally include Sandbar Willow, White Alder, and California Sycamore. Desert Willow grows along the river's drier ephemeral reaches. Mojave Narrows Regional Park is a County of San Bernardino-operated recreational park and campground. Two lakes (Horseshoe and Pelican Lakes) exist in the park, and numerous wooded and grass areas serve as nesting grounds and as a migratory route for bird species.

Another notable feature of the area is Joshua Trees which can grow to 12 meters tall. These trees are distributed on gentle slopes and on valley floors of upper bajadas and sandy areas. The understory of this highly variable community typically includes Creosote Bush and/or species of saltbush. The Joshua Tree is an archetypal plant of the Mojave Desert that may live several hundred years and that provides valuable habitat for a variety of native wildlife species. Off-road vehicle use and illegal dumping appear to have adverse effects on the health of Joshua Trees. See Section 5.4 Biological Resources for additional information regarding Joshua trees and the Mojave Narrows.

5.1.2 Regulatory Framework

5.1.2.1 State Policies

California Environmental Quality Act: In accordance with Section 21000(b) of CEQA, “[i]t is necessary to provide a high-quality environment that at all times is healthful and pleasing to the senses and intellect of man.” Pursuant to Section 21001(b) of CEQA, it is the policy of the State to “take all actions necessary to provide the people of this State with clean air and water, enjoyment of aesthetics, natural, scenic, and historic environmental qualities, and freedom from excessive noise.” Based on these declarations, the issue of aesthetics or, more specifically, project-related impacts on visual resources, is an important element of environmental review. CEQA does not provide specific methodology for assessing visual impacts, but provides threshold criteria upon which to base impacts.¹

Government Code: Section 65560 of the Government Code states: "Open space land is any parcel or area of land or water which is essentially unimproved and devoted to an open-space use..." Open space is used for the preservation of natural resources, managed production of resources (including agriculture), outdoor recreation, and public health and safety.

Scenic Highway System: The State Scenic Highway System includes a list of highways that are either eligible for designation as scenic highways or have been so designated. These highways are identified in Section 263 of the California Streets and Highways Code (S&HC). The status of a State Scenic Highway changes from “eligible” to officially “designated” when the local jurisdiction adopts a scenic corridor protection program, applies to Caltrans for scenic highway approval, and receives notification from Caltrans that the highway has been designated as a scenic highway. There are no designated State Scenic Highways within the Planning Area².

Joshua Trees: Joshua trees are protected by the "California Desert Plant Protection Act", which requires a tag through the Department of Food and Agriculture if five or more trees are to be removed.

5.1.2.2 Regional Policies

The I-15 freeway is designated as a scenic route within the County of San Bernardino General Plan EIR³. The EIR identifies as scenic, the I-15 freeway from Devore (junction with I-215) to the Nevada state line, excepting those areas within the Barstow Planning Area and the

¹ Note: Several Federal Agencies provide specific methodologies to quantitatively and qualitatively assess visual impacts. As no federal action is involved, herein, a more general approach is applied in the impacts analysis.

² California Department of Transportation, Scenic Highways website:
http://www.dot.ca.gov/hq/LandArch/scenic_highways/index.htm

³ County of San Bernardino General Plan EIR. 2006. Chapter 4, Aesthetics Analysis.

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. As mitigation for their 2007 General Plan, the County identified the following mitigation measure, “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.” There is no scenic designation of the I-15 within the City of Victorville, sphere of influence or proposed sphere of influence.

5.1.2.3 Local Policies

General Plan: The existing General Plan defines open space as “land that is to remain undeveloped due to severe development constraints, reserved public open space in parks, and areas that are in agricultural preserves.” Within the existing City incorporated boundaries, approximately 52% of the area is undeveloped, vacant land. The existing General Plan designates most of this vacant land for urban uses, designating 1,405 acres or 3% of the City area as permanent open space. In addition, the existing General Plan has an “Urban Conservation” designation, which allows for densities of one dwelling unit per 2.5 acres, to one dwelling unit per 40 acres. At this density, the land is predominantly open space.

Municipal Ordinance: The City of Victorville Municipal Code contains design guidelines that indirectly regulate the aesthetic quality of new development with respect to structures, signs, walls, landscaping, street widths, street lighting. There also are zoning codes that address signs, walls, fences, hedges, structure heights, structure projections, and architectural design controls.

City of Victorville Joshua Tree Ordinance: Joshua trees are protected by Title 13.33, Chapter 13.33 of the Victorville Municipal Code, which prohibits the destruction or removal of Joshua trees without written consent from the Director of Community Services. According to Chapter 13.33, the term “Joshua tree” means a living tree of the botanical name of *Yucca Brevifolias* [stet; the correct scientific name is *Yucca brevifolia*] (Ord. 1224 § 1 (part), 1988). Section 13.33.010 (Purpose and Intent) provides that ... “proper and necessary steps be taken in order to protect and preserve, to the greatest extent possible, Joshua trees in all areas of the city so as to preserve the unique natural desert environment throughout the city and for the health, safety and welfare of the community (Ord. 1224 § 1 (part), 1988).” The Ordinance applies to all property within the corporate limits of the city, particularly: (1) Any existing lot in a subdivision already cleared and graded with improvements installed as required by the conditions of the original subdivision; and (2) Any occupied residential properties (Ord. 1224 § 1 (part), 1988).

Section 13.33.040 prohibits Joshua tree removal and provides for enforcement. Providing that: (1) It is unlawful for any person to cut, damage, destroy, dig up, or harvest any Joshua

tree without the prior written consent of the director of parks and recreation or his designee; and (2) A violation of this section is a misdemeanor punishable by up to six months in jail and/or a five-hundred-dollar fine (Ord. 1224 § 1 (part), 1988).

Size and health of trees are addressed in Title 15, Chapter 15.06.080, Section 2, Subsection A, Number IV which reads: “All Joshua Trees, as per Chapter 13.33 of the Victorville Municipal Code, shall be indicated by showing the exact center of its trunk as established by a licensed surveyor. Its tag number, trunk diameter and height must be indicated. The health and proposed disposition of the tree must be indicated. The application shall include a detailed plan for protecting, preserving, relocating the tree, which may be affected by the proposed grading. The details of which shall conform to Chapter 13.33 of the Victorville Municipal Code as amended.”

5.1.3 Thresholds of Significance

Significant impacts relative to aesthetic resources are evaluated in this section based on Appendix G of the CEQA Guidelines. Implementation of the proposed project may have a significant adverse impact if it would do any of the following:

- 1) Have a substantial adverse effect on a scenic resource.
- 2) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway.
- 3) Substantially degrade the existing visual character or quality of the site and its surroundings.
- 4) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

5.1.4 Project Impacts

General Plan 2030 Provisions: Of the proposed General Plan 2030 95,709-acre Planning Area, 22,536 acres or 23% of the area is designated as open space. The majority of this open space, 19,065 acres or 85% of the designated open space, would occur in the proposed Northern Expansion Area.

Within the proposed General Plan 2030 Land Use Element the following goal, policies and implementation measures would apply to visual resources:

GOAL #4: BEAUTIFY VICTORVILLE – Provide for an Aesthetically Pleasing Community.

Objective 4.1: Enhance the appearance of the Victorville community to increase its desirability as an attractive place to live, work and play.

Policy 4.1.1: Promote high quality development.

Implementation Measures 4.1.1.1: Utilize Specific Plans and/or redevelopment project areas in areas deemed appropriate for design themes.

Implementation Measures 4.1.1.2: Require architectural model preparation for significant developments.

Implementation Measures 4.1.1.3: Consider a policy to promote or require public art in major developments.

Policy 4.1.2: Promote high quality public spaces.

Implementation Measures 4.1.2.1: Develop and install streetscape design themes for major corridors into and through key City commercial districts.

Implementation Measures 4.1.2.1: Enhance entries to the City with integrated signage and design.

Within the proposed General Plan 2030 Resource Element the following goal, objective and policies would apply to conservation and open space areas, which are visual resources of the community:

GOAL #4: Preserve Land Containing Native Habitat that Sustains Rare, Threatened or Endangered Plants and Wildlife Species

Policy 4.1.1: Encourage development to preserve natural habitat that supports rare, threatened or endangered plants and wildlife (i.e., “sensitive” species), or require restoration of the same type of impacted habitat within an existing, planned or potential conservation area.

Policy 4.1.2: Support and participate in the West Mojave Plan.

Objective 4.2: Promote permanent conservation of Mojave River Corridor ecological values

Policy 4.2.1: Generally prohibit private or public development projects or major infrastructure facilities on land within the Mojave River Corridor, inclusive of its floodplain, where biological surveys have determined there is habitat that supports rare, threatened and/or endangered plants or wildlife. Allow minor encroachments

into such habitat, for critical public facilities and recreational trails, where reliable assurances are provided that no loss of sensitive species would occur.

Scope of Impact Analysis: This analysis considers impacts to aesthetic resources that would occur with implementation of the proposed General Plan 2030; whether growth would result in visual changes through land use modifications. These potential impacts are weighed against proposed General Plan 2030 provisions applicable to aesthetics.

5.1.4.1 Would the Project have a substantial adverse effect on a scenic resource?

Impact Discussion:

Development within incorporated and SOI areas have the potential to impact scenic resources. Those resources may include views of mountains, hillsides, water features, open space and/or a combination of factors. Development within a viewer's line of sight of scenic areas may interfere with a scenic vista, either by physically blocking or screening the vista from view, or by impeding or blocking access to a formerly available viewing position. Those viewers may see the scenic areas prior to development; but would have those views blocked post development.

Scenic resources may also include urban/developed areas such as parks, and developed conservation/open space areas, as well as cultural sites of significance. Thus scenic resources can occur not only in open space areas, but also within highly urbanized sections of the City.

Any such development on/near sensitive habitat areas would also have the potential to indirectly impact biological and cultural resources. In such areas, even with very low density developments, the overall character in terms of landform, vegetation, water surfaces and cultural modifications may result in significant impacts. In addition, public expectations, values, goals, awareness and concern regarding visual quality may result. Views of the development may be more or less aesthetically appealing depending on the nature of the resulting structures, wall, landscaping, lighting, and how those properties are maintained.

Goal #4 and Policy 4.1 of the Land Use Element promotes high quality development that will be aesthetically pleasing to the community. Goal #4 of the Resource Element and the related objective and policies identified above, promote preservation of natural open spaces and natural resources, inclusive of the West Mojave River Corridor. These proposed General Plan provisions offer broad protection of scenic resources for the community.

However, to ensure that these broad measures are affectively implemented with development projects, Mitigation Measures AES-1 through AES-7 are added to the Project, and described in Section 5.1.6 below. These mitigation measures address preservation of open spaces, preserving view corridors into scenic resources and defining scenic resources, locating trails

to maximize views of visual resources, developing hillside development standards to protect views of hillsides, undergrounding utility lines, and designing area-wide flood control measures in a manner compatible with the natural visual setting.

With the inclusion of Mitigation Measures AES-1 through AES-7, potential adverse impacts to aesthetics would be less than significant.

Impact Finding: Less than Significant with Mitigation.

5.1.4.2 Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?

Impact Discussion:

There are no existing or proposed State scenic highways in the Planning Area. Consequently, area growth induced by implementation of the General Plan 2030 will have no potential to adversely affect, directly and indirectly, scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a State scenic highway. Implementation of the General Plan 2030 would not impact scenic resources within a State scenic highway.

Impact Finding: No impact.

5.1.4.3 Would the project substantially degrade the existing visual character or quality of the site and its surroundings?

Impact Discussion:

Development within incorporated and SOI areas has the potential to alter the visual character and quality of a site or area and its surroundings, resulting in potentially significant impacts. This impact is usually associated with project features being unsuitable for the character and pattern of those that are inherent to the existing setting including public views, as well as adverse effects on the coherence (unity) of the patterns or features of the landscape (whether urban or rural). One or more of the following factors could occur to alter an area's visual character, including:

- The amount of natural open space to be graded or developed.
- Existing features or elements that substantially contribute to the valued visual character or image of a neighborhood, community, or localized area, which would be removed, altered, or demolished.

- The degree to which proposed structures in natural open space areas would be effectively integrated (or not integrated) into the aesthetics of the site, through appropriate design.
- The degree to which a proposed zone change would result in buildings that would detract from the existing style or image of the area due to density, height, bulk, setbacks, signage, or other physical elements.
- The degree of contrast between proposed features and those existing features that represent the valued aesthetic image of an area.
- The degree to which the proposed development would contribute to the aesthetic value of an area.

Change in visual character and overall quality of the area's surroundings is highly subjective and can vary within a community. Planning and design awareness and an understanding of an area's visual character, as well as an understanding of and responses to public expectations, values, goals, awareness and concern regarding visual quality should all be part of responsible planning. To this end, the proposed 2030 Land Use Element's Goal #4, "Provide for an aesthetically pleasing community" works toward minimizing impacts to visual character. Further, Policy 4.1 of the 2030 Land Use Element proposes that the City will promote high quality development and Policy 4.2 proposes, high quality public spaces. Supporting these policies, the implementation measures encourage design themes as appropriate in Specific Plans and/or redevelopment areas (Implementation Measure 4.1.1), require architectural model preparation for significant developments (Implementation Measure 4.1.2), consider a policy to promote or require public art in major developments (Implementation Measure 4.1.3), develop streetscape design themes for major corridors into and through key City commercial districts (Implementation Measure 4.2.1), and enhance entries to the City with integrated signage and design (Implementation Measure 4.2.2).

Further, the proposed 2030 Resource Element's Goal #4 and the related objective and policies, promote preservation of natural open spaces and natural resources, inclusive of the West Mojave River Corridor. Policy 4.1.1 encourages development to preserve natural habitat, and Policy 4.2.1 generally prohibits development projects or major infrastructure on land within the Mojave River Corridor, and by these actions, scenic character and quality are also being preserved.

Building height is another issue that can affect visual character and quality. As outlined in Table LU-2 of the proposed Land Use Element, the Commercial designation is permitted a maximum height of 120 feet, and the Mixed-Use and Office Professional designations are permitted a maximum height of 150 feet. The Light Industrial, Heavy Industrial and Public Institutional designations are permitted a maximum height of 50 feet. In certain areas of the Planning Area, these land use designations occur adjacent to residentially designated areas. In the Very Low, Low and Medium Density residential districts, maximum building height is 30 feet; and in the Mixed and High Density residential districts, maximum building height is 35 feet. Placing buildings of over 50 feet adjacent to residential uses could substantially degrade the visual character and quality of the residential area. Proposed General Plan Land Use

Element Table LU-2 anticipates these potential impacts through inclusion of the following height restrictions:

- Within 500 feet of residential districts, maximum building height in the Commercial, Office Professional and Mixed-Use districts shall be 35 feet.
- Within 250 feet of residential districts, maximum building height in the Light Industrial, Heavy Industrial and Public Institutional districts shall be 35 feet.

These height restrictions limit building height proximate to residentially designated land use areas.

Upon implementation of the above 2030 Land Use Element's Goal #4 and Resource Element #4 and General Plan Land Use Table LU-2 height restrictions adjacent to residential districts, potential adverse impacts to visual character and quality would be reduced to levels of insignificance.

Impact Finding: Less than Significant.

5.1.4.4 Would the project create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?

Impact Discussion:

New land uses in response to the growth anticipated during the planning horizon of the General Plan 2030 update will slowly and incrementally change conditions of nighttime lighting within the Planning Area. Most undeveloped, open areas presently have no artificial sources of light. With the introduction of street lighting, additional automobile headlights, accent lights, residential lighting, commercial lighting, security lighting, and other new lighting sources, the visual character of a project site will change from that of a "dark" site to an area more characteristic of an urban setting.

From an individual project perspective, the introduction of new light sources will result in an increase to on-site ambient nighttime illumination levels. Nighttime spillover of light onto adjacent properties has the potential to interfere with certain functions, including vision, sleep, privacy, and general enjoyment of the natural nighttime condition. The significance of the impact depends on the type of use affected, the proximity of the affected use, the intensity of the light source, and the existing ambient light environment. Uses considered sensitive to nighttime light intrusion include, but are not necessarily limited to, residential uses, institutional uses, and natural areas.

From a cumulative or area-wide perspective, all new urban light sources contribute

incrementally to “light pollution.” From an astronomical observation perspective, urban light sources reduce the ability of ground-based astronomers to observe the stars and other heavenly bodies. The introduction of new Planning Area project-related light sources adds to those sky-glow effects, as continued development incrementally increases ambient light and glare, and incrementally degrades “dark skies” conditions.

The proposed provisions of the General Plan 2030 do not address the issue of night sky glow. However, the amount of changes to nighttime views can be significantly reduced by following Mitigation Measures AES-8 through AES-11, described in Section 5.1.6 below. These measures address design, location, type, intensity and direction of exterior lighting within the Planning Area.

Upon implementation of the Mitigation Measures AES-8 through AES-11, potential adverse impacts of light and glare on a project-specific level are expected to be reduced to levels of insignificance.

Impact Finding: Less than Significant with Mitigation.

5.1.5 Cumulative Impacts

Impact Discussion:

Compliance with and conformity to adopted plans and policies, including those within the General Plan 2030, is intended to ensure that future development occurs in a manner compatible with adjacent and surrounding planned land uses. General Plan 2030 contains provisions intended to preserve open space, protect views onto open spaces and scenic resources, and ensure visual compatibility with surrounding areas. To further support these provisions, Mitigation Measures AES-1 through AES-11 are recommended for inclusion to the Project to further support views of scenic resources and to reduce impacts relative to light and glare. As a result, further intensification of the Planning Area and region is not expected to create a significant adverse cumulative impact on the region’s existing visual resources.

Compliance with and conformity to adopted plans and policies, including those within the General Plan 2030, and recommended mitigation measures will help to mitigate the potential cumulative impacts produced by the visual changes to existing landscapes associated with future development within the Planning Area.

Impact Finding: Less than Significant.

5.1.6 Mitigation Measures

AES-1: The City shall endeavor to preserve natural open spaces, including those in the Northern Expansion Area, in perpetuity. Potential measures used to preserve open space lands include dedication to the City or conservation agency, dedication or purchase of conservation easements, and transfer of development rights.

AES-2: The City shall work with developers to retain areas in new developments which are not suitable for habitable structures as open space, including recreational open space uses, trails, and scenic outlooks.

AES-3: The City shall work with developers to retain open spaces adjacent to view corridors or scenic resources in exchange for increased density elsewhere on the project site. 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;
- 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 the San Bernardino and San Gabriel Mountains, and Mojave River Corridor urban areas).

AES-4: The City shall locate trail routes to highlight the City's recreational and educational experiences, including natural, scenic, cultural and historic features.

AES-5: The City shall require that hillside development be compatible with natural features and that site development occur 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. Avoid/discourage development on ridgelines and areas where structures would be the dominant visual element. These criteria shall be incorporated into hillside development regulations for specific plans that encompass land in the Northern Expansion Area or any other hillside areas within the Planning Area.

AES-6: The City shall require new electrical and communication lines to be placed underground.

AES-7: The City shall design area-wide 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 Planning Area's streams and creeks.

AES-8: Lighting fixtures shall be architecturally compatible with the character of the surrounding structure(s) and shall be energy efficient. Fixtures shall be appropriate in height, intensity, and scale to the use they are serving. Generally, pole-mounted fixtures shall be low

in height (20 feet or less) and be equipped with light shields to reduce or eliminate light spillage beyond the project's boundaries.

AES-9: Parking areas shall be provided with lighting capable of providing adequate illumination for nighttime security and safety. Lighting, as set forth in the lighting or electrical plan, shall provide a minimum one foot candle of illumination at the ground throughout the parking area and all associated walkways, plazas and courts. Building-mounted decorative lights shall not exceed five foot-candles measured five feet from the light source.

AES-10: Security lighting shall be provided in all nonresidential zoning districts at building entrances/exits. Security lighting shall provide a minimum of two foot-candles and a maximum of three foot-candles at the ground level of the entrance.

AES-11: Where the light source is visible from outside the project boundary, shielding shall be required to reduce glare so that neither the light source nor its image from a reflective surface shall be directly visible from any point five feet or more beyond the property line. This requirement shall not apply to single-family residential uses, traffic safety lighting, or public street lighting.

5.1.7 Level of Significance After Policies/Mitigation Measures – Less than Significant.

5.2 AGRICULTURAL RESOURCES

This section addresses agricultural resource issues within the Planning Area. Potential project impacts on agricultural resources and any mitigation measures necessary to resolve impacts are also discussed. Information referenced in this section was obtained from the California Department of Conservation Farmland Mapping and Monitoring Program (2006), and the City Planning Division.

5.2.1 Existing Conditions

5.2.1.1 Regulatory Framework - Important Farmlands

Preservation of agricultural resources and activities is regulated by both the state of California Department of Conservation (CDC) and the United States Department of Agriculture (USDA). These agencies work to enforce the federal Farmland Protection Policy Act (FPPA), which is intended to minimize the extent to which federal programs contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses..." (7 U.S.C. 4201(b), et seq.).

To protect agricultural resources and activities, the Natural Resources Conservation Service (NRCS) rates the agricultural suitability of soils for most types of field crops and land use compatibility. The NRCS then maps all land within the state according to its suitability for agriculture. The mapping, known as the Farmland Mapping and Monitoring Program (FMMP), classifies land according to the following categories:

1. **Prime Farmland:** Lands with the best combination of physical and chemical features and able to sustain long term production of agricultural crops. This land must have been used to produce irrigated crops at some time during the two update cycles prior to the mapping date.
2. **Farmland of Statewide Importance:** Lands similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. This land must have been used to produce irrigated crops at some time during the two update cycles prior to the mapping date.
3. **Unique Farmland:** Lands with lesser quality soils used to produce leading agricultural crops. Includes non-irrigated orchards or vineyards.
4. **Farmland of Local Importance:** Lands of importance to the local agricultural economy, as determined by each county's board of supervisors and a local advisory committee.

5. **Grazing Land:** Lands on which existing vegetation is suited to livestock grazing. This category was developed in cooperation with the California Cattlemen's Association and U.C. Cooperative Extension.

As shown in Figure 5.2-1, *City of Victorville Important Farmland 2006 Map*, there are a few areas of Prime Farmland in the City, scattered along and adjacent to the Mojave River corridor in the vicinity of Highway 18. These areas, which consist of six parcels, are detailed in Figure 5.2-2, *City of Victorville Important Farmland Detail Map*. Four of the Prime Farmland parcels are located fully or partially within the existing City boundaries. As numbered in Figure 5.2-2, parcel #1 consisting of 27.24 acres and parcel #2 consisting of 6.89 acres are located adjacent to the Mojave River corridor fully within the existing City boundaries. Parcel #3, consisting of 49.03 acres, is located partially within the City's eastern boundary and partially within the City's existing SOI. Parcel #4, consisting of 225.47 acres, is located partially within the City's northern boundary and partially within the proposed Northern Expansion Area. Parcels #5 (49.23 acres) and #6 (53.97 acres) are located within the City's existing SOI and within the Spring Lake Planning Area.

No Farmlands of Statewide Importance, Unique Farmlands or Farmlands of Local Importance occur within the Planning Area. : Lands of importance to the local agricultural economy, as determined The undeveloped areas of the City are noted on the map as Grazing Land, although the only existing grazing activities known to occur in the Planning Area is on the Kemper-Campbell Ranch site, described in Section 5.2.1.2. The developed areas of the City are identified as Urban Land Built-up.

According to the CDC *Farmland Mapping and Monitoring Program 2006 Field Report*, between 2004 and 2006, there were 213 conversions of local, grazing, or other land to urban land in San Bernardino County. These changes included new homes, schools, businesses, and parks. In the City of Victorville, the CDC reports multiple new housing communities that were added to the urban environment, including: Foxfire Ranch (≈120 acres), Diamond Ridge at Crystal Springs (≈115 acres), Canterbury Place (≈85 acres), Mariposa (≈85 acres), Elkona at Covenant (≈40 acres), Tuscany (≈30 acres), Cherrybrook Lane (≈25 acres), and two other areas of new homes (≈130 and 80 acres). Also in Victorville, the CDC reports the addition of multiple commercial and industrial developments, including the Nutro and AmeriCold Logistics buildings, two new car dealerships (≈15 acres total), the High Desert Travel Center (≈10 acres), and the Endeavour School of Exploration (≈10 acres). The Southern California Logistics Airport also added some paved strips for airplane parking (≈160 acres) and expanded a runway (≈25 acres).

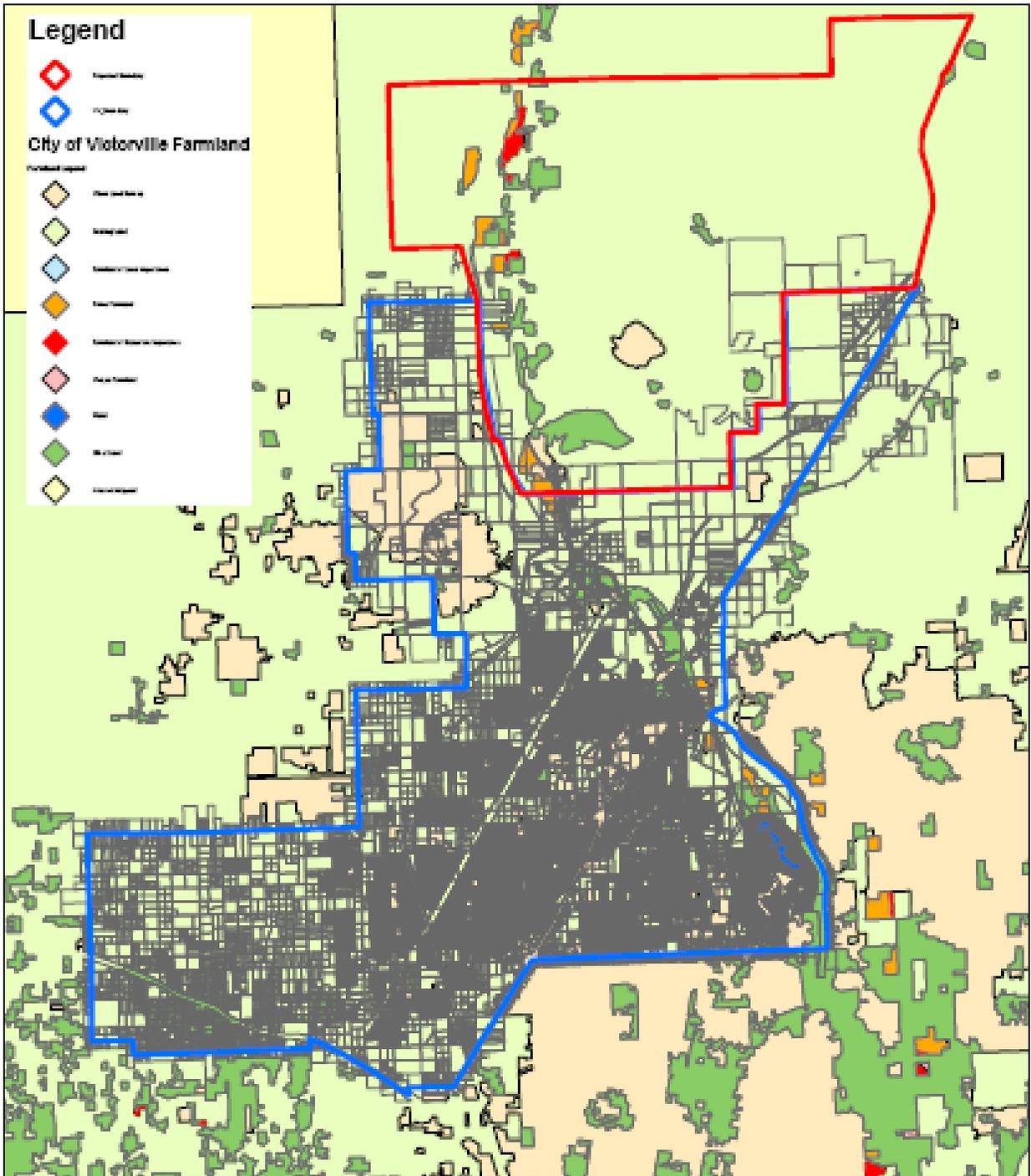


Figure 5.2-1. City of Victorville Important Farmland 2006 Map

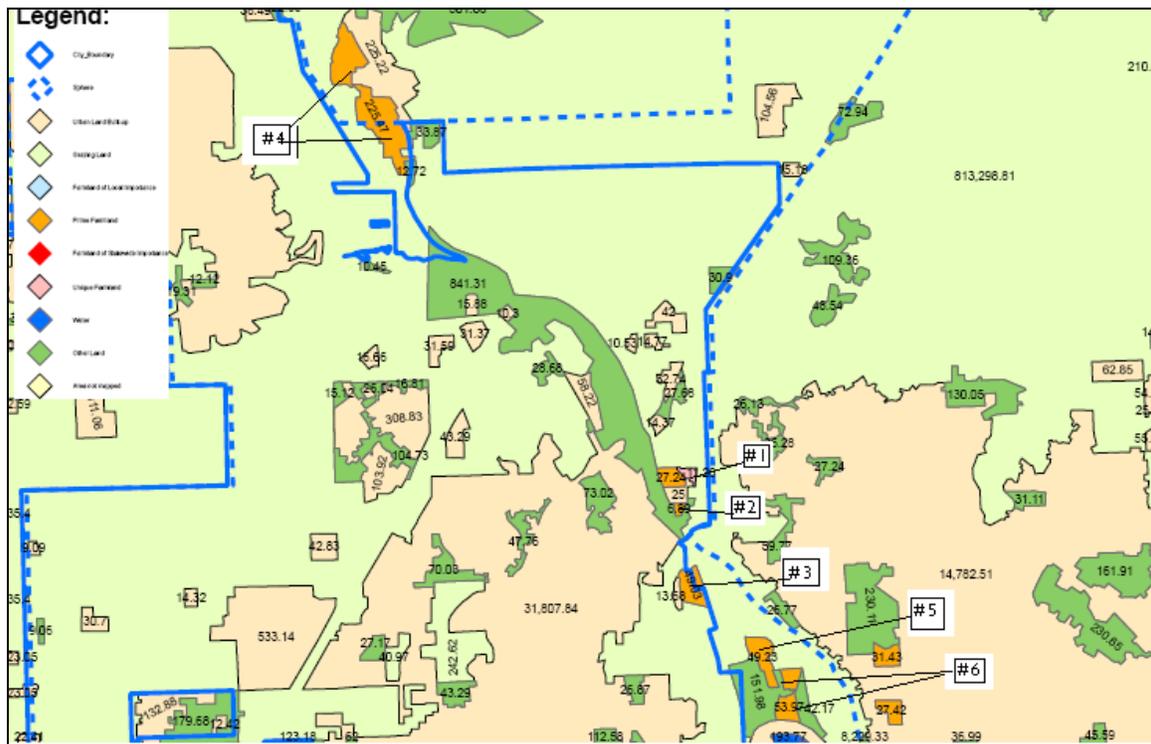


Figure 5.2-2. City of Victorville Important Farmland Detail Map

5.2.1.2 Existing Agricultural Lands

Existing City information and recent aerial photos indicate that Parcels #1, #2 and #3, as shown in Figure 5.2-2, are the only currently agriculturally producing areas within the Planning Area. Parcels #1 and #2, separated by a mobile home park, are currently designated by the existing City General Plan as Very Low Density Residential and Medium Density Residential, respectively, and zoned R-1B1/2 and R-2, districts which allow garden, orchard and field crops permitted use. Parcel #2 has not produced crop in a number of years and the 12 acre parcel is currently planted with peach trees.

Parcel #3 combines with adjacent non-Prime Farmland parcels to create a 148-acre property, known as Kemper-Campbell Ranch. This property is currently designated by the General Plan as Rural Residential and zoned A-E, designations which do permit agricultural use. This property is used for grazing.

There are currently 357.15 acres within the City zoned A-E and which could be used for agricultural production. However, outside of the properties noted above, none of the remaining A-E acres are used to produce agricultural products for commercial sale or for grazing. There are no existing agricultural producing properties or zoned properties within the Northern Expansion Area.

5.2.1.3 Williamson Act Land

The Williamson Act of 1965 allows cities and counties to preserve agricultural lands by providing a lower property tax rate to the property owner provided the land is used for agriculture, or recreation, or open space or any combination thereof. Such preserves must consist of at least one hundred acres unless findings of unique characteristics are made by the city or county. Williamson Act contracts require a minimum ten year initial term with automatic annual renewal unless a notice of non-renewal is submitted.

According to the existing County of San Bernardino Office of the Assessor Victorville District Office, the 148-acre Kemper-Campbell Ranch site is the only property within the Planning Area within a Williamson Act contract. The site encompasses parcel #3, and two adjacent parcels, identified by the County as : Assessor Parcel Numbers 0480-011-14-0000; 0480-011-20-0000; 0480-011-32-0000.

5.2.3 Thresholds of Significance

Significant impacts relative to agricultural resources are evaluated in this section based on Appendix G of the CEQA Guidelines. Implementation of the proposed project may have a significant adverse impact if it would do any of the following:

- 1) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?
- 2) Conflict with existing zoning for agricultural use, or a Williamson Act contract?
- 3) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use?

5.2.4 Project Impacts

General Plan 2030 Provisions: General Plan 2030 envisions the Planning Area as an urbanizing community with a mix of residential, commercial and industrial development. The proposed General Plan designation of the Mojave River corridor as Open Space would protect areas zoned A-E. The proposed General Plan does not contain any other provisions that address agricultural resources.

Scope of Impact Analysis: This analysis considers impacts to agricultural resources, which include lands designated as Prime Farmland, Unique Farmland, Farmland of Statewide

Importance and Farmland of Local Importance as defined by NRCS. Lands currently used for commercial agricultural production and within an active Williamson Act contract also are considered agricultural resources.

5.2.4.1 Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

Impact Discussion:

As shown in Figure 5-2.1, the NRCS identifies most of the Planning Area is Urban land Built-up. The undeveloped portions of the City, although designated by the NRCS as Grazing Land, are mostly barren, containing sparse areas of native scrub and grasses. The Grazing Lands are not considered an Important Farmland by the CDC.

The Prime Farmland areas are scattered along and adjacent to the Mojave River corridor. The General Plan 2030 proposes to designate the entire Mojave River corridor, inclusive the Prime Farmland areas, Open Space. As proposed by the General Plan 2030 Land Use Element, the Open Space land use designation refers to: land that is to remain undeveloped due to severe development constraints, lake or river bodies and floodplains; and reserved public open space in parks and golf courses. The purpose of this district is to provide for the protection of the public health, safety and general welfare in those areas of the City which, under present conditions, are subject to periodic flooding and accompanying hazards and to conserve natural resources of benefit to the general public interest. Zoning for Open Space areas outside the floodplain would be A-E and would permit residential at one unit per five acres and agricultural uses.

Parcels #1 and #2, which contain Prime Farmlands and existing agricultural operations, currently designated by the General Plan and City Zoning Map for residential uses, would not be changed by the proposed General Plan 2030 Land Use Map. As proposed, General Plan 2030 would retain the existing General Plan Very Low Density Residential and Medium Density Residential designations, , and as a result, the zoning would also remain unchanged.

The General Plan designation for the 148 acre Kemper-Campbell property would change from Rural Residential to Open Space. However, the underlying zoning of A-E would not be changed. The General Plan designation for the Prime Farmland area within the Northern Expansion Area would change from Urban Conservation to Open Space. Zoning for this area would occur following the City's annexation of the area, and is expected to be A-E.

There are no Unique Farmland, or Farmland of Statewide Importance (Farmland) designated by the NRCS within the Planning Area.

Over time as Victorville continues to develop, the parcels #1 and #2, currently designated for residential uses, are expected to ultimately transition to their General Plan use as residential. This transition to non-agricultural uses is likely to occur under the existing City General Plan, absent the project. General Plan 2030 retains the residential designation of this agricultural property and continues to promote development of the Planning Area. Because General Plan 2030 would not intensify land uses on or surrounding these properties, project impacts relative to the conversion of Prime Farmland to non-agricultural uses on parcels #1 and #2 are considered less than significant.

The Open Space designation proposed for the Prime Farmland on the Kemper-Campbell property and in the Northern Expansion Area would not support conversion of these properties to non-agricultural uses. Impacts relative to the conversion of Prime Farmland to non-agricultural uses on these properties are considered less than significant.

Impact Finding: Less than Significant.

5.2.4.2 Conflict with existing zoning for agricultural use, or a Williamson Act contract?

Impacts Discussion:

As proposed by the General Plan 2030, the zoning for the two existing agricultural properties would not be changed. The General Plan designation for the Kemper-Campbell property would change from Rural Residential to Open Space, but the underlying zoning of A-E would not be changed. The Kemper-Campbell property is the last remaining property in the Planning Area under a Williamson Act contract.

General Plan 2030 does not propose to alter existing zoning for an agriculture use or for a property with a Williamson Act contract. Consequently, project impacts relative to conflicts with zoning for an agricultural use or Williamson Act contract are considered less than significant.

Impact Finding: Less than Significant.

5.2.4.3 Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use?

Impacts Discussion:

There are six Prime Farmland parcels, and three agricultural properties remaining in the Planning Area. As proposed by the General Plan 2030, the zoning for these agricultural properties would not be changed and would not restrict current agricultural uses on these properties.

The General Plan 2030 does not involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use

Impact Finding: No impact.

5.2.5 Cumulative Impacts

Impact Discussion:

Although originally settled in the 1900's as an agrarian community, Victorville has since transitioned to an urbanized community with large areas of residential, commercial and industrial development. The two existing agricultural properties comprise 160 acres (44 acres and 148 acres). Compared to the Planning Area which comprises 98.5 miles (or 2,746,022,400 square feet), the existing agricultural properties comprise less than 1% of the entire Planning Area.

The remaining agricultural properties are surrounded by open space and urban uses. Their expected ultimate conversion to non-agricultural use would not cause or accelerate the conversion of other agricultural areas to urban use. Consequently, the project is not expected to result in cumulatively significant adverse impacts relative to agricultural resources.

Impact Finding: No impact.

5.2.6 Mitigation Measures – None required.

5.2.7 Level of Significance After Policies/Mitigation Measures – Less than Significant.

5.3 AIR QUALITY

5.3.1 Existing Conditions

This section of the EIR discusses existing air quality conditions for the Planning Area, the regulatory setting and the air quality standards used by state and federal regulatory agencies. The potential air quality impacts of General Plan buildout from construction activities and from vehicular emissions is also evaluated. As needed, appropriate air quality mitigation measures are recommended. Technical Information referenced in this section was obtained from the technical report prepared for the project by Giroux & Associates (Appendix C).

5.3.1.1 Atmospheric Setting

Hot summers, mild winters, infrequent rainfall, moderate afternoon breezes and generally fair weather characterize the climate of the Victor Valley, an interior sub-climate of Southern California's Mediterranean climate. The clouds and fog that form along the Southern California coastline rarely extend across the mountains to Victorville. The most important local weather pattern is associated with the funneling of the daily onshore sea breeze through El Cajon Pass into the upper desert to the northeast of the heavily developed portions of the Los Angeles Basin. This daily airflow brings polluted air into the area late in the afternoon from late spring to early fall. This transport pattern creates both unhealthy air quality as well as destroying the scenic vistas of the mountains surrounding the Victor Valley.

Table 5.3-1 summarizes the climatic data observed throughout the Victorville region. The low annual humidity, moderate temperature swings, very low rainfall and frequent breezy conditions are typical of California's "Upper Desert" sub-climate.

Temperatures at Victorville, as determined from long-term climatic data at SCLA in Table 5.3-1, average a very comfortable 62 degrees (F) year-round, but it gets very hot on summer afternoons (97 degrees average July maximum) and quite cool on winter mornings (35 degrees average minimum January). About 100 days per year, temperatures reach 90 degrees, while about 40 mornings temperatures drop to slightly sub-freezing temperatures. The warm summer afternoons are quite dry and the breezes are moderate such that physical comfort is good despite the warm weather.

Rainfall in the Planning Area varies considerably in both time and space. Almost all the annual rainfall comes from the fringes of mid-latitude storms from late November to early April. Summers are often completely dry except for occasional widely scattered summer thundershowers. The Victor Valley is located in a transition area between the semi-arid conditions of the Los Angeles Basin and the completely arid portions of the Mojave Desert. The Valley's location in the "rain-shadow" of the San Gabriel Mountains further enhances its dryness. Rainfall averages around 3.4 inches per year in the Planning Area with light to moderate rain falling on only 10 days per year. Because of Southern California's location on the edge of the mid-latitude storm track, a shift in the jet stream aloft of a few hundred miles north

or south can mean the difference between a year with twice the annual average rainfall and one with drought conditions where less than one-half of the normal rainfall is observed. The Victorville area may occasionally experience a light winter snowfall (1-2 inches per year), but temperatures do not remain cold enough for the snow to stay on the ground for very long.

Winds blow primarily from south to north and from west to east in response to the regional pattern of airflow from the cool ocean to the heated interior. A large portion of the airflow across the Planning Area therefore has its origin in more developed areas of the Los Angeles Basin. Over 50 percent of all airflow derives from a narrow sector from south through west. These winds are moderately strong, averaging from 8-12 mph, but become light and variable at night with about 10 percent of all hours almost complete calm. Afternoon winds may, at times, exceed 20 mph and begin to pick up fine dust and other loose material.

**Table 5.3-1
Victorville Area Climatic Data Summary**

Month	Mean Max. (°F)	Mean Min. (°F)	Days >90°F	Days <32°F	Rel. Hum. (%)	Rain-fall (in.)	Days >0.1 in.	Winds > 20 mph (%)
Jan.	59	35	0.0	5.3.1	56	1.05	2.4	7.1
Feb.	61	36	0.0	8.7	52	0.35	1.1	9.7
Mar.	68	41	0.3	2.3	48	0.36	0.9	13.1
Apr.	75	47	1.1	0.2	44	0.12	0.5	13.9
May	82	52	6.0	0.0	40	0.10	0.4	13.2
June	93	62	22.2	0.0	32	0.00	0.0	5.3.4
July	97	67	28.7	0.0	29	0.15	0.7	5.9
Aug.	94	64	26.8	0.0	31	0.11	0.3	6.6
Sep.	86	56	5.3.4	0.0	33	0.08	0.2	4.4
Oct.	75	47	2.1	0.2	38	0.22	1.0	4.7
Nov.	62	37	0.0	7.7	46	0.46	0.8	6.1
Dec.	58	34	0.0	13.1	51	0.39	1.4	6.3
Annual	76	48	97.6	42.3	42	3.4	9.7	8.5

Source: U.S. Naval Weather Service; World-Wide Airfield Summaries (SCLA).

The wind distribution is an important atmospheric parameter because it controls both the initial rate of pollutant dispersal near the source as well as the ultimate regional trajectory of air pollution. These prevailing winds provide a vehicle for visible smog to be transported from the South Coast Air Basin (SCAB) through the mountain passes to the Mojave Desert Air Basin (MDAB). The rapid daytime heating of the lower air leads to convective activity. This exchange of upper air tends to accelerate surface winds during the warm part of the day when convection is at a minimum. During the winter, the rapid cooling of the surface layers at night retards this exchange of momentum that often results in calm winds.

In addition to winds, which govern the horizontal dispersion of locally generated emissions, vertical temperature structure controls the depth through which pollutants can be mixed. The strong surface heating by day in the Mojave Desert usually creates a vertical temperature distribution that decreases rapidly with height (unstable). At night, especially in winter, cool air settles in low-lying areas and forms shallow radiation-induced temperature inversions (stable) that may temporarily restrict the dispersion of low-level pollutant emissions. Such inversions "burn off" rapidly after sunrise. The elevated subsidence/marine inversions that create major air quality problems in coastal environments are rarely observed in the desert. When they do form, their bases are from 6,000 to 8,000 feet mean sea level and thus do not impede vertical dispersion. The low-level radiation inversions, however, play an important role in limiting the dispersion capacity of the local airshed from late evening to the next morning. Because they burn off rapidly in the morning, their importance to the dispersion of air contaminants is limited to localized effects.

5.3.2 Regulatory Framework

5.3.2.1 Ambient Air Quality Standards (AAQS)

In order to assess the air quality impact of operations at the proposed Victorville General Plan 2030, that impact, together with baseline air quality levels, must be compared to the applicable ambient air quality standards. These standards are the levels of air quality considered safe, with an adequate margin of safety, to protect the public health and welfare. They are designed to protect that segment of the public most susceptible to respiratory distress or infection such as asthmatics, the elderly, the very young, people weak from other disease or illness, and persons engaged in heavy work or exercise, all called "sensitive receptors."

Healthy adults can tolerate periodic exposure to air pollution levels somewhat above these standards before adverse health effects are observed. Recent research has shown, however, that chronic exposure to ozone even at the federal clean air standard level can create unhealthful reactions through pulmonary distress. Just meeting clean air standards may therefore ultimately not be enough to protect human health. An additional margin of safety is needed to achieve all clean air objectives and protect human health.

The Clean Air Act Amendments (CAAA) of 1970 established national AAQS with states retaining the option to adopt more stringent standards or to include other pollution species. Because California already had standards in existence before the federal AAQS were established, and because of unique meteorological problems in California, there is considerable

diversity between state and federal standards currently in effect in California, as shown in Table 5.3-2. Sources and health effects of these criteria pollutants are described in Table 5.3-3.

The entries in Table 5.3-2 include the federal standards for chronic (8-hour) ozone exposure and for ultra-small diameter particulate matter of 2.5 microns or less in diameter (called "PM-2.5") adopted in 1997. The Environmental Protection Agency's (EPA) authority to adopt such standards was subsequently challenged. In a unanimous decision published in February 2001, the U. S. Supreme Court ruled the EPA did have authority to promulgate standards without specific congressional authority, and that a cost-benefit analysis was not required for health-based standards. The Court also ruled, however, that there was an attainment schedule inconsistency between "old" and "new" standards. This inconsistency was resolved through a consent decree signed by the EPA in 2002. The decree required that EPA develop (non) attainment designations for the federal 8-hour ozone and the PM-2.5 standards by 2005. Preparation and implementation of non-attainment plans was to be completed in 2006.

After further review of the relationship between fine particulate matter and human health effects, the California Air Resources Board adopted a new state standard for PM-2.5 that is more stringent than the federal standard. This standard was adopted June 20, 2002 and went into effect in July 2003. The State PM-2.5 standard is more of a goal in that it does not have specific attainment planning requirements like a federal clean air standard. The State standard became enforceable in 2003 when it was incorporated into the California Health and Safety Code.

Pollutant	Averaging Time	California Standards		Federal Standards		
		Concentration	Method	Primary	Secondary	Method
Ozone (O ₃)	1 Hour	0.09 ppm (180 µg/m ³)	Ultraviolet Photometry	-	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.07 ppm (140 µg/m ³)		0.08 ppm (157 µg/m ³)		
Respirable Particulate Matter (PM ₁₀)	24 Hour	50 µg/m ³	Gravimetric or Beta Attenuation	150 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m ³		Revoked (2006)		
Fine Particulate Matter (PM _{2.5})	24 Hour	No Separate State Standard		35 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m ³	Gravimetric or Beta Attenuation	15 µg/m ³		
Carbon Monoxide (CO)	8 Hour	9.0 ppm (10 mg/m ³)	Non-Dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m ³)	None	Non-Dispersive Infrared Photometry (NDIR)
	1 Hour	20 ppm (23 mg/m ³)		35 ppm (40 mg/m ³)		
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m ³)		-		

**Table 5.3-2
Ambient Air Quality Standards**

Pollutant	Averaging Time	California Standards		Federal Standards		
		Concentration	Method	Primary	Secondary	Method
Nitrogen Dioxide (NO ₂)	Annual Arithmetic Mean	0.030 ppm (56 µg/m ³)	Gas Phase Chemiluminescence	0.053 ppm (100 µg/m ³)	Same as Primary Standard	Gas Phase Chemiluminescence
	1 Hour	0.18 ppm (338 µg/m ³)		–		
Lead	30-Day average	1.5 µg/m ³	Atomic Absorption	–	–	–
	Calendar Quarter	–		1.5 µg/m ³	Same as Primary Standard	High Volume Sampler and Atomic Absorption
Sulfur Dioxide (SO ₂)	Annual Arithmetic Mean	–	Ultraviolet Fluorescence	0.030 ppm (80 µg/m ³)	–	Spectrophotometry (Pararosaniline Method)
	24 Hour	0.04 ppm (105 µg/m ³)		0.14 ppm (365 µg/m ³)	–	
	3 Hour	–		–	0.5 ppm (1,300 µg/m ³)	
	1 Hour	0.25 ppm (655 µg/m ³)		–	–	
Visibility Reducing Particles	8 Hour	Extinction coefficient of 0.23 per kilometer—visibility of 10 miles or more (0.07–30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70 percent. Method: Beta Attenuation and Transmittance through Filter Tape.		NO FEDERAL STANDARDS		
Sulfates	24 Hour	25 µg/m ³	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m ³)	Ultraviolet Fluorescence			
Vinyl Chloride	24 Hour	0.01 ppm (26 µg/m ³)	Gas Chromatography			

Source: California Air Resources Board (01/01/08)

**Table 5.3-3
Health Effects of Major Criteria Pollutants**

Pollutants	Sources	Primary Effects
Carbon Monoxide (CO)	<ul style="list-style-type: none"> • Incomplete combustion of fuels and other carbon-containing substances, such as motor exhaust. • Natural events, such as decomposition of organic matter. 	<ul style="list-style-type: none"> • Reduced tolerance for exercise. • Impairment of mental function. • Impairment of fetal development. • Death at high levels of exposure. • Aggravation of some heart diseases (angina).
Nitrogen Dioxide (NO ₂)	<ul style="list-style-type: none"> • Motor vehicle exhaust. • High temperature stationary combustion. • Atmospheric reactions. 	<ul style="list-style-type: none"> • Aggravation of respiratory illness. • Reduced visibility. • Reduced plant growth. • Formation of acid rain.
Ozone (O ₃)	<ul style="list-style-type: none"> • Atmospheric reaction of organic gases with nitrogen oxides in sunlight. 	<ul style="list-style-type: none"> • Aggravation of respiratory and cardiovascular diseases. • Irritation of eyes. • Impairment of cardiopulmonary function. • Plant leaf injury.
Lead (Pb)	<ul style="list-style-type: none"> • Contaminated soil. 	<ul style="list-style-type: none"> • Impairment of blood function and nerve construction. • Behavioral and hearing problems in children.
Fine Particulate Matter (PM-10)	<ul style="list-style-type: none"> • Stationary combustion of solid fuels. • Construction activities. • Industrial processes. • Atmospheric chemical reactions. 	<ul style="list-style-type: none"> • Reduced lung function. • Aggravation of the effects of gaseous pollutants. • Aggravation of respiratory and cardio respiratory diseases. • Increased cough and chest discomfort. • Soiling. • Reduced visibility.
Fine Particulate Matter (PM-2.5)	<ul style="list-style-type: none"> • Fuel combustion in motor vehicles, equipment, and industrial sources. • Residential and agricultural burning. • Industrial processes. • Also, formed from photochemical reactions of other pollutants, including NO_x, sulfur oxides, and organics. 	<ul style="list-style-type: none"> • Increases respiratory disease. • Lung damage. • Cancer and premature death. • Reduces visibility and results in surface soiling.
Sulfur Dioxide (SO ₂)	<ul style="list-style-type: none"> • Combustion of sulfur-containing fossil fuels. • Smelting of sulfur-bearing metal ores. • Industrial processes. 	<ul style="list-style-type: none"> • Aggravation of respiratory diseases (asthma, emphysema). • Reduced lung function. • Irritation of eyes. • Reduced visibility. • Plant injury. • Deterioration of metals, textiles, leather, finishes, coatings, etc.

Source: California Air Resources Board, 2002

Because of the strong evidence that chronic ozone exposure is more harmful than short-term hourly levels, the CARB has adopted a new ozone standard. The new standard mirrors the

federal longer-term (8 hour) exposure limit. The California 8-hour ozone standard is slightly more stringent than the federal standard. It does not have a specific attainment deadline, but only that continued progress toward attainment must be demonstrated. A new State AAQS for NO₂ has also been adopted that is more stringent than the federal standard.

As part of EPA's 2002 consent decree on clean air standards, an additional review of airborne particulate matter (PM) and human health was initiated. A substantial modification of federal clean air standards for PM was promulgated in 2006. Standards for PM-2.5 were strengthened, a new class of PM in the 2.5 to 10 micron size was created, some PM-10 standards were revoked, and a distinction between rural and urban air quality was adopted.

Because of the intrusion of the fringe of the Los Angeles urban pollution plume into the upper desert, EPA designated the western Mojave Desert as "moderate non-attainment" for the 8-hour ozone standard with an attainment goal of 205.3. Although the Mojave Desert Air Basin (MDAB) is a designated non-attainment area for PM-10, very little of the dust is in the sub-microscopic PM-2.5 range. The MDAB is unclassified for PM-2.5, but any violations of the federal PM-2.5 standard are rare.

5.3.2.2 Greenhouse Gas Legislation

"Greenhouse gases" (so called because of their role in trapping heat near the surface of the earth) emitted by human activity are implicated in global climate change, commonly referred to as "global warming." These greenhouse gases contribute to an increase in the temperature of the earth's atmosphere by transparency to short wavelength visible sunlight, but near opacity to outgoing terrestrial long wavelength heat radiation. The principal greenhouse gases (GHGs) are carbon dioxide, methane, nitrous oxide, ozone, and water vapor. Fossil fuel consumption in the transportation sector (on-road motor vehicles, off-highway mobile sources, and aircraft) is the single largest source of GHG emissions, accounting for approximately half of GHG emissions globally. Industrial and commercial sources are the second largest contributors of GHG emissions with about one-fourth of total emissions.

California has passed several bills and the Governor has signed at least three executive orders regarding greenhouse gases. The Governor's Office of Planning and Research is in the process of developing CEQA significance thresholds for GHG emissions but thresholds have yet to be established. GHG statutes and executive orders (EO) include AB 32, SB 1368, EO S-03-05, EO S-20-06 and EO S-01-07.

AB 32 is one of the most significant pieces of environmental legislation that California has adopted. Among other things, it is designed to maintain California's reputation as a "national and international leader on energy conservation and environmental stewardship." It will have wide-ranging effects on California businesses and lifestyles as well as far reaching effects on other states and countries. A unique aspect of AB 32, beyond its broad and wide-ranging mandatory provisions and dramatic GHG reductions are the short time frames within which it must be implemented. Major components of the AB 32 include:

- Require the monitoring and reporting of GHG emissions beginning with sources or categories of sources that contribute the most to statewide emissions.

- Requires immediate “early action” control programs on the most readily controlled GHG sources.
- Mandates that by 2020, California’s GHG emissions be reduced to 1990 levels.
- Forces an overall reduction of GHG gases in California by 25-40%, from business as usual, over the next 13 years (by 2020).
- Must complement efforts to achieve and maintain federal and state ambient air quality standards and to reduce toxic air contaminants.

Statewide, the framework for developing the implementing regulations for AB 32 is under way. Additionally, through the California Climate Registry (CCAR), general and industry-specific protocols for assessing and reporting GHG emissions have been developed. GHG sources are categorized into direct sources (i.e. company owned) and indirect sources (i.e. not company owned). Direct sources include combustion emissions from on-and off-road mobile sources, and fugitive emissions. Indirect sources include off-site electricity generation and non-company owned mobile sources.

5.3.3 Baseline Air Quality

Monitoring of air quality in the MDAB is the responsibility of the Mojave Desert Air Quality Management District (MDAQMD) headquartered in Victorville, California. The most representative air monitoring station is the Victorville Station located at 14306 Park Avenue. Ozone, carbon dioxide, nitrogen oxide, 5.3-micron diameter particulate matter (PM-10) and fine particulate matter (PM-2.5) are monitored at the Victorville facility. Table 5.3-4 summarizes the last six years of monitoring data from the available data at the Victorville monitoring station. Key findings are summarized below:

1. Photochemical smog (ozone) levels frequently exceed standards. The 1-hour state standard was violated an average of 15 times a year in the last six years near Victorville. However, the State eight-hour standard has been exceeded much more frequently (approximately 15% of all days). While ozone levels are still high, they are much lower than 10 to 20 years ago. Attainment of all clean air standards in the project vicinity is not likely to occur soon, but the severity and frequency of violations is expected to continue to slowly decline during the current decade.
2. PM-10 levels have exceeded the state 24-hour standard on approximately six percent of all measurement days. The three times less stringent federal 24 hour-standard has been exceeded only twice in the last six years. No significant trend can be seen in regards to maximum 24-hour PM-10 concentrations over the past 6 years, though there was a spike in year 2007. However, this reading was taken during a high wind event.
3. A fraction of PM-10 is comprised of ultra-small diameter particulates capable of being inhaled into deep lung tissue (PM-2.5). Year 2006 showed the lowest maximum 24-hour concentration in the past 6 years. The national 24-hour PM-2.5 standard was recently revised from 65 $\mu\text{g}/\text{m}^3$ to 35 $\mu\text{g}/\text{m}^3$. Even so, the newly adopted, more stringent 24-hour federal standard is very rarely exceeded.

4. More localized pollutants such as carbon monoxide and nitrogen oxides, etc. are very low throughout the Victorville area. There is substantial excess dispersive capacity to accommodate localized vehicular air pollutants such as NO_x or CO without any threat of violating applicable AAQS.

The Mojave Desert Air Basin (MDAB) does not generate enough ozone precursors to substantially reduce ozone levels. Attainment of ozone standards is most strongly linked to air quality improvements in upwind communities. PM-10, however, is affected by construction, by unpaved road travel, by open fires and/or by agricultural practices. These emissions can be controlled to some extent, and are, therefore, components in a respirable range (5.3-micron diameter) particulate matter (PM-10) MDAQMD Attainment Plan. The attainment plan for PM-10 was adopted in July 1995 for designated federal PM-10 non-attainment areas in the MDAB. Any General Plan development-related PM-10 generation activities require an enhanced level of controls consistent with the control measures that are part of the MDAQMD Attainment Plan.

Pollutant/Standard	2002	2003	2004	2005	2006	2007
Ozone						
1-Hour > 0.09 ppm (S)	30	22	8	16	9	7
8-Hour > 0.07 ppm (S)	68	72	39	53	47	45
8-Hour > 0.08 ppm (F)	25	19	4	12	6	27
Max. 1-Hour Conc. (ppm)	0.127	0.145	0.111	0.131	0.136	0.107
Carbon Monoxide						
1-Hour > 20. ppm (S)	0	0	0	0	0	0
1-Hour > 9. ppm (S, F)	0	0	0	0	0	0
Max 1-Hour Conc. (ppm)	3.0	3.9	2.4	2.5	2.2	-
Max 8-Hour Conc. (ppm)	1.8	2.1	1.7	1.6	1.6	1.6
Nitrogen Dioxide						
1-Hour > 0.18 ppm (S)	0	0	0	0	0	0
Max 1-Hour Conc. (ppm)	0.085	0.090	0.080	0.077	0.079	0.71
Inhalable Particulates (PM-10)						
24-Hour > 50 µg/m ³ (S)	9/59	3/59	1/30	1/62	2/60	4/56
24-Hour > 150 µg/m ³ (F)	0/53	1/49	0/26	0/59	0/52	1/56
Max. 24-Hr. Conc. (µg/m ³)	98.	169.	53.	57.	56.	339.**
Ultra-Fine Particulates (PM-2.5)³						
24-Hour > 35 µg/m ³ (F)*	1/119	0/108	0/124	0/109	0/63	0/--

Table 5.3-4
Planning Area Air Quality Monitoring Summary – 2002-2007
(Days Standards Were Exceeded and Maximum Observed Levels)

Pollutant/Standard	2002	2003	2004	2005	2006	2007
Max. 24-Hr. Conc. ($\mu\text{g}/\text{m}^3$)	38.0	28.0	34.0	27.0	22.0	28.0
Source: Mojave Desert Air Basin-Victorville Air Monitoring Station Data Summary, * Revised standard adopted in 2006, ** High wind event						

5.3.3 Thresholds of Significance

Significant impacts relative to air quality are evaluated in this section based on Appendix G of the CEQA Guidelines. Implementation of the proposed project may have a significant adverse impact if it would do any of the following:

1. Conflict with or obstruct implementation of the applicable air quality plan?
2. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?
3. Expose sensitive receptors to substantial air pollutant concentrations?
4. 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?
5. Create objectionable odors affecting a substantial number of people?

5.3.3.1 Project Air Quality Impact Criteria

Air quality impacts are significant if they cause clean air standards to be exceeded, or if they substantially worsen an existing violation. Impacts deriving from automobile or truck exhaust occur when precursor tailpipe emissions are converted to more unhealthful pollutants. This process may take many hours. By the time this conversion is completed, the contribution from any individual project will have been diluted to undetectable levels miles away from the emissions source.

Because such "secondary" impacts cannot be evaluated relative to ambient clean air standards, many air quality jurisdictions have developed surrogate indicators of potential impact significance. Most commonly, the volume of material emitted is used as a significance criterion even though there is no effective mechanism to convert the emissions into actual air quality. The Mojave Desert AQMD has adopted numerical emissions thresholds as indicators of potential impact even if the actual air quality increment cannot be directly quantified. The MDAQMD thresholds are as follows:

Carbon Monoxide (CO)	548 pounds/day
Nitrogen Oxides (NO _x)	137 pounds/day
Sulfur Oxides (SO _x)	137 pounds/day
Reactive Organic Gases (ROG)	137 pounds/day
Particulate Matter (PM-10)	82 pounds/day

5.3.3.2 Additional Screening Criteria

The MDAQMD CEQA Handbook also states that additional indicators should be used as screening criteria to determine the need for further analysis with respect to air quality. The additional indicators relevant to the General Plan update are as follows:

- Generates total emissions (direct and indirect) in excess of the MDAQMD thresholds.
- Generate a violation of any ambient air quality standard when added to the local background
- Creates odors that could be considered a nuisance by any substantial number of people.
- Represents a level of growth not previously anticipated in regional air quality planning.

5.3.4 Project Impacts

General Plan 2030 Provisions: The Resource Element of the General Plan, mandated by State Government Code Section 65302(d), includes provisions related to natural hazards. Within the proposed General Plan 2030 Resource Element the following goals, objectives, policies, and implementation measures would apply to air quality:

GOAL #6: Good Air Quality – Promote Clear Air with Low Pollutant Concentrations that do not Adversely Affect Respiratory Health

Objective 6.1: Contribute to regional air quality plan attainment

Policy 6.1.1: Encourage planning and development activities, that reduce the number and length of single occupant automobile trips

Implementation Measure 6.1.1.1: Require large projects (exceeding 150,000 square feet of development) to incorporate Transportation Demand Management (TDM) techniques, such as promoting carpooling and transit, as a condition of project approval.

Implementation Measure 6.1.1.2: Require dust abatement actions for all new construction and redevelopment projects.

Implementation Measure 6.1.1.3: Maintain parking standards that encourage and facilitate alternative transportation modes, including reduced parking standards for

transit-oriented developments, mixed-use developments, and preferential parking for carpoolers.

Implementation Measure 6.1.1.4: Replace existing gasoline powered City vehicles and equipment with clean fuels and vehicles and equipment.

Objective 6.2: Reduce health risks associated with air pollution

Policy 6.2.1: Encourage compliance with the California Air Resources Board (CARB) “Air Quality and Land Use Handbook: A Community Health Perspective”, which provides guidelines for siting new sensitive land uses in proximity to air pollutant emitting sources

Implementation Measure 6.2.1.1: 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.

Implementation Measure 6.2.1.2: 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).

Implementation Measure 6.2.1.3: Avoid siting new sensitive land uses within 1,000 feet of a major service and maintenance rail yard.

Implementation Measure 6.2.1.4: 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 Mojave Desert Air District prior to placement.

Implementation Measure 6.2.1.5: 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.

Scope of Impact Analysis: This analysis considers air quality impacts that would occur with implementation of the proposed General Plan 2030. Compared to existing conditions, the proposed General Plan 2030 would substantially increase development in the Planning Area and associated vehicle trips. (Reference Tables 5.3-7 and 5.3-8, below.) These expected changes under the General Plan 2030 could result in increased air pollution emissions.

The scope of analysis for this air quality assessment includes consideration of regional air quality management plans, forecasting of project-related local air quality vehicular (mobile) and area source emissions, compliance of the project with applicable air quality standards (CEQA and MDAQMD) and recommendations of mitigation measures which reduce project air pollutant emissions.

Although there are some differences in language between the MDAQMD additional indicators and the statements included in the CEQA Initial Study Checklist for assessing air quality impacts, the differences are minor. MDAQMD has specific numerical emission thresholds (lbs/day) for five emissions (CO, NO_x, SO_x, ROG and PM-10). The MDAQMD thresholds are used in the evaluation of project air quality impacts. Although there are no adopted thresholds for greenhouse gases, projections of GHG project emissions has also been completed.

Construction Related Air Quality Impact Analysis: Dust is typically the primary concern during construction of new buildings and infrastructure. Because such emissions are not amenable to collection and discharge through a controlled source, they are called "fugitive emissions." Emission rates vary as a function of many parameters (soil silt, soil moisture, wind speed, area disturbed, number of vehicles, depth of disturbance or excavation, etc.). These parameters are not known with any reasonable certainty prior to project development and may change from day to day. Any assignment of specific parameters to an unknown future date is speculative and conjectural.

Because of the inherent uncertainty in the predictive factors for estimating fugitive dust generation, regulatory agencies typically use one universal "default" factor based on the area disturbed assuming that all other input parameters into emission rate prediction fall into midrange average values. This assumption may or may not be totally applicable to site-specific conditions on a proposed construction site. As noted previously, emissions estimation for project-specific fugitive dust sources is therefore characterized by a considerable degree of imprecision.

Average daily PM-10 emissions during site grading and other disturbance are stated in the SCAQMD Handbook to be 26.4 pounds/acre. This estimate is based upon required dust control measures in effect in 1993 when the AQMD CEQA Air Quality Handbook was prepared. The MDAQMD PM-10 attainment plan requires the use of strongly enhanced control procedures. Use of enhanced dust control procedures such as continual soil wetting, use of supplemental binders, early paving, etc. can achieve a substantially higher PM-10 control efficiency. Daily emissions with use of reasonably available control measures (RACMs) for PM-10 can reduce emission levels to around ten (10) pounds per acre per day. With the use of best available control measures (BACMs) the California Air Resources Board URBEMIS2007 computer model predicts that emissions can be reduced to 1-2 pounds per acre per day.

Annual construction estimates were calculated for a typical year in the mid portion of the City of Victorville build-out cycle. Emissions were calculated for year 2020. The net residential and non-residential growth between 2030 and 2005 was divided by 25 years to determine the average yearly rate of construction.

For year 2020, the Air Resource Board URBEMIS2007 computer model predicts that 139 acres could be under simultaneous heavy construction at some point. With the use of only minimum construction dust control, daily PM-10 emissions during site grading could reach 3,672 pounds per day ($139 \times 26.4 = 3,672$ lb/day). The MDAQMD significance threshold of 82 pounds per day would be greatly exceeded. 3,672 pounds per day ($139 \times 26.4 = 3,672$ lb/day). The MDAQMD significance threshold of 82 pounds per day would be greatly exceeded.

With the use of RACMs, daily PM-10 emissions during site grading could be reduced to 1,390 pounds per day ($139 \times 5.3.0 = 1,390$ lb/day), still above the MDAQMD threshold. With the use of Best Available Control Measures (BACM), daily PM-10 emissions can be further reduced. As shown in the URBEMIS2007 computer model output, PM-10 emissions from soil disturbance can be reduced to less than 129 pounds per day with the application of the BACM's detailed in the appendix though this still would exceed the significance threshold.

Current research in particulate-exposure health suggests that the most adverse effects derive from ultra-small diameter particulate matter comprised of chemically reactive pollutants such as sulfates, nitrates or organic material. A national clean air standard for particulate matter of 2.5 microns or smaller in diameter (called "PM-2.5") was adopted in 1997. A limited amount of construction activity particulate matter is in the PM-2.5 range. PM-2.5 emissions are estimated by the SCAQMD to comprise 20.8 percent of PM-10. Other studies have shown that the fugitive dust fraction of PM-2.5 is closer to 10 percent. With mitigation, PM-2.5 emissions during grading will be reduced to 27 pounds per day.

In addition to fine particles that remain suspended in the atmosphere semi-indefinitely, construction activities generate many larger particles with shorter atmospheric residence times. This dust is comprised mainly of large diameter inert silicates that are chemically non-reactive and are further readily filtered out by human breathing passages. These fugitive dust particles are therefore more of a potential soiling nuisance as they settle out on parked cars, outdoor furniture, or landscape foliage rather than being any adverse health hazard. The deposition distance of most such dust particles is very close to the source (typically 100 feet).

Exhaust emissions will result from on and off-site heavy equipment. The types and numbers of equipment will vary among contractors such that such emissions cannot be quantified with certainty. Equipment exhaust emissions were calculated presuming that grading will be balanced on-site, and that initial heavy grading and infrastructure development will gradually shift toward building construction and then for finish construction, paving, landscaping, etc. The URBEMIS2007 computer model was used to calculate emissions from the following prototype default (implicit in the computer model) construction equipment fleet:

Table 5.3-5 Typical Construction Equipment Fleet	
Grading	2 Rubber Tired Dozers
	2 Graders
	1 Compactor
	5 Scrapers

	1 Tractor/Loader/Backhoe
	2 Water Trucks
Paving	1 Paver
	2 Paving Equipment
	2 Rollers
Construction	1 Crane
	3 Forklifts
	1 Generator Set
	1 Welder
	3 Tractor/Loader/Backhoes
Source: URBEMIS2007 default equipment fleet	

Calculated construction activity emissions are summarized in Table 5.3-6.

Activity	ROG	NO _x	CO	SO ₂	PM-10	PM-2.5	CO ₂
Grading 2020							
No Mitigation	11.5	80.6	50.6	0.0	2,398.9	503.2	16,316.1
With Mitigation	11.5	68.5	50.6	0.0	222.6	46.8	16,316.1
Construction and Paving 2020							
No Mitigation	889.5	114.6	410.7	1.2	12.0	7.9	124,953.5
With Mitigation	802.0	111.5	410.7	1.2	10.9	6.9	124,953.5
MDAQMD Threshold	137	137	548	137	82	-	-
Source: URBEMIS2007 Model, Output in Appendix C.							

Emission levels for two out of the five of the pollutants analyzed would exceed threshold levels. PM-10 emissions from fugitive dust during grading and ROG during painting and coating during area wide build-out will generate emissions that will likely exceed MDAQMD thresholds by a wide margin. The construction activity emissions should be considered as having a cumulatively significant air quality impact.

Construction activity air quality impacts occur mainly in close proximity to the surface disturbance area. There may, however, be some "spill-over" into the surrounding community. That spill-over may be physical as vehicles drop or carry out dirt or silt is washed into public streets. Passing non-project vehicles then pulverize the dirt to create off-site dust impacts. "Spillover" may also occur via congestion effects. Construction may entail roadway encroachment, detours, lane closures and competition between construction vehicles (trucks and contractor employee commuting) and ambient traffic for available roadway capacity. Such

potential impacts are typically not quantifiable because they vary with any individual project. Emissions controls require good housekeeping (e.g. sweeping) procedures and a construction traffic management plan.

Operational Related Air Quality Impact Analysis: Long-term growth of the Victorville Planning Area will lead to an ever-increasing amount of trip generation and associated air pollution emissions. Project-related air quality impacts will derive from the mobile source emissions that will be generated from the residential and non-residential uses within the City. Mobile source emissions from area wide development were calculated using the URBEMIS2007 computer model that combines trip data from city growth with evolving vehicular emissions factors. Table 5.3-7 provides projections of the trips generated by the existing (2005) and the proposed General Plan Update 2030 Land Use Plan.

Table 5.3-7 Travel Demand Model – Calculated Trip Generation for Existing Conditions (2005) to General Plan 2030 ¹				
	Square Foot (Commercial & Industrial)	Total Dwelling Units	Single Family Units	Multi-Family Units
Existing (2005)	203,905	253,272	210,352	42,920
General Plan 2030	633,544	842,249	606,541	235,708
Source: City of Victorville Travel Demand Model, PB.				

Operational emissions for project-related traffic were calculated using a computerized procedure developed by the California Air Resources Board (CARB) for urban growth mobile source emissions. The URBEMIS2007 model was run using the trip generation factors specified above.

The URBEMIS2007 model calculates the following vehicle miles traveled (VMT) per day for the above associated trips, as shown in Table 5.3-8:

Table 5.3-8 Vehicles Miles Traveled Per Day		
Use	Vehicle Miles/Day 2005	Vehicle Miles/Day 2030
Single Family Use	2,125,665	6,127,222
Multi Family Use	433,983	2,382,500
Non-Residential Uses	1,830,764	5,681,452
Total	4,390,413	14,191,175

¹ Square footages and unit counts used in Traffic Study and Air Quality Study count internal Planning Area trips plus the trips attracted from outside.

Project energy demand met by burning fossil fuels in regional power plants will add an NOx increment from project operations and add small amounts of other pollutants. Residential uses also generate small quantities of organic compounds from cleaning products, personal care products, landscape maintenance, cooking, etc. The individual residential contribution of each such source is small, but becomes significant when summed for a large quantity of residences.

The URBEMIS2007 model was used to calculate area source emissions and the resulting vehicular operational emissions for current emissions and for project build-out emissions. These results, along with the net difference between the two time frames, are shown in Table 5.3-9.

The bulk of the trip generation was assumed to be from automobiles and light duty trucks. The effects of growth are offset by continued vehicular emissions improvements for CO, NOx and ROG. Because SOx and PM-10 are related to miles driven and not to smog controls, these pollutants will increase over time. The difference between build-out versus existing PM-10 will exceed the 82-pound per day significance threshold. No other pollutant will experience any significant increase despite the more than three-fold increase in travel miles for future city residents.

The City of Victorville is forecast to undergo substantial growth, and the rate of emissions is more related to project consistency with area growth projections (see Section 5.12: Population and Land Use) than with the emissions magnitude some 30 years from now. The rate of growth anticipated under the General Plan exceeds the growth that SCAG has currently allocated for the City of Victorville and its sphere of influence. However, the possible difference between SCAG's forecast for 2030 and the General Plan build-out may not necessarily have a significant air quality impact because:

1. Continued emissions improvements will completely offset ozone precursor emissions associated with anticipated growth.
2. The growth and associated emissions will occur somewhere within the air basin if not in/near Victorville with identical regional air quality impacts.
3. Vehicular emissions at assumed citywide build-out may be far different than predicated by extrapolation of current emissions trends if engine technology or lack of fossil-fuel (petroleum) resources creates a more dramatic shift to alternative-fueled transportation.

**Table 5.3-9
Project-Related Emissions Burden**

	Emissions (lbs/day)						
Year 2005	ROG	NOx	CO	SO2	PM-10	PM-2.5	CO2
Area Sources	2,403.3	714.8	1,580.4	0.1	4.5	4.5	881,928.4

**Table 5.3-9
Project-Related Emissions Burden**

Mobile Sources	7,176.5	11,243.0	78,893.2	99.6	7,775.1	1,644.9	4,795,086.4
Total	9,579.8	11,957.8	80,473.6	99.7	7,779.6	1,649.4	5,677,014.8
MDAQMD Threshold	137	137	548	137	82	-	-
Emissions (lbs/day)							
Year 2030	ROG	NOx	CO	SO2	PM-10	PM-2.5	CO2
Area Sources	9,117.2	2,759.1	5,372.6	0.2	15.4	15.2	3,411,892.9
Mobile Sources	5,975.9	5,649.0	53,996.3	156.9	24,537.6	4,781.3	15,422,119.9
Total	15,093.1	8,408.1	59,368.9	157.1	24,553.0	4,796.5	18,834,012.8
MDAQMD Threshold	137	137	548	137	82	-	-
Emissions (lbs/day)							
Net Uses (2030-2005)	ROG	NOx	CO	SO2	PM-10	PM-2.5	CO2
Area Sources	6,713.9	2,044.3	3,792.2	0.1	10.9	10.7	2,529,964.5
Mobile Sources	-1,200.6	-5,594.0	-2,4896.9	57.3	16,762.5	3,136.4	10,627,033.5
Total	5,513.3	-3,549.7	-21,104.7	57.4	16,773.4	3,147.1	13,156,998.0
MDAQMD Threshold	137	137	548	137	82	-	-
Percent of Threshold	4,024	0	0	42	20,455	NA	NA
Exceeds Threshold?	Yes	No	No	No	Yes	NA	NA

The comparison of net usage between General Plan 2030 buildout and existing conditions (2005) is germane since the MDAQMD additional criteria states air quality impacts “generate a violation of any ambient air quality standard when added to the local background.” Local background in this analysis is Year 2005, which is consistent with the timeframe used in the traffic study.

Greenhouse Gas Emission Impact Analysis: Implementation of the proposed project would contribute to long-term increases in greenhouse gases (GHGs) as a result of traffic increases (mobile sources) and minor secondary fuel combustion emissions from space heating, etc. Development occurring as a result of the proposed project would also result in secondary operational increases in GHG emissions as a result of electricity generation to meet project-related increases in energy demand. Electricity generation in California is mainly from natural gas-fired power plants. However, since California imports about 20 to 25 percent of its total electricity (mainly from the northwestern and southwestern states), GHG emissions associated with electricity generation could also occur outside of California. Short-term GHG emissions

will also derive from construction activities. During project construction, the URBEMIS2007 computer model predicts that in 2020 a peak activity day will generate the following CO₂ emissions:

Grading	-	13,741 pounds/day
Construction	-	68,934 pounds/day

For purposes of analysis, it was assumed that non-CO₂ GHG emissions are negligible, and that the a typical project year construction GHG burden can be characterized by 60 peak grading days and 200 peak construction days. The estimated annual GHG impact is estimated as follows:

$$\text{Grading} = (13,741 \text{ lbs/day} \times 60 \text{ peak days/year}) / 2,000 \text{ lbs/ ton} = 412 \text{ tons/year}$$

$$\text{Construction} = (68,934 \text{ lbs/day} \times 200 \text{ peak days/year}) / 2,000 \text{ lbs/ton} = 6,893 \text{ tons/year}$$

In 2004, the statewide annual GHG inventory in CO₂-equivalent levels (including all non-CO₂ gases weighted by their thermal absorption potential) was 492,000,000 metric tons (541,000,000 short tons). The worst-case project construction impact of 6,893 tons/year represents approximately 0.0014 % percent of the statewide burden.

At project build-out, new daily operational CO₂ emissions from project-related traffic and area source emissions are predicted to be 13,156,998 pounds per day. Annually, this translates into 2,401,152 tons per year. This represents less than 0.5 percent of the most recent statewide inventory. However, for a single jurisdiction to comprise 0.5 percent of the statewide inventory is significant.

There are no adopted thresholds of GHG emissions significance. However, GHG emissions are implicated in the acceleration of global warming experienced in the last several decades. Climatic impacts are global in scale. Any project-specific contribution to the global issue is miniscule. In the absence of any definitive thresholds of significance, the GHG emphasis on a project-specific level is to incorporate project design features that reduce energy consumption and reduce vehicular travel as much as is reasonably feasible. Unless there is a greater shift to clean energy such as solar, hydroelectric, wind, nuclear, etc., no substantial reduction in GHG is likely attainable by conventional methods except through energy conservation (See Section 8.0: Energy Conservation).

5.3.4.1. Would the project conflict with or obstruct implementation of the applicable air quality plan?

Impact Discussion: The project is located in a MDAQMD region classified as a designated “non-attainment” for PM-10 and “moderate non-attainment” for the 8-hour ozone standards with a attainment goal of 205.3. Areas that are in non-attainment of the PM-10 standard must reach attainment as expeditiously as possible.

Buildout of the General Plan, as portrayed in the typical construction scenario for Year 2020, exceeds the MDAQMD thresholds for ROG and PM-10 (Table 5.3-6). Projected mobile and area source emissions also will exceed PM-10 standards (Table 5.3-10). The Planning Area is now, and likely will continue to exceed the state and federal standards for Ozone and PM-10 (Table 5.3-4). Buildout of the General Plan is not consistent with regional SCAG current growth projections for the City and its Sphere of Influence (Section 5.12. Population and Housing). The additional screening indicator used by MDAQMD in air quality analysis is “represents a level of growth not previously anticipated in regional air quality planning.”

While analysts may speculate that future trends may reverse existing levels of vehicular-related emissions (e.g. ozone), there are no specific proposals or requirements that suggest future trends will be successful in bringing the Planning Area into compliance with MDAQMD thresholds or state and federal standards before 2030. Assuming that continued economic and population growth is inevitable and has adverse air quality effects, and that the growth will occur somewhere within the MDAQMD Basin at the levels anticipated by General Plan 2030, is also speculative.

Proposed General Plan 2030 Resource Element Goal 6, Objective 6.1, Policy 6.1.1, and related implementation measures are intended to encourage compliance with applicable air quality plans. In addition, mitigation measures AQ-1 through AQ-7 are recommended for inclusion into the General Plan 2030 project to reduce construction level, operational level and green house gas air pollutant emissions. The General Plan provisions and recommended mitigation measures will reduce air pollutant emissions but will not reduce conflicts with the MDAQMD air quality plans to less than significant levels.

Impact Finding: Significant and unavoidable

5.3.4.2. Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Impact Discussion: The primary air quality impacts from buildout of the General Plan Update are short-term construction-related impacts and long-term impacts from mobile and stationary sources. Applicable air quality standards for the Planning Area are MDAQMD numerical emissions thresholds and MDAQMD indicators of potential air quality impacts (Section 5.3.4.2). In addition, federal and state ambient air quality standards (Table 5.3-2) are applicable to the project.

Buildout of the General Plan, as portrayed in the typical construction scenario for Year 2020, exceeds the MDAQMD thresholds for ROG and PM-10 (Table 5.3-6). Projected mobile and area source emissions also will exceed PM-10 standards (Table 5.3-10). The Planning Area is now, and will likely continue to exceed the state and federal standards for Ozone and PM-10 (Table 5.3-4). Based on the Vehicle Miles Traveled Per Day (Table 5.3-9) projected for buildout of the project, the project has a significant impact on PM-10 emissions. The recommended mitigation measures will reduce air pollutant emissions but not to less than significant levels.

Further, as discussed above, at project build-out, new daily operational CO₂ emissions from project-related traffic and area source emissions are predicted to be

At project build-out, new daily operational CO₂ emissions from project-related traffic and area source emissions are predicted to be 13,156,998 pounds per day. Annually, this translates into 2,401,152 tons per year. This represents less than 0.5 percent of the most recent statewide inventory. However, for a single jurisdiction to comprise 0.5 percent of the statewide inventory is significant.

Proposed General Plan 2030 Resource Element Goal 6 and its related objectives, policies and implementation measures are intended to reduce air pollutant emissions. In addition, mitigation measures AQ-1 through AQ-7 are recommended for inclusion into the General Plan 2030 project to reduce construction level, operational level and green house gas air pollutant emissions. The General Plan provisions and recommended mitigation measures would reduce air pollutant emissions; however the project would continue to violate established air quality standards and to significantly contribute to greenhouse gas emissions.

Impact Finding: Significant and unavoidable

5.3.4.3 Would the project expose sensitive receptors to substantial air pollutant concentrations?

Impact Discussion: The sources of substantial air pollutant concentrations for projects in urban areas generally are related to: (1) Use of diesel equipment during construction, (2) Heavy concentrations of traffic at congested intersections with little distance between the roadway and sensitive receptors and, (3) Air pollutant emissions from manufacturing or industrial operations (e.g. oil refineries, generation plants, chemical plants etc.). The health risks of air pollutant emissions on sensitive receptors are well documented (Table 5.3-3). Substantial pollutant concentrations may be defined using the ambient air quality standards (Table 5.3-2) and by MDAQMD emission thresholds.

The proposed Land Plan includes several geographical areas where residential and non-residential land uses abut each other. The Circulation Element includes numerous geographical areas where expanded or new roadways are located adjacent to residential and recreational uses. In both situations, sensitive receptors may be exposed to air pollutant emissions above state or federal standards. Potential air quality impacts, in most situations, may be reduced to acceptable levels by proper site planning, setbacks, and appropriate roadway capacity. Proposed General Plan 2030 Resource Element Goal 6, Objective 6.2, Policy 6.2.1 and related implementation measures are intended to reduce health risks associated with siting sensitive land uses near air pollutant emitting sources. These General Plan provisions are expected to reduce potential air quality impacts to sensitive receptors to less than significant levels.

Impact Finding: Less than significant

5.3.4.4 Would the project 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?

Impact Discussion: The project is located in a MDAQMD region classified as a designated “non-attainment” for PM-5.3. Buildout of the General Plan, as portrayed in the typical construction scenario for Year 2020, exceeds the MDAQMD thresholds for ROG and PM-10 (Table 5.3-6). Projected mobile and area source emissions also will exceed PM-10 standards (Table 5.3-10). The Planning Area is now, and will likely continue to exceed the state and federal standards for PM-10 (Table 5.3-4). Based on the Vehicle Miles Traveled Per Day (Table 5.3-9) projected for project buildout, the project has a significant impact on PM-10 emissions.

Further, as discussed above, at project build-out, the Victorville Planning Area would contribute slightly less than 1 percent of the most recent statewide inventory. For a single jurisdiction to comprise near 1 percent of the statewide inventory cumulatively, as well as individually, significant.

Proposed General Plan 2030 Resource Element Goal 6 and related provisions seek to reduce air pollutant emissions and promote clean air. In addition, mitigation measures AQ-1 through AQ-7 are recommended for inclusion into the General Plan 2030 project to reduce construction level, operational level and green house gas air pollutant emissions. The General Plan provisions and recommended mitigation measures will reduce air pollutant emissions but will not reduce the project’s cumulatively net increase on a criteria pollutant for which the region is in non-attainment. The project will also continue to cumulatively contribute to greenhouse gas emissions.

Impact Finding: Significant and unavoidable

5.3.4.5 Would the project create objectionable odors affecting a substantial number of people?

Impact Discussion: Objectionable odors from projects in urban areas usually are related to diesel equipment used during construction or chemical byproducts of manufacturing and industrial products released into the air near sensitive receptors.

The Land Plan includes numerous non-residential areas but they tend to be concentrated geographically to minimize interface with residential areas. Manufacturing or industrial uses that generate objectionable odors are subject to MDAQMD regulations and state and federal regulations (e.g., OSHA, CAL EPA). While diesel equipment will be used during construction, diesel equipment emissions are usually not concentrated enough to represent significant odor

emission impacts and do not impact substantial numbers of people. State regulations are requiring older diesel equipment to be replaced gradually with more efficient equipment. Construction equipment diesel odor emissions will be assessed during specific project reviews.

Impact Finding: Less than significant.

5.3.5 Cumulative Impacts

Impact Discussion: Buildout of the General Plan, as portrayed in the typical construction scenario for Year 2020, exceeds the MDAQMD thresholds for ROG and PM-10 (Table 5.3-6). Projected mobile and area source emissions also will exceed PM-10 standards (Table 5.3-10). The Planning Area is now, and will likely continue to exceed the state and federal standards for Ozone and PM-10 (Table 5.3-4).

The project will increase total Vehicle Miles Traveled per day by a factor of 3.2 over 2005 (Table 5.3-9). Based on the Vehicle Miles Traveled per day (Table 5.3-9) forecasted for project buildout, the project has a significant impact on PM-10 emissions. Some geographical areas will be exposed to air pollutant emissions above applicable MDAQMD thresholds, and state and federal air quality standards, from one or more projects. The proposed General Plan Resource Element provisions and recommended mitigation measures will reduce air pollutant emissions but not to less than significant levels.

Impact Finding: Significant and unavoidable

5.3.6 Mitigation Measures

Greenhouse Gas Emissions Reduction Measures

GHG reduction options on a project-level basis are similar to those measures designed to reduce criteria air pollutants (those with ambient air quality standards). The transportation sector is the largest emitter of greenhouse gases, emitting roughly 38 percent of California's greenhouse gases in 2004. Measures that reduce trip generation or trip lengths, measures that optimize the transportation efficiency of a region, and measures that promote energy conservation within a development will reduce GHG emissions. Additionally, carbon sequestering can be achieved through urban forestry measures (i.e. [AQ-3](#)).

Project-specific mitigation recommendations to reduce the global cumulative impact from project implementation include the following:

AQ-1: Land Use and Transportation

- a) Implement land use strategies to encourage jobs, housing proximity, promote transit-oriented development and encourage high density development along transit corridors.

Encourage compact, mixed-use projects, forming urban villages designed to maximize affordable housing and encourage walking, bicycling and the use of public transit systems.

- b) Encourage infill, redevelopment, and higher density development, whether in incorporated or unincorporated settings.
- c) Encourage new developments to integrate housing, civic and retail amenities (jobs, schools, parks, and shopping opportunities) to help reduce vehicle miles traveled resulting from discretionary automobile trips.
- d) Apply advanced technology systems and management strategies to improve operational efficiency of transportation systems and movement of people goods and services.
- e) Incorporate features into project design that would accommodate the supply of frequent, reliable and convenient public transit.
- f) Implement street improvements that are designed to relieve pressure on the most congested roadways and intersections.
- g) Limit idling time for commercial vehicles, including delivery and construction vehicles.
- h) Develop a Safe Routes to School program that allows and promotes bicycling and walking to school.
- i) Assess project air quality impacts on sensitive receptors at the project level, with special consideration of school playgrounds, parks and other outdoor recreational uses.

AQ-2: Energy Conservation

- a) Recognize and promote energy savings measures beyond Title 24 requirements for residential and commercial projects.
- b) Where feasible, include in new buildings facilities to support the use of low/zero carbon fueled vehicles, such as the charging of electric vehicles from green electricity sources.
- c) Educate the public, schools and other jurisdictions, and businesses about reducing GHG emissions.
- d) Replace traffic lights, streetlights, and other electrical uses to energy efficient bulbs and appliances.
- e) Design, build, and operate schools that meet the Collaborative for High Performance Schools (CHPS) best practices.
- f) Offer rebates and low-interest loans to residents that make energy-saving improvements on their homes.

- g) Construct non-residential buildings to meet LEED (Leadership in Energy and Environmental Design) Silver Certification where possible.
- h) Maximize use of low-pressure sodium and/or fluorescent lighting.
- i) Require acquisition of new appliances and equipment to meet Energy Star certification.

AQ-3: Urban Forestry

- a) Plant trees or vegetation to shade buildings and thus reduce heating/ cooling demand.
- b) Preserve or replace onsite trees (that are removed due to development) as a means of providing carbon storage.
- c) Select landscaping that is fast-growing while minimizing water demand to sequester carbon while reducing electrical loads associated with regional water transportation.

Construction Emissions Mitigation

Construction activity air pollution emissions are anticipated to exceed MDAQMD CEQA thresholds. Regardless, the PM-10 non-attainment status of the Victorville area requires that Best Available Control Measures (BACMs) be used where feasible. Recommended construction activity mitigation includes:

AQ-4: Dust Control

- a) Require property owners to apply soil stabilizers to inactive areas.
- b) During construction, require property owners to prepare a high wind dust control plan and implement plan-elements and terminate soil disturbance when winds exceed 25 mph.
- c) During construction, require property owners to stabilize previously disturbed areas if subsequent construction is delayed.
- d) During construction, require property owners to water exposed surfaces and haul roads 3 times/day.
- e) During construction, require property owners to cover all earth stockpiles with tarps.
- f) During construction, require property owners replace ground cover in disturbed areas quickly.
- g) Require all vehicles to reduce speeds on unpaved roads to less than 15 mph.

AQ-5: Exhaust Emissions

- a) Require 90-day low-NO_x tune-ups for off-road equipment operating in the Planning Area.
- b) Limit allowable idling to 5 minutes for trucks and heavy equipment.

- c) Require construction operators to use Tier 3-rated engines during site grading for all equipment exceeding 100 horsepower if available.
- d) Require construction operators to utilize equipment whose engines are equipped with diesel oxidation catalysts if available.
- e) Require construction operators to utilize diesel particulate filter and diesel oxidation catalyst on heavy equipment where feasible.

AQ-6: ROG Emissions

- a) Require the use of high-volume, low-pressure paint sprayers, apply paint thickness of 0.75 millimeters or less and, use water-based and low-VOC coatings with ROG emissions of less than 8.0 pounds per 1,000 square feet of painted surface.

Operational Emissions Mitigation

Operational emissions for PM-10 are forecast to exceed MDAQMD thresholds by a wide margin at build out. For operational emissions, automotive sources are the dominant contributors to the project emissions burden. Mitigation in the form of alternatives to the single occupant automobile (SOV), therefore, should be considered where possible through viable transportation control measures (TCMs).

AQ-7: Wherever feasible, developers should be encouraged to incorporate the following TCMs on a project-specific basis includes:

- a) Provide future transit access points within the development.
- b) Include bicycle lanes in the project design.
- c) Provide an attractive pedestrian environment.
- d) Encourage mixed-use developments where employment, shopping and living can occur within short distances.

5.3.7 Level of Significance After Policies/Mitigation Measures – Significant and unavoidable.

5.4 BIOLOGICAL RESOURCES

This section addresses issues related to existing plant communities, wildlife and wetlands currently found within the Planning Area. Potential project impacts on these biological resources, and any mitigation measures necessary to resolve impacts are also discussed. Information referenced in this section was obtained from the *Biological Resources Report, City of Victorville General Plan Update*, prepared by Robert A. Hamilton, Consulting Biologist, June 29, 2005; and *Expanded Biological Resources Report, City of Victorville General Plan Update Including the Northern Sphere Expansion Area*, prepared by Robert A. Hamilton, Consulting Biologist, April 17, 2008. Both reports, which are referred to herein as “Biological Resources Study”, were prepared in support of the General Plan 2030, and are contained in Appendix F of this EIR. This section also includes the General Plan 2030’s relationship to the proposed West Mojave Plan. The West Mojave Plan presents a multi-species conservation strategy applicable to public and private lands throughout the 6.2-million-acre West Mojave Plan Area (WMPA). The entire Victorville Planning Area lies within the WMPA.

5.4.1 Existing Conditions

5.4.1.1 Plant Communities

The Victorville General Plan Planning Area contains the following plant communities: Mojave creosote bush scrub, Mojave Desert saltbush scrub, rabbitbush scrub, Mohavean juniper woodland and scrub, ruderal (disturbed) communities, Joshua tree woodland, and riparian communities associated with the Mojave River and its floodplain, including transmontane alkali and freshwater marsh, Mojave riparian forest, and southern willow scrub. The noted riparian communities are classified as "communities of highest inventory priority" by the California Department of Fish and Game. These communities are described below.

Creosote Bush Scrub

This characteristic community of the western Mojave Desert is dominated by Creosote Bush (*Larrea tridentata*). Other native species often present include the smaller White Bursage (*Ambrosia dumosa*) and a robust species of native grass, Big Galleta (*Pleuraphis rigida*), as well as various annual grasses and wildflowers. Creosote Bush Scrubs are typically 0.5-3 meters tall, widely spaced, usually with bare ground between. Growth occurs during spring (or rarely in summer or fall) if rainfall is sufficient. Growth is prevented by cold in winter and limited by drought in other seasons. Many species of ephemeral herbs may flower in late March and April if the winter rains are sufficient. Other, less numerous species of annuals appear following summer thundershowers.

Mojave Desert Saltbush Scrub

This widespread vegetative association is dominated by three species of saltbush: Allscale (*Atriplex polycarpa*), Shadscale (*A. confertifolia*), and Desert Holly (*A. hymenelytra*). Saltbush scrub is usually low, grayish, microphyllous shrubs, 0.3-1 meter tall, with some succulent species. Total coverage is often low, with much bare ground between the widely spaced shrubs.

Rabbitbrush Scrub

This low-growing native community is dominated by Rubber Rabbitbrush (*Chrysothamnus nauseosus*) and may contain other species of *Chrysothamnus* along with other low-growing plants. Dominated by rubber rabbitbrush, this species is usually 1 meter tall, with fairly evenly spaced gray shrubs flowering in late summer or fall.

Joshua Tree Woodland

Joshua Trees (*Yucca brevifolia*) to 12 meters tall, are distributed on gentle slopes and on valley floors of upper bajadas and sandy areas. The understory of this highly variable community typically includes Creosote Bush and/or species of saltbush. The Joshua Tree is an archetypal plant of the Mojave Desert that may live several hundred years and that provides valuable habitat for a variety of native wildlife species. Off-road vehicle use and illegal dumping appear to have adverse effects on the health of Joshua Trees. Joshua trees are protected by the "California Desert Plant Protection Act", which requires a tag through the Department of Food and Agriculture if five or more trees are to be removed. In addition, Joshua trees are protected by Chapter 13.33 of the Victorville Municipal Code, which prohibits the destruction or removal of Joshua trees without written consent from the Director of Community Services.

Mojave River Riparian Communities

The City of Victorville is generally characterized by a relatively flat topography which ranges between approximately 2600 and 2875 feet above sea level. The North Sphere Expansion Area is dominated by Quartzite Mountain, which rises to 4025 feet above sea level. Victorville occupies the broad surface of a large alluvial fan referred to as the Cajon Fan (or Victorville Fan).

The Mojave River runs along the fan's eastern margin and is the City's most notable topographic feature. This river flows from south to north, conveying runoff out of the San Gabriel and San Bernardino Mountains. The river's natural floodplain is up to a mile wide, and its waters flow below the surface for most of its length except following storms. At Mojave Narrows, however, the river encounters an impenetrable layer of bedrock that forces water to the surface even during dry periods. The artificial Spring Valley Lake (which lies outside of the Planning Area's limits) appears to have been established in the river's historic bed. Oro

Grande Wash, the City's second-largest drainage course, conveys flows only following intense storms. It parallels Interstate 15 and crosses beneath the freeway in a culvert between La Mesa Road and Olivera Road. The wash becomes channelized at Bear Valley Road passes through the Victorville Municipal Golf Course in a culvert, and is eventually dispatched into an underground culvert in Center Street Park, near Hesperia Road at Verde Street.

Mojave Narrows Regional Park, located on the City's border, supports extensive native riparian woodlands dominated by Fremont Cottonwood (*Populus fremontii*), Black Willow (*Salix gooddingii*), and Honey Mesquite (*Prosopis glandulosa*). Other native tree species found locally include Sandbar Willow (*Salix exigua*), White Alder (*Alnus rhombifolia*), and California Sycamore (*Platanus racemosa*). Desert Willow (*Chilopsis linearis*) grows along the river's drier ephemeral reaches. The other native communities mapped along the river include cottonwood-willow woodland, monotypic cottonwood woodland, mesquite bosque, a willow-baccharis streamside community, and hydrophytes.

Based on historical photographs of the river from the late 19th and early 20th centuries with photos taken at the same locations in the year 2000, the extent of well-developed riparian woodland has increased substantially over the course of several decades. The main contributors appear to be increased urban runoff into the Mojave River combined with a decrease in major flood events due to damming of the river¹. The largest increases in riparian vegetation have occurred in the area that now is Mojave Narrows Regional Park, upstream of the Upper Narrows between Victorville and Apple Valley. In addition to the Fremont Cottonwood (*Populus fremontii*) and the California Sycamore (*Platanus racemosa*), the most widespread and prevalent plant species identified in the Mojave River riparian zone is the non-native Saltcedar (*Tamarix ramosissima*). Saltcedar progressively desiccates and salinizes floodplains due to its salt exudation and high transpiration rates. Moreover, dry Saltcedar is highly flammable, and burning of Saltcedar-invaded stands usually favors regeneration of Saltcedar over native species.

5.4.1.2 Wildlife

The Mojave River forms a regionally important corridor of natural open space between the San Bernardino Mountains to the south and natural open spaces that lie within and north of the Planning Area. It is to be expected that various large and medium-sized mammals use the river and associated floodplain as a travel route. The central and southeastern regions reflect the Pleistocene history of the Mojave River, which flows from the San Bernardino Mountains north to Barstow, then east to Soda Lake and the Mojave National Preserve. In the last Ice Age, extending from 30,000 to 10,000 years ago, the Mojave River discharged to the south into the Mojave Valley, Lavic Lake, Dale Lake, Bristol Lake, and other playas extending nearly to the Colorado River. The now-dry river and playas supported species of invertebrates, fish, amphibians, and pond turtles, and attracted migratory birds dependent on water and remnant populations of these animals are still present today.

¹ Refer to Appendix F of this EIR for additional details on historic flooding, flood control dams, artificial discharges and groundwater hydrology.

The ancient river and lakes formed sandy beaches and prevailing winds carried the finer particles to the east, forming hummocks and dunes. These blowsand areas now support unique species of insects, plants, and reptiles, including the Mojave fringe-toed lizard, whose entire distribution can be traced to the former path of the ancient Mojave River and Amargosa River.

The Mojave River has been substantially altered within the past 100 years by two primary human-dependent uses: 1) flood control provided by the Mojave Forks dam, and 2) groundwater extraction within the basin. The effects on wildlife habitat are primarily the reduction in the extent of the riparian woodland and forest along the banks, but also include fragmentation of habitat for the arroyo toad, interruption of ecosystem processes associated with infrequent flooding, and drying of associated wetlands, as at Turner Springs near Victorville. In addition, introduction of non-native species, including fish, bullfrogs, cowbirds, and starlings, has displaced some of the species targeted for protection in the West Mojave Plan.

Despite these changes, the Mojave River remains an outstanding desert stream, supporting abundant wildlife where the groundwater surfaces at the upper and lower narrows and downstream at Camp Cady and Afton Canyon. Endemic species, including the Mojave River vole, the Mojave shoulderband snail, and the Mojave fringe-toed lizard are found along the river. Limited-range species, primarily birds dependent on the riparian habitat, are a major wildlife feature. A disjunct population of the San Emigdio blue butterfly is known from the edge of the river near Victorville. The river also serves as a water source for wide-ranging species, including bats, which are abundant in certain locations.

The river is used as a flyway stopover for some migratory birds, most notably turkey vultures and Swainson's hawks. These raptors can be seen in the spring and fall using the Regional Park as a night roost.

Near Victorville, the West Mojave River contains over fifteen of the species addressed by the West Mojave Plan (see discussion in Section 4.4.1.3 below).² It is also a center of endemism, being the sole locality for the Mojave River vole and the Mojave shoulderband snail and formerly for the Mojave tui chub.

No other known preserves exist within the Planning Area boundary.

5.4.1.3 Special-Status Species

² The West Mojave Plan characterizes Mojave Narrows Regional Park (on the City's border) as a "biological hotspot." The park is owned by the state Wildlife Conservation Board and is operated by San Bernardino County Department of Regional Parks. It comprises 850 acres, with 450 acres devoted to habitat. Under an approved West Mojave Plan, groundwater levels would be monitored and maintained in a manner specifically designed to conserve biological resources along the Mojave River. Therefore, even though this area lays just outside of the Planning Area's limits, requirements to conserve groundwater resources could affect land use decisions within the Planning Area. This area is designated as "Open Space" in the City's Land Use Plan and is subject to the City's Joshua Tree Protection Ordinance.

Within the City boundaries, seven wildlife species considered threatened or endangered as listed by either or both the California Department of Fish and Game (CDFG) and the United States Fish and Wildlife Service (USFWS) occur. Three of the species, all birds (Yellow-billed Cuckoo, Willow Flycatcher, Least Bell's Vireo), are found within the riparian habitat of the Mojave River.

The Desert Tortoise is classified as a threatened species and is covered by a federal species recovery plan (USFWS 1994). Desert Tortoises have occurred within Victorville's city limits historically, but have not been found there in recent years. The species' recovery plan recommends conservation and management of several tortoise-occupied areas covering approximately 1610 km² each, but none of the proposed areas extend into the City of Victorville.

In recent years, most biological reports completed for CEQA compliance in the City have focused on five sensitive wildlife species: Desert Tortoise, Mohave Ground Squirrel, Burrowing Owl, Sharp-shinned Hawk, and Loggerhead Shrike.

This section presents sensitive species plants and animals occurring or potentially occurring not only within the City but within the defined Planning Area that are endangered or rare, or that are of current local, regional, or state concern. Legal protection for sensitive species varies widely, from the relatively comprehensive protection extended to listed threatened/endangered species to no legal status at present. The CDFG publishes a quarterly list of "Special Vascular Plants, Bryophytes, and Lichens," which incorporates continually updated information from the California Native Plant Society (CNPS), an independent organization that maintains an online inventory of taxa that its botanists regard as rare, declining, or insufficiently known. In addition, recently published findings and preliminary results of ongoing research provide a basis for consideration of species that are candidates for state and/or federal listing.

This section follows the lead of the CDFG in not recognizing "federal species of concern," which was an informal designation developed in the Sacramento office of the U.S. Fish and Wildlife Service. Most such species are former Category 1 and Category 2 candidates for federal listing. As reported by CDFG³, "the list was seldom updated and generated only from Sacramento without review by other FWS offices."

Table 5.4-1 lists each sensitive species known to occur in the Planning Area or adjacent areas, or that is otherwise judged to have at least moderate potential to occur in the Planning Area. Additional sensitive plants or animals could conceivably occur in the Planning Area, but such occurrences would be exceptional or limited to the passage of migrants⁴. Species accounts discuss the known status and distribution of the taxa included in Table 5.4-1.

³ <http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/SPPlants.pdf>

⁴ The Data Base includes historic records of the following species, which are no longer considered to occur in the area, and thus, are not covered in this biological technical report: (1) Southern Skullcap (*Scutellaria bolanderi* ssp.

The Biological Technical Report (Appendix F) contains species accounts for species which occur or may potentially occur in the Planning Area and listed in Table 5.4-1. The species accounts in Appendix F were extracted from the West Mojave Plan and the “West Mojave Plan Draft Evaluation Report, Suggested Conservation Strategies” (BLM 1999), and describe the general status, habitat, life history, distribution, biological goals, and threats faced by each species⁵. Abbreviated species accounts taken from Appendix F follow Table 5.4-1.

Table 5.4-1
Sensitive Wildlife Species and
Species Not Listed or Proposed for Listing within the Planning Area

Species	Status			To Be Covered in the West Mojave Plan HCP
	USFWS	CDFG	CNPS	
Listed/Proposed Species				
<i>Amphibians</i>				
Arroyo Toad <i>Bufo microscaphus californicus</i>		CSC	—	No
<i>Reptiles</i>				
Desert Tortoise <i>Gopherus agassizii</i>	T	T	—	Yes
<i>Birds</i>				
Bald Eagle <i>Haliaeetus leucocephalus</i>		E	—	No
Yellow-billed Cuckoo <i>Coccyzus americana</i>		E	—	No
Willow Flycatcher <i>Empidonax traillii</i>	E	E	—	No
Least Bell's Vireo <i>Vireo bellii pusillus</i>	E	E	—	No
<i>Mammals</i>				
Mohave Ground Squirrel <i>Spermophilus mohavensis</i>		T	—	Yes

austromontana) (2) California Red-legged Frog (*Rana aurora draytonii*), and (3) Mojave Tui Chub (*Gila bicolor mohavensis*). See Hamilton Biological Reports, Appendix F.

⁵ Numerous authors contributed to the species accounts in the West Mojave Plan, and all species accounts were peer reviewed. Additional species details and a detailed bibliography is included in the West Mojave Plan.

Table 5.4-1 (Continued)
Sensitive Wildlife Species and
Species Not Listed or Proposed for Listing within the Planning Area

Species	Status			To Be Covered in the West Mojave Plan HCP
	USFWS	CDFG	CNPS	
Species Not Listed or Proposed for Listing				
Plants				
Chaparral Sand-Verbena <i>Abronia villosa</i> var. <i>aurita</i>		—	List 1B.1	No
Small-flowered Androstephium <i>Androstephium breviflorum</i>		—	List 2.3	No
Booth's Evening-Primrose <i>Camissonia boothii</i> ssp. <i>boothii</i>		—	List 2.3	No
Pygmy Poppy <i>Cambya candida</i>	—	—	List 4.2	No
Desert Cymopterus <i>Cymopterus deserticola</i>	—	—	List 1B.2	Yes
Barstow Woolly Sunflower <i>Eriophyllum Mojavense</i>		—	List 1B.3	Yes
Creamy Blazing Star <i>Mentzelia tridentata</i>	—	—	List 1B.3	No
Mojave Monkeyflower <i>Mimulus mohavensis</i>	—	—	List 1B.2	Yes
Short-joint Beavertail <i>Opuntia basilaris</i> var. <i>brachyclada</i>		—	List 1B.2	Yes
San Bernardino Aster <i>Symphotrichum defoliatum</i>		—	List 1B.2	No
Gastropods				
Victorville Shoulderband <i>Helminthoglypta mohaveana</i>		—	—	No
Reptiles				
Western Pond Turtle <i>Clemmys marmorata</i>	—	CSC	—	Yes
Coast Horned Lizard <i>Phrynosoma coronatum</i>	—	CSC	—	No
Birds				
Northern Harrier <i>Circus cyaneus</i>	—	CSC	—	No
Sharp-shinned Hawk <i>Accipiter striatus</i>	—	CSC	—	No
Cooper's Hawk <i>Accipiter cooperii</i>	—	CSC	—	No
Ferruginous Hawk <i>Buteo regalis</i>	—	CSC	—	No

Table 5.4-1 (Continued)
Sensitive Wildlife Species and
Species Not Listed or Proposed for Listing within the Planning Area

Species	Status			To Be Covered in the West Mojave Plan HCP
	USFWS	CDFG	CNPS	
Species Not Listed or Proposed for Listing				
Golden Eagle <i>Aquila chrysaetos</i>	—	CSC	—	No
Prairie Falcon <i>Falco mexicanus</i>	—	CSC	—	No
Burrowing Owl <i>Athene cunicularia</i>	—	CSC	—	Yes
Long-eared Owl <i>Asio otus</i>	—	CSC	—	No
Brown-crested Flycatcher <i>Myiarchus tyrannulus</i>	—	CSC	—	No
Loggerhead Shrike <i>Lanius ludovicianus</i>	—	CSC	—	No
Bendire's Thrasher <i>Toxostoma bendirei</i>	—	CSC	—	No
Le Conte's Thrasher <i>Toxostoma lecontei</i>	—	CSC	—	No
Yellow Warbler <i>Dendroica petechia</i>	—	CSC	—	No
Yellow-breasted Chat <i>Icteria virens</i>	—	CSC	—	No
Summer Tanager <i>Piranga rubra</i>	—	CSC	—	No
Tricolored Blackbird <i>Agelaius tricolor</i>	—	CSC	—	No
Mammals				
Pallid San Diego Pocket Mouse <i>Chaetodipus fallax pallidus</i>	—	CSC	—	No
Mojave River Vole <i>Microtus californicus mohavensis</i>	—	CSC	—	No
Pallid Bat <i>Antrozous pallidus</i>	—	CSC	—	No
Townsend's Big-eared Bat <i>Corynorhinus townsendii</i>	—	CSC	—	No
Spotted Bat <i>Euderma maculatum</i>	—	CSC	—	No
California Mastiff Bat <i>Eumpos perotis californicus</i>	—	CSC	—	No
American Badger <i>Taxidea taxus</i>	—	CSC	—	No

**Table 5.4-1 (Continued)
Sensitive Wildlife Species and
Species Not Listed or Proposed for Listing within the Planning Area**

Species	Status			To Be Covered in the West Mojave Plan HCP
	USFWS	CDFG	CNPS	
Legend				
<p>Legend:</p> <p>USFWS (Federal) Classifications E Taxa listed as Endangered. T Taxa listed as Threatened. PE Taxa proposed to be listed as Endangered. PT Taxa proposed to be listed as Threatened.</p> <p>CDFG (State) Classifications E Taxa State listed as Endangered. T Taxa State listed as Threatened. CSC California Species of Special Concern. An administrative designation given to vertebrate species that appear to be vulnerable to extinction because of declining populations, limited ranges, and/or continuing threats. Some species may be just starting to decline, while others may have already reached the point where they meet the criteria for listing as a threatened or endangered species.</p> <p>CSA California Special Animal. A general term that refers to all of the taxa the CNDDDB is interested in tracking, regardless of their legal or protection status. This list is also referred to as the list of “species at risk” or “special status species.” The CDFG considers the taxa on this list to be those of greatest conservation need.</p> <p>CNPS Lists List 1B Plants considered by CNPS to be rare or endangered in California or elsewhere. List 2 Plants considered by CNPS to be rare, threatened, or endangered in California, but which are more common elsewhere. List 4 Plants of limited distribution or infrequent occurrence throughout a broader area in California that CNPS does not regard as “rare” from a statewide perspective, but their populations warrant monitoring.</p> <p>CNPS Threat Ranks 0.1 Seriously threatened in California (high degree/immediacy of threat) 0.2 Fairly threatened in California (moderate degree/immediacy of threat) 0.3 Not very threatened in California (low degree/immediacy of threats or no current threats known).</p> <p>A Threat Rank is assigned to all taxa on CNPS List 1B, List 2, and the majority of those on Lists 3 and List 4. Taxa on List 4 may be assigned a Threat Rank of 0.2 or 0.3; however an instance in which a Threat Rank of 0.1 is assigned to a List 4 plant has not yet been encountered. List 4 plants generally have large enough populations to not have significant threats to their continued existence in California; however, certain conditions still exist to make the plant a species of concern and hence be placed on a CNPS List. In addition, all List 1A (presumed extinct in California) and some List 3 (need more information) and List 4 (limited distribution) plants, which lack threat information, do not have a Threat Rank extension.</p>				

Sensitive Wildlife Species

Arroyo Toad (*Bufo microscaphus californicus*): This toad is federally listed as endangered, and is a California Species of Special Concern. The historic range extended along the coastal slope from San Luis Obispo County to northwestern Baja California, and six sites in on the state's southern desert slope. The species still occurs along the Mojave River above Mojave Forks Dam, but has disappeared from areas downstream of this dam. Arroyo Toads are largely nocturnal, and have highly specialized habitat requirements. They typically frequent sandy washes and arroyos with shallow pools that lack predatory fish or crayfish, and that have damp, sandy or gravelly banks. The adults dig deep burrows in sandy stream terraces and remain underground from late summer through the winter.

The USFWS designated critical habitat for the arroyo toad at the upper reaches of the Mojave River near the Mojave Forks dam and in a stretch of the river in Victorville, including Mojave Narrows Regional Park. This designation has been withdrawn by court order, and a new critical habitat designation is pending. The Victorville reach has historical records of occurrence of the arroyo toad, but biological surveys within the past ten years have failed to detect this species. The upper reach on both sides of the Mojave Forks dam is known to currently support arroyo toads. The Old Fire and subsequent debris flows in 2003 and 2004 damaged a great deal of occupied arroyo toad habitat in the upper tributaries. Although the Arroyo Toad appears to be extirpated from the Mojave River downstream of Mojave Forks Dam, the river lies within this toad's historic range, and the toad could potentially be found there in the future.

Desert Tortoise (*Gopherus agassizii*): The Desert Tortoise is widely distributed across the Mojave and Sonoran deserts of California, Nevada, Utah, Arizona, Sonora, and Sinaloa. Desert Tortoises found north and west of the Colorado River (i.e., those in the West Mojave Plan Area or WMPA) are listed as threatened by federal and state governments. The Mojave population exists at varying densities in six distinct population segments, or "evolutionarily significant units," and the species' 1994 Recovery Plan (USFWS 1994) lists each segment as a separate Recovery Unit. One major segment of the Mojave population of the Desert Tortoise occurs almost entirely within the WMPA and is called the West Mojave Recovery Unit.

Vegetation and topography in tortoise habitat within the WMPA are variable. The greatest population densities are found in Creosote Bush scrub with lower densities occurring in Joshua Tree woodland and Mojave-saltbush-allscale scrub. Major topographical features used by tortoises include flats, valleys, bajadas, and rolling hills generally from 600 to 1,000 meters in elevation. Friable soil is important for digging burrows. Direct threats to Desert Tortoises include collisions with motorized vehicles, illegal collecting, and disease. Indirect threats likely affecting tortoise populations include: habitat loss from construction and agricultural development; habitat alterations from livestock grazing, recreational activities, atmospheric pollution, global warming, and invasions of exotic plants. In the WMPA, the greatest threats are probably (1) disease, (2) cumulative effects of habitat loss, degradation, and fragmentation from construction, (3) urbanization and development, and (4) a high level of human access to

tortoise habitat. Increased predation by Common Ravens (*Corvus corax*) also appears to exert pressure on this population. Even if some individual threats appear to be minor, they may be cumulatively considerable.

Desert Tortoises have occurred in the Planning Area, at least historically, but have not been found there in recent years. The species' recovery plan recommends conservation and management of several tortoise-occupied areas covering approximately 1610 km² each, and none of the proposed areas extend into the Planning Area.

Bald Eagle (*Haliaeetus leucocephalus*): Listed as endangered by the federal government in 1978, the Bald Eagle was formally delisted by the U.S. Fish and Wildlife Service on 8 August 2007. The eagle's range is across much of North America, although the breeding range is patchy in much of the contiguous United States and very localized in northern Mexico. In California, breeding areas are restricted to the northern, forested parts of the state with the exception of a reintroduced population on the Channel Islands and several recent unsuccessful nesting attempts in southern California, including at Lake Silverwood in San Bernardino County (1994–1996). Northern populations are partially migratory, and some of these birds winter at water bodies in southern California. At all times of year, Bald Eagles require access to water bodies that provide adequate supplies of fish. The Planning Area does not include any water bodies known to support Bald Eagles, but the species could occasionally wander into this area from Mojave Narrows Regional Park, Apple Valley, or elsewhere.

Yellow-billed Cuckoo (*Coccyzus americanus*): The Yellow-billed Cuckoo is widely distributed in North America, breeding primarily across the central and eastern United States and in northern Mexico. The California Yellowbilled Cuckoo (*C.a. occidentalis*) occupies a much more restricted range that is limited to scattered populations in California, Idaho, Utah, Arizona, New Mexico, extreme western Texas, and possibly Nevada and western Colorado. The species has been observed during the breeding season at several locations along the Mojave River between Victorville and Barstow, but most of these sightings have involved unmated males. The species probably breeds at Mojave Narrows near Victorville, but nests or fledged young have not been located.

Yellow-billed Cuckoos have one of the most restrictive suite of macro-habitat requirements of any bird species. Not only are they restricted to a single habitat type, but the size and configuration of the habitat are also extremely important. During the breeding season in California, they are confined to areas comprised of large patches (at least 200 acres in extent and a width of at least 600 meters) of cottonwood-willow riparian habitat. This species has declined primarily due to habitat loss on the breeding grounds. It has been estimated that 95% or more of the original riparian habitat in the Central Valley of California has been lost over the past 150 years, and much of the remaining habitat is highly degraded and fragmented, and is not suitable because the patches are too small in extent and too narrow in width. The extent of the historic breeding population of Yellowbilled Cuckoos in the WMPA is unknown. It is likely that habitat along the Mojave River and at Morongo Valley was more extensive in the distant past than it is today and that a breeding population occurred at least along the Mojave River. It is unlikely that other areas of habitat sizable enough to support a population

of Yellow-billed Cuckoos existed, though a pair may have nested at larger oases from time to time.

Willow Flycatcher (*Empidonax traillii*): Two subspecies of Willow Flycatcher regularly occur in California: the Southwestern Willow Flycatcher (*E. t. extimus*), which is federally listed as endangered, and the Little Willow Flycatcher (*E. t. brewsteri*), which has no federal status. The entire species (including both subspecies mentioned above) has been placed on California's endangered species list. Fragmentation, modification, and destruction of the dense, expansive riparian woodlands that Willow Flycatchers require for nesting, combined with brood parasitism by Brownheaded Cowbirds (*Molothrus ater*), have greatly reduced breeding numbers of Willow Flycatchers in California and the West. The drawing down of water tables that support expansive riparian habitat is also implicated in this species' widespread decline in the West. Willow Flycatchers are widespread during migration, and occur regularly throughout southern California, generally favoring riparian areas.

From 1990 to 1995, territorial Willow Flycatchers (presumably Southwestern Willow Flycatchers) were found sparingly along the Mojave River, at Mojave Narrows Regional Park and about one-quarter mile downstream of Interstate 15. Nesting has not been confirmed in this area, and the species' current status there is unknown. The West Mojave Plan includes recommendation for the possible future restoration of the Mojave River as Willow Flycatcher habitat.

Least Bell's Vireo (*Vireo bellii pusillus*): This small, migratory songbird is listed as endangered by both federal and state resource agencies. This vireo once nested commonly throughout much of lowland California and northern Baja California, but its breeding range is now largely limited to a small number of major riparian systems in southern California and Baja California. This decline has been attributed to loss and degradation of riparian habitat, combined with brood parasitism by the Brown-Headed Cowbird, and is being reversed through preservation and restoration of habitat combined with aggressive cowbird control. Least Bell's Vireos typically breed along the margins of dense willow-riparian habitat that possesses high structural diversity. The West Mojave Plan indicates that only one or two pairs of Least Bell's Vireos are known to breed at Mojave Narrows Regional Park, and includes recommendations for possible conservation and management actions within the WMPA to benefit this species.

Mohave Ground Squirrel (*Spermophilus mohavensis*): This ground squirrel is listed as threatened by the State of California, occupies portions of Inyo, Kern, Los Angeles, and San Bernardino counties in the western Mojave Desert. The species ranges from near Palmdale on the southwest to Lucerne Valley on the southeast, Olancho on the northwest, and the Avawatz Mountains on the northeast. Most of the Planning Area lies within this species' range. The Mohave Ground Squirrel occupies all of the region's major desert scrub habitats, preferring flat to moderately hilly terrain; steep areas are generally avoided. This ground squirrel is most frequently in sandy, alluvial soils, but is also found in gravelly, and occasionally rocky soils. The main threats to this species come from destruction, degradation, and fragmentation of habitat. In addition, agricultural development can bring the animals into

contact with harmful toxins and may also increase populations of the California Ground Squirrel (*Spermophilus beecheyi*), a species that competes for resources with the Mohave Ground Squirrel.

Species Not Listed or Proposed for Listing

Chaparral Sand-Verbena (*Abronia villosa var. aurita*): This annual herb is placed on CNPS 1B.1, referring to species that CNPS considers to be rare or endangered in California and elsewhere, as well as being seriously threatened in California (high degree/immediacy of threat). Chaparral Sand-Verbena flowers between January and September, and is found in desert dune, scrub, and chaparral communities at elevations ranging between 80 and 1600 meters. Most populations are in the western half of Riverside County, but the species is found at widely scattered locations elsewhere in southern California. Chaparral Sand-Verbena has been recorded at two locations in the vicinity of Barstow, roughly 20 miles north of the Planning Area. At one of those sites, associated plants included Fourwing Saltbush (*Atriplex canescens*), horsebrush (*Tetradymia sp.*), Russian-thistle (*Salsola tragus*), and Desert Marigold (*Baileya multiradiata*). This species has potential to occur in the Planning Area.

Small-flowered Androstephium (*Androstephium breviflorum*): This perennial herb is placed on CNPS List 2.3, referring to species that CNPS considers to be rare, threatened, or endangered in California, but that are more common elsewhere, and that are not very threatened in California (low degree/immediacy of threats or no current threats known). The California distribution is poorly known, consisting of scattered populations in San Bernardino, Riverside, and possibly Inyo counties. Small-flowered Androstephium flowers in March and April, and occurs in desert dune and Mojavean desert scrub communities at elevations ranging between 220 and 640 meters. A reported a population of Small-flowered Androstephium along Highway 18, 0.75 miles west of its junction with Highway 395 was questioned in the West Mojave Plan and on 28 January 2008 Sula Vanderplank, collections manager at Rancho Santa Ana Botanic Gardens, confirmed that the photos and vegetative material supporting this record are regarded as inconclusive by Steve Boyd, the herbarium's curator. Thus, the status of this species in the Planning Area is uncertain.

Booth's Evening-Primrose (*Camissonia boothii ssp. boothii*): This annual herb is placed on CNPS List 2.3. In addition to populations in Arizona, Nevada, and Washington, in California it is known from scattered populations in western San Bernardino, southeastern Inyo, and Mono counties. Booth's Evening-Primrose flowers from April to September. It occurs between 800 and 2400 meters elevation in Joshua Tree woodland and pinyon and juniper woodland communities, on rocky or gravelly slopes and along sandy washes. The Consortium of California Herbaria lists an historic record from the Victorville area and three records from along the Mojave River in and near the Planning Area dating back to 1981: 0.5 miles upriver from Oro Grande; Yucca Loma Road at the river in Apple Valley; and about a mile north of Mojave Forks Dam, near Hesperia. It is likely that this species still occurs in the Planning Area.

Pygmy Poppy (*Canbya candida*): This tiny annual herb is a California endemic placed on CNPS 4.2., indicating that its populations warrant monitoring and appear to be fairly threatened in California. The range of the Pygmy Poppy includes Inyo, Kern, Ventura, San Bernardino, and Imperial counties. The species flowers from March to June and occurs between 600 and 1460 meters in elevation in Joshua Tree woodland, Mojavean desert scrub, and pinyon-juniper woodland communities. Soils are sandy, gravelly, or granitic. The Data Base includes two records of the Pygmy Poppy from the Planning Area and vicinity—one from Victorville in 1903 and the other from the Hesperia area in 1958. The Consortium of California Herbaria list several additional records from north of the Planning Area, around Hinkley, Kramer Junction, and Barstow. Populations of this inconspicuous plant potentially persist in the Planning Area.

Desert Cymopterus (*Cymopterus deserticola*): This herbaceous perennial plant is placed on CNPS List 1B.2, referring to species that CNPS considers to be rare or endangered in California and elsewhere, and that CNPS regards as being fairly threatened in California (moderate degree/immediacy of threat). It is known from a limited number of populations in western San Bernardino, southeastern Kern, and northeastern Los Angeles counties. Desert Cymopterus flowers between March and early May, and occurs in deep, loose, well drained, fine to coarse sandy soils of alluvial fans and basins, often in swales or on stabilized low sand dunes, and occasionally on sandy slopes. The known elevation range is 630 to 1500 meters. It occurs in Creosote Bush scrub, Desert Saltbush scrub, and Joshua Tree woodland with Creosote Bush scrub or Desert Saltbush scrub understory. Desert Cymopterus has never been found in Victorville, but populations were historically known from near Highway 18 in Apple Valley. It was last seen there in 1941, and appears to be extirpated due to human activities. It is suspected that Desert Cymopterus may be more widespread and abundant than is currently known. This is because (1) large areas of potentially suitable habitat have not been surveyed, (2) the species is detectable only during relatively short periods each year, and (3) population sizes fluctuate greatly between wet and dry years. Desert Cymopterus has some potential to occur in the Planning Area, particularly in the Northern Sphere Expansion area.

Barstow Woolly Sunflower (*Eriophyllum Mojavense*): This small annual herb is placed on CNPS List 1B.3. It is found in a very limited range in northwestern San Bernardino County and adjacent counties; most of the known populations are in the Kramer Junction area northwest of Barstow. Due to increasing disturbance throughout its range, the species may meet criteria for federal listing as threatened or endangered. That population is likely extirpated, as the Stoddard Well area is now highly disturbed. Flowering takes place between late March or April and May, and the plants rapidly dry out and decompose, becoming nearly impossible to detect by the end of May or beginning of June. This plant may be confused with a closely related species, Bud Woolly Sunflower (*Eriophyllum pringlei*). The West Mojave Plan includes a lengthy species account for the Barstow Woolly Sunflower including details of an attempt to translocate this species that met with limited success. The Barstow Woolly Sunflower is usually found in Creosote Bush scrub, sometimes adjacent to or with an overstory of Joshua Trees, and in arid-phase saltbush scrub, with an elevation range of about

600 to 1100 meters. The Barstow Woolly Sunflower is unrecorded in the Planning Area but has potential to occur there, particularly in the Northern Sphere Expansion area.

Creamy Blazing Star (*Mentzelia tridentata*): This annual herb is placed on CNPS List 1B.3. It flowers between March and May and occurs in Mojavean desert scrub with rocky, gravelly, or sandy soils at elevations ranging from 700 to 1160 meters. Plants reportedly associated with this species in the West Mojave area include Creosote Bush (*Larrea tridentata*), Burrobush (*Ambrosia dumosa*), Spiny Hopsage (*Grayia spinosa*), Bladder Sage (*Salazaria mexicana*), Catclaw Acacia (*Acacia greggii*), Burrobrush (*Hymenoclea salsola*), and Mojave Yucca (*Yucca schidigera*). This species is known to occur at several locations in northwestern San Bernardino County, all of them north and east of the Planning Area; however, it has potential to occur there, particularly in the Northern Sphere Expansion area.

Mojave Monkeyflower (*Mimulus mohavensis*): This annual herb, known only from western San Bernardino County, is placed on CNPS List 1B.2. This inconspicuous species flowers April–June and occurs between 600 to 1200 meters in Joshua Tree woodland and Creosote Bush scrub communities. The Data Base lists several records from May 1992 of populations of Mojave Monkeyflower within the Northern Sphere Expansion area. This wildflower occurs mainly on granitic soils on gravelly banks of desert washes, in sandy openings between Creosote Bushes, and along rocky slopes above washes (areas that are not subject to regular water flows). The species has been recorded in association with Creosote Bush, Desert Senna (*Senna armata*), Cheesebush, Rattany (*Krameria sp.*), Cholla (*Opuntia sp.*), Burrobush, Indigo bush (*Dalea sp.*), Cat-claw Acacia (*Acacia greggii*), Bigelow's Monkeyflower (*Mimulus bigelovii*), Desert Bells (*Phacelia campanularia*), and Desert Trumpet (*Eriogonum inflatum*).

Short-joint Beavertail (*Opuntia basilaris* var. *brachyclada*): This small cactus is placed on CNPS List 1B.2. It is a California endemic with a range centered in southwestern San Bernardino and northeastern Los Angeles counties, plus a few populations to the west and east. Short-joint Beavertail flowers in May and June, and occurs in chaparral, Joshua Tree woodland, Mojave Desert scrub, and pinyon-juniper woodland communities at elevations of 425 to 2000 meters. It often occurs as a single plant and seldom occurs in large numbers. Associated plants in the western Mojave Desert include Joshua Tree, Mojave Yucca (*Yucca brevifolia*), California juniper (*Juniperus californica*), Tucker's Oak (*Quercus john-tuckeri*), Pinyon Pine (*Pinus monophylla*), Desert Ceanothus (*Ceanothus greggii*), California buckwheat (*Eriogonum fasciculatum* var. *polifolium*), Purple Sage (*Salvia dorrii*), Rubber Rabbitbrush (*Chrysothamnus nauseosus*), and Linear-leaved Goldenbush (*Ericameria linearifolia*).

The Data Base reports that in 1989 one plant was present near Oro Grande Wash, along Highway 395 at Joshua Street, which was apparently translocated by Caltrans in order to establish a rest stop there. In 1991 another single plant was observed approximately 0.3 miles southeast of the Hesperia Airport in Hesperia. Just west of the Planning Area, P. J. MacKay has frequently observed Short-joint Beavertail at many scattered locations in the Pinon Hills and south Phelan. This species could occur in the Planning Area.

San Bernardino Aster (*Symphyotrichum defoliatum*): San Bernardino Aster is placed on CNPS List 1B.2. This species, formerly given the scientific name of *Aster bernardinus*, is a California endemic known from populations in Kern, Los Angeles, Orange, Riverside, San Bernardino, San Diego, and possibly San Luis Obispo counties. San Bernardino Aster is a rhizomatous herb that flowers from July to November. It occurs in a wide variety of habitats below 2040 meters, including disturbed areas, and is listed as an “obligate” wetland plant, meaning that it “occurs almost always (estimated probability 99%) under natural conditions in wetlands.” The plant was collected near a pond south of Victorville on 31 August 1924, and the species appears on Dr. Pamela J. MacKay’s Mojave River Plant List⁶. The San Bernardino Aster may still occur in Victorville and surrounding areas.

Victorville Shoulderband (*Helminthoglypta mohaveana*): This native snail, which has no federal or state protective status, occurs only along the Mojave River in the vicinity of Victorville, where it occupies rocky outcrops. Considering its extremely limited range, the species would seem to be a possible candidate for listing by the state and/or federal governments at some time, although probably not in the foreseeable future.

Western Pond Turtle (*Actinemys marmorata pallida*): This turtle is a California Species of Special Concern. The species ranges from Washington to northern Baja California. Two subspecies are currently recognized, but more taxonomic divisions may be warranted and the southern populations (now treated as *E. m. pallida*) may represent a distinct species. Based on preliminary analysis, turtles in the Mojave River showed a high level of morphological differentiation from other populations in southern California.

Western Pond Turtles occupy a wide range of permanent and intermittent aquatic habitats from near sea level to approximately 2050 meters, and require some slack- or slow-water aquatic habitat as well as sandy banks or open fields in which to estivate, hibernate, and lay eggs. Nesting sites are usually located along stream or pond margins, but may be more than 100 meters from the water on hillsides.

The Data Base lists a record of the Western Pond Turtle at a wastewater treatment plant located somewhere within the USGS Victorville quadrangle in the year 2004. The animals were in habitat vegetated by “cottonwood, narrow-leaf willows, black willows, and freshwater reeds. Dominant exotics include cattails and arundo.” Western Pond Turtles are threatened in various ways, including loss and degradation of habitat, competition from exotic turtle species, and predation by exotic Bullfrogs (*Rana catesbeiana*).

San Diego Horned Lizard (*Phrynosoma coronatum blainvillei*): This lizard is a California Species of Special Concern. It occurs in southern California and northwestern Baja California. Within the WMPA, the San Diego Horned Lizard (SDHL) occurs from the

⁶<http://hegel.lewiscenter.org/users/mhuffine/subprojects/Instructor/Mojave%20Desert%20Collection/plantMojaveDesert.html>. Accessed on 28 January 2008.

Antelope Valley eastward along the base of the San Gabriel and San Bernardino Mountains to Joshua Tree National Park. The species historically occurred along the Mojave River north to near Oro Grande, but is reportedly extirpated from this part of the range. Note, however, that the Data Base lists two records from within approximately 10 miles of Victorville, to the south and southwest, suggesting that the species could possibly still be found within the limits of the Planning Area.

Northern Harrier (*Circus cyaneus*): This raptor, a California Species of Special Concern, breeds widely in marshlands and open upland habitats across North America and Europe. Regular breeding is limited to Piute Ponds (at Edwards Air Force Base) and Harper Dry Lake, and Northern Harriers may occasionally nest in agricultural or grassland areas elsewhere in the WMPA. This species winters fairly commonly in the Victorville area but is unlikely to nest in the Planning Area.

Sharp-shinned Hawk (*Accipiter striatus*): This small hawk, a California Species of Special Concern, breeds in forests across much of Alaska and Canada, and in mountainous parts of the contiguous United States. It is a widespread migrant and wintering species that occurs across most of North and Central America, including southern California. Sharp-shinned Hawks winter regularly throughout the WMPA, and are expected to occur in both developed and undeveloped portions of the Planning Area.

Cooper's Hawk (*Accipiter cooperii*): This medium-sized hawk, a California Species of Special Concern, is a generally uncommon breeding species and fairly common wintering species in southern California. This hawk typically nests in well-developed oak woodlands and riparian forests, and occurs in a wider variety of habitats, including residential areas, during the fall and winter months. Cooper's Hawks winter regularly in the WMPA and breed locally at a handful of sites. Mojave Narrows Regional Park is the only known breeding site near the Planning Area.

Ferruginous Hawk (*Buteo regalis*): The Ferruginous Hawk, a California Species of Special Concern, breeds in the west-central United States and adjacent southern Canada; it winters in grasslands and deserts southward through most of the western and central United States and northern Mexico. This large hawk is an uncommon migrant and winter visitor that occurs primarily in agricultural fields, as well as other open habitats that offer adequate supplies of jackrabbits, ground squirrels, gophers, and other suitable prey. Ferruginous Hawks probably occur as rare migrants and winter visitors in undeveloped portions of the Planning Area.

Golden Eagle (*Aquila chrysaetos*): This large raptor is a California Species of Special Concern. Golden Eagles are year-round residents across much of southern California, nesting in hilly and mountainous areas well removed from human presence and foraging over a open desert in a range of close to 100 square miles. It is possible that the Northern Sphere Expansion area includes rocky cliffs suitable for use as nesting substrate for the Golden Eagle,

but otherwise the species' occurrence in the Planning Area would be limited to wandering and foraging birds.

Prairie Falcon (*Falco mexicanus*): This large falcon is a California Species of Special Concern that occupies open country throughout southern California and the West. It is increasingly rare throughout the region, particularly as a breeder. It is possible that the Northern Sphere Expansion area includes rocky cliffs suitable for use as nesting substrate for the Prairie Falcon, but otherwise the species' occurrence in the Planning Area would be limited to wandering and foraging birds.

Burrowing Owl (*Athene cunicularia*): This small, ground-dwelling raptor is a California Species of Special Concern. Burrowing Owls live in grasslands, rangelands, along the edges of agricultural fields, and in sparsely vegetated scrub lands. They usually occupy ground squirrel burrows but have been known to use drain pipes and other types of holes or other structures. Burrowing Owls were widespread and fairly common residents in southern California during most of this century, prior to widespread losses of habitat and destruction of ground squirrel colonies associated with human developments. In many areas, particularly on the coastal slope, the species now occurs only rarely in fall and winter.

The West Mojave Plan reported 53 records of the Burrowing Owl in the WMPA, 23 of them from Edwards Air Force Base. In the WMPA, the Burrowing Owl "is currently uncommon, local or patchy in occurrence, and currently in slow decline, but is not yet threatened with extirpation. The total breeding population within the WMPA is likely in the range of a few hundred pairs." A 31 December 2007 Data Base search for the Victorville USGS topographic quadrangle and surrounding quadrangles yielded 33 records of the Burrowing Owl, some of them from within Victorville City limits in recent years. The species presumably still occurs in open lands in the Planning Area, particularly in areas that have healthy ground squirrel populations. The West Mojave Plan cites the following potential threats to Burrowing Owls in the WMPA: (1) direct mortality from interactions with humans, including vehicle collisions, (2) pesticides, (3) habitat degradation and destruction, and (4) predators.

Long-eared Owl (*Asio otus*): This owl is a California Species of Special Concern found across large portions of North America, including most of the West. Populations have declined greatly throughout much of the species' range due to habitat loss and degradation. The Long-eared Owl's status is generally poorly known in California, but it appears to occur most regularly in desert areas. Although not truly migratory, pairs may move considerable distances outside of the breeding season, presumably in response to prey availability. In the California deserts, Long-eared Owls nest and/or roost in a variety of plant communities, including riparian woodlands, junipers, and even stands of exotic tamarisk (*Tamarix spp.*) or other artificial plantings. The Data Base does not list any recent records of the Long-eared Owl from in or around the City of Victorville, but the species is known to nest along the Mojave River and possibly in undeveloped or lightly developed areas within the City of Victorville, where stands of suitable trees occur. The West Mojave Plan identifies habitat

degradation and habitat disturbance as the most likely potential threats to Long-eared Owls in the WMPA.

Loggerhead Shrike (*Lanius ludovicianus*): This small predatory bird is a California Species of Special Concern. Shrikes inhabit open country, where they feed primarily on large insects and occasionally small vertebrate prey. Southern California's resident populations are increased somewhat by winter visitors that breed elsewhere. The Loggerhead Shrike is known to occur in the Planning Area, with resident birds presumably augmented by winter visitors from elsewhere. Potential threats to this species include the use of biocides (herbicides and insecticides), competition from human-tolerant species like the Common Raven, collisions with vehicles, and possibly invasion of desert scrub by non-native annual grasses, which may decrease shrike foraging efficiency.

Brown-crested Flycatcher (*Myiarchus tyrannulus*): The Brown-crested Flycatcher is a California Species of Special Concern is a very localized breeder in southeastern California, where it requires riparian woodland or forest dominated by large cottonwoods and willows, and these birds migrate southward to winter in Mexico or Central America. As reported in West Mojave Plan, up to three pairs of Brown-crested Flycatchers nest each year at Mojave Narrows Regional Park, the only pocket of potentially suitable habitat for this species in or around Victorville. Loss of well-developed riparian woodlands along the river resulting from drawing down of groundwater probably represents the greatest threat to this small breeding population of Brown-crested Flycatchers.

Bendire's Thrasher (*Toxostoma bendirei*): This California Species of Special Concern is resident in the southwestern United States and northwestern mainland Mexico. The breeding distribution of Bendire's Thrasher in California is restricted almost exclusively to the Mojave Desert. The primary distribution of Bendire's Thrasher breeding habitat in the WMPA extends as a discontinuous band in suitable habitat from Joshua Tree National Park (JTNP) to near Victorville. The Data Base does not list any recent records of Bendire's Thrasher from in or around the Planning Area, and if the species does occur there it is probably rare.

Le Conte's Thrasher (*Toxostoma lecontei*): This thrasher, a California Species of Special Concern, is resident in the southwestern United States and northwestern Mexico. Many of California's Le Conte's Thrashers occur in the WMPA, generally in open desert with scattered shrubs and sandy and/or alkaline soil, rarely on rocky soil, hillsides, in riparian vegetation or on agricultural lands. This species is not found in urban or dense residential areas, but may be found in proximity to scattered rural residences. Loss of suitable habitat is identified as the main threat to Le Conte's Thrasher. The Data Base lists several records from the Victorville USGS quadrangle and surrounding quadrangles, but most are from outside of Victorville proper. The species may occur in undeveloped or lightly developed parts of the Planning Area, where suitable habitat is present.

Yellow Warbler (*Dendroica petechia*): This widespread wood-warbler, a California Species of Special Concern, breed in a variety of woodland habitats in the state, and is

widespread in migration. Southern California breeding populations declined markedly due to habitat loss, habitat degradation, and parasitism by Brown-headed Cowbirds, but have rebounded in recent years in response to habitat preservation, restoration, and cowbird control measures. Mojave Narrows Regional Park is one of only four places that currently hosts breeding Yellow Warblers (8 to 12 pairs annually). Threats to this species in the WMPA include cowbird parasitism and loss of well-developed riparian woodlands along the river resulting from drawing down of groundwater. The extensive network of trails at Mojave Narrows Regional Park increases the amount of “edge” in the riparian forest there, a condition known to promote cowbird proliferation, and horse stables also serve to attract large numbers of cowbirds to areas near the Mojave River. The species occurs as a regular spring and fall migrant within the Planning Area but it is unlikely to breed there.

Yellow-breasted Chat (*Icteria virens*): California's breeding population has declined significantly, especially in the southern portion, leading to its consideration as a California Species of Special Concern. Mojave Narrows Regional Park is one of only five places that currently hosts breeding Yellow-breasted Chats (6 to 10 pairs annually). The West Mojave Plan identifies cowbird parasitism as the main threat to this species and notes that the extensive network of trails at Mojave Narrows Regional Park increases the amount of “edge” in the riparian forest there, a condition known to promote cowbird proliferation. Horse stables also serve to attract large numbers of cowbirds to areas near the Mojave River. The Planning Area lacks habitat that appears to be suitable for nesting by the Yellow-breasted Chat.

Summer Tanager (*Piranga rubra*): The Summer Tanager is a California Species of Special Concern that breeds across large parts of the United States and northern Mexico. Populations scattered through the southern California deserts breed almost exclusively in well-developed cottonwood-willow riparian forests. Mojave Narrows Regional Park is one of only four places that currently hosts breeding Summer Tanagers (10-15 pairs annually). Threats to this species come from loss of well-developed riparian woodlands along the river resulting from drawing down of groundwater, from invasion of native riparian woodlands by non-native plant species, and possibly from cowbird parasitism. The Planning Area lacks habitat that appears to be suitable for nesting by the Summer Tanager.

Tricolored Blackbird (*Agelaius tricolor*): The Tricolored Blackbird, a California Species of Special Concern, breeds in freshwater marshes, and occasionally in other types of dense, often thorny, vegetation, and requires expansive nearby grasslands, rangelands, or other open habitats for foraging. Tricolored Blackbirds make regular seasonal movements, but the occupancy of individual colony sites is often unpredictable. In the WMPA, Tricolored Blackbirds are most frequent in the western parts, and the West Mojave Plan reports that they have bred along the Mojave River near Interstate 15. Suspected threats to Tricolored Blackbird include loss and destruction of suitable nesting and foraging habitat, contamination by biocides and other toxins, and human disturbance of colonies. Tricolored Blackbirds could potentially nest in small “pocket” wetlands in the Planning Area and/or forage in open fields, golf courses, and other open situations.

Pallid San Diego Pocket Mouse (*Chaetodipus fallax pallidus*): This small mouse, a California Species of Special Concern, occupies desert areas from eastern Los Angeles County south and east through San Bernardino and Riverside counties to eastern San Diego County southwestern Imperial County. The species occurs in a variety of habitats, including desert wash, desert scrub, desert succulent scrub, and pinyon-juniper woodland. Sandy soils are selected, usually in association with rocks or coarse gravel and herbaceous vegetation. The Data Base lists records from Oro Grande and Victorville, and the species presumably still occurs in suitable habitat throughout the Planning Area.

Mojave River Vole (*Microtus californicus mohavensis*): The Mojave River Vole, one of numerous subspecies of the California vole, *Microtus californicus*, is limited to moist habitats (e.g., meadows, freshwater marshes, irrigated pastures, possibly alfalfa fields) in the vicinity of the Mojave River between Victorville and Helendale. Suitable habitat is associated with ponds and irrigation canals along with the Mojave River proper. The rapid development of the Victorville/Apple Valley/Hesperia area has taken place in the historic core area of the subspecies. The Mojave Narrows Regional Park is the only protected land in this core area. The primary threats to the Mojave River vole are the destruction and fragmentation of habitat resulting from agriculture and urbanization. Urbanization adjacent to the Mojave River restricts the availability of upland habitat that may be critical during flood events. Agricultural development affects this subspecies by removing and modifying native habitats. Channelization of surface water and pumping of ground-water may continue to be a significant threat along the Mojave River. Virtually all of the potential habitat along the Mojave River, with the exception of the Mojave Narrows Regional Park, is in private ownership.

Pallid Bat (*Antrozous pallida*): This bat is a California Species of Special Concern. Pallid Bats occupy a variety of habitats in western North America, but the species has declined greatly in many parts of its range, including southern California. Pallid bats roost in rock crevices, old buildings, bridges, caves, mines, and hollow trees. They are unique among North American bats in foraging on the ground, where scorpions, grasshoppers, beetles and other insects make up the main prey base, and they also glean insects from shrubs and trees.

No known Pallid Bat roost is currently threatened in the WMPA, but potential threats include loss or disturbance to roosts and destruction of foraging habitat. In the desert, many rock crevice roosts may be difficult to identify, and impacts may be unintentional such as the blasting of rocks for renewed mining, highway construction, and other developments. When the bats occupy mines and buildings, human entry can cause the bats to abandon the roost, even if non-volant young are present. Roosts in abandoned mines are also at risk due to closure for hazard abatement or renewed mining in historic districts. Closure can directly entomb bats if conducted during the day, but renewed activity is always a potential issue to bats roosting in mines. In many parts of their range, Pallid Bats roosting in buildings are excluded by renovations or by the desire of property owners to be rid of them. Because their roosting sites are often highly visible (e.g., open rafters) and the animals display considerable

roost loyalty, they are often targeted by pest control operators and vandals. In the name of human safety, public health personnel encourage the removal of bats in buildings.

Townsend's Big-eared Bat (*Corynorhinus townsendii*): This sedentary bat is a California Species of Special Concern that is widespread in western North America. In California it is found primarily on the west side of the Sierra Nevada Range. This bat roosts in caves and other similar situations, including lava tubes and mine tunnels; buildings and other human-made structures are also utilized. The Data Base lists a specimen from near the Planning Area at Apple Valley, collected at Dead Man's Point on Laguna Seca Drive 0.25 mile north of State Route 18. Potentially suitable roosting habitat for Townsend's Big-eared Bat occurs in the Planning Area, particularly in the Northern Sphere Expansion area. Bats occupying mines and buildings are threatened by human entry, which can cause the bats to abandon the roost, even if non-volant young are present. Roosts in abandoned mines are also at risk due to closure for hazard abatement or renewed mining in historic districts.

Spotted Bat (*Euderma maculatum*): This bat, a California Species of Special Concern, is considered one of the rarest mammals in North America. The Spotted Bat has been found in the West from southern British Columbia to the Mexican border, at widely scattered localities. Little is known of its habitat requirements, but records come from such varied habitats as arid deserts, grasslands, and mixed coniferous forests as high as 3200 meters. This bat roosts primarily in crevices in cliffs. In the Planning Area, potentially suitable roosting habitat for the Spotted Bat occurs in the Northern Sphere Expansion area.

California Mastiff Bat (*Eumops perotis californicus*): This, the largest bat in North America, is a California Species of Special Concern. The California Mastiff Bat ranges from north-central California south to northern Baja California, eastward across the southwestern United States and northwestern Mexico to west Texas and Coahuila. In California, most records are from rocky areas at low elevations, where roosting occurs primarily in crevices in cliffs and trees. In the Planning Area, potentially suitable roosting habitat for the California Mastiff Bat occurs in the Northern Sphere Expansion area.

American Badger (*Taxidea taxus*): This mustelid, a California Species of Special Concern, ranges across most of western North America, including California outside of the humid coastal forests of northwestern California. The American Badger's principal habitat requirements seem to be sufficient food, friable soils, and relatively open, uncultivated ground. Grasslands, savannas, and mountain meadows near timberline are preferred. Badgers prey primarily on burrowing rodents, although they will eat a variety of other animals, including mice, Woodrats, reptiles, birds and their eggs, bees, and other insects. Badger populations across the state have declined drastically in California within the last century and the species has been extirpated from many areas in southern California. Loss of natural open spaces to agriculture and construction represents the primary cause of the species' decline and extirpation in California, and deliberate killing probably has played a role, as well. Badgers are also susceptible to direct and secondary poisoning. Shooting and trapping is another source of mortality. The Data Base lists no records of the American Badger from the Planning Area, but

the biological technical report for the City of Barstow's General Plan (Circle Mountain Biological Consultants 1996) reported sightings from the Kramer Hills and Iron Mountain areas. American Badgers have potential to occur in the Planning Area.

5.4.2 Regulatory Framework

5.4.2.1 Federal

Endangered Species Act of 1973 (ESA): The ESA and implementing regulations, Title 16 United States Code (USC) §1531 et seq. (16 USC 1531 et seq.), Title 50 Code of Federal Regulations (CFR) §17.1 et seq. (50 CFR §17.1 et seq.), includes provisions for the protection and management of federally listed threatened or endangered plants and animals and their designated critical habitats.

Section 9 of the ESA prohibits the “take” of listed wildlife taxa. “Take” is defined as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct” relative to listed taxa. The ESA also makes it illegal for any person to collect (“remove and reduce to possession”) or “maliciously damage and destroy” any endangered plant species. Since “take” cannot always be avoided, Section 10 of the ESA includes provisions for “take” that are incidental to, but not the purpose of, otherwise lawful activities occurring on state or private lands. Section 7 of the Act provides a similar function for incidental take considerations associated with federal agencies that undertake, fund or authorize actions potentially affecting listed species.

Section 7 of the Act also directs the United States Fish and Wildlife Service (USFWS) to issue “biological opinions” (BO’s) to requesting federal agencies in consideration of actions which may affect listed species. These binding regulatory documents identify probable impacts to listed species and/or designated critical habitat, and offer expert opinions as to whether a proposed action would constitute jeopardy to the continued existence of listed species or result in “adverse modification” of critical habitat. This process is initiated with the submission of a “biological assessment” (BA) by the requesting federal agency, which ascertains whether the considered action “may affect” a listed taxon. Terms and conditions designed to minimize anticipated impacts are generally specified in the resulting BO issued by the USFWS, as is a specific level of “incidental take.” ESA consultations and permitting actions in the Planning Area are handled by the USFWS Ventura Field Office.

Clean Water Act (CWA): The CWA (33 USC Sections 1251-1376), administered by the Environmental Protection Agency (EPA) and other federal agencies, authorizes water quality programs, requires federal effluent limitations/state water quality standards, and requires permits for pollutant discharge into “Waters of the United States.”

Section 401 of the CWA is administered by the State Water Resources Control Board (SWRCB) through its Regional Water Quality Control Boards (RWQCB’s), which review

projects and issue permits for those actions which may result in wastewater discharge, or that may otherwise affect water quality in the State of California. The RWQCB certifies that established state water quality standards would not be violated by the discharge of pollutants into Waters of the U.S. Some regulated actions may qualify for a waiver of certification if certain precautions are taken during project implementation. The Planning Area lies within the RWQCB's Lahontan Region and is served by its Victorville office.

Section 402 of the CWA establishes a permitting system for the discharge of any pollutant (except dredge or fill material) into Waters of the U.S. This regulatory program is administered by the SWRCB through its RWQCB's. A National Pollutant Discharge Elimination System (NPDES) permit is required for all point discharges of pollutants to surface waters. A point source is a discernible, confined, and discrete conveyance, such as by pipe, ditch, or channel. The regulatory process involves preparing a Notice of Intent and Stormwater Pollution Prevention Plan (SWPPP) and submitting them for agency approval.

Section 404 of the CWA establishes a permit program administered by the U.S. Army Corps of Engineers (Corps) that regulates the discharge of dredged or fill material into Waters of the U.S. Corps jurisdiction is founded upon a nexus between the water body in question and interstate commerce. This connection may be direct, through a tributary system linking a stream channel with traditional navigable waters used in interstate or foreign commerce, or may be indirect, through a nexus identified in Corps regulations. Corps jurisdictional areas include 1) navigable waters, 2) tributaries to navigable waters that possess an "ordinary high water mark," and 3) isolated waters that are important to interstate or foreign commerce. In order for non-tributary (i.e., isolated) waters to be considered jurisdictional, they must possess intrinsic attributes important to interstate or foreign commerce. Important attributes include habitat for endangered species or migratory birds, or other attributes identified in Corps regulations. The Corps may, at its discretion, assert jurisdiction over minor seasonal drainage, policy may undergo change in response to the Supreme Court's 19 June 2006 "Rapanos decision" in which some justices questioned the validity of the nexus between non-navigable waters and interstate commerce.

The Corps has created a series of nationwide permits (NWP's) that authorize certain activities within Waters of the U.S., provided that the proposed activity does not exceed certain impact thresholds. Per this nationwide program, steps must also be taken to avoid impacts to wetlands where practicable, minimize potential impacts to wetlands, and provide compensation for any remaining, unavoidable impacts. For projects that exceed identified thresholds for nationwide permits, the Corps considers individual permits for specific projects. The Planning Area is served by the Corps' Los Angeles District Office.

Migratory Bird Treaty Act (MBTA): The original 1918 statute implemented the 1916 Convention between the U.S. and Great Britain (for Canada) for the protection of migratory birds (16 USC Sections 703-711; 50 CFR Subchapter B). Later amendments implemented treaties between the U.S. and Mexico, the U.S. and Japan, and the U.S. and the Soviet Union (now Russia). Provisions in the statute and amendments relevant to the Victorville General Plan include:

- Establishment of a Federal prohibition, unless permitted by regulations, to “pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird, included in the terms of this Convention . . . for the protection of migratory birds . . . or any part, nest, or egg of any such bird.” (16 USC 703)
- The 1960 statute (Public Law 86-732) amended the MBTA by altering earlier penalty provisions. The new provisions stipulated that violations of this Act would constitute a misdemeanor and conviction would result in a fine of not more than \$500 or imprisonment of not more than six months. Activities aimed at selling migratory birds in violation of this law would be subject to fine of not more than \$2000 and imprisonment could not exceed two years. Guilty offenses would constitute a felony. Equipment used for sale purchases was authorized to be seized and held, by the Secretary of the Interior, pending prosecution, and, upon conviction, be treated as a penalty.
- Public Law 99-645, the 1986 Emergency Wetlands Resources Act, amended the Act to require that felony violations under the MBTA must be “knowingly” committed.
- Public Law 105-312 amended the law to allow the fine for misdemeanor convictions under the Migratory Bird Treaty Act to be up to \$15,000 rather than \$5000. The practical effect of the MBTA is to make the disturbance of nearly all actively nesting native bird species a federal offense. Compliance with the MBTA is normally achieved either through (a) prohibiting actions during the nesting season (roughly 1 February to 31 August) that could disturb native birds attempting to nest, or (b) requiring preconstruction surveys by a qualified biological monitor to identify any nests that could be disturbed, followed by periodic (e.g., weekly) construction monitoring to check for such disturbance. If apparent disturbance is noted, the monitor typically has the authority to cease or modify the actions so as to permit successful nesting.
- Disturbances causing nest abandonment and/or loss of reproductive effort (i.e., killing or abandonment of eggs or young) may also be considered a “take.” In 1972, the MBTA was amended to include protection for migratory birds of prey (e.g., raptors). Six families of raptors occurring in North America were included in the amendment: Accipitridae (kites, hawks, and eagles); Cathartidae (New World vultures); Falconidae (falcons and caracaras); Pandionidae (ospreys); Strigidae (typical owls); Tytonidae (barn owls). The provisions of the 1972 amendment to the MBTA protects over 800 species including geese, ducks, shorebirds, raptors, songbirds, and many relatively common species.

National Environmental Policy Act (NEPA): Title I of NEPA (42 USC Section 4321) requires that all federal agencies prepare detailed Environmental Impact Statements (EISs) for “every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment.” The statute stipulated the factors to be considered in environmental impact statements, and required that federal agencies employ an interdisciplinary approach in related decision-making and develop means to ensure that unquantified environmental values are given appropriate consideration, along with economic and technical considerations. NEPA review provides for interdisciplinary agency review of proposals, allows for public involvement, and determines the need for preparation of an EIS. The process also facilitates the identification of mitigation measures that can minimize impacts to the human environment. NEPA reviews are based upon the Council on Environmental Quality (CEQ) regulations set forth at 40 C.F.R. Sections 1500–1508.

5.4.2.2 State

California Fish and Game Code: The Fish and Game Code provides specific protection and listing for several types of biological resources. Title 14 California Code of Regulations, Section 1602 of the California Fish and Game Code requires any person, state or local governmental agency, or public utility to notify the California Department of Fish and Game (CDFG) before beginning any activity that will do one or more of the following: 1) substantially obstruct or divert the natural flow of a river, stream, or lake; 2) substantially change or use any material from the bed, channel, or bank of a river, stream, or lake; or 3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into a river, stream, or lake. Section 1602 applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes in the state. Section 13050 of California's Porter-Cologne Act defines “waters of the state” as “any surface water or groundwater, including saline waters, within the boundaries of the state.”

Section 1603 of the Code states that, upon notification, if CDFG determines that the proposed activity may have an effect listed above, CDFG shall provide a draft Streambed Alteration Agreement to the entity within 60 days. The draft agreement shall describe the fish and wildlife resources to be affected and specify measures to protect those resources. Within 30 days of the date of receipt of the draft agreement, the applicant shall notify the department whether the measures in the draft agreement are acceptable. Upon written request, CDFG shall meet with the applicant within 14 days.. If the applicant fails to respond, in writing, within 90 days of receiving the draft agreement, CDFG may withdraw that agreement and require the entity to resubmit a notification before commencing the activity.

Sections 1900–1913 of the Code constitute the Native Plant Protection Act of 1977 (NPPA). The NPPA directed CDFG to carry out the Legislature’s intent to “preserve, protect and enhance rare and endangered plants in this State.” The NPPA gave the California Fish and Game Commission the power to designate native plants as “endangered “or “rare” and protected endangered and rare plants from take. The NPPA provides limitations on take and

transport of identified plants as follows: “no person will import into this state, or take, possess, or sell within this state” any rare or endangered native plants, except in accordance with the provisions outlined in the Act. Furthermore, if a landowner is notified by CDFG pursuant to Section 1903.5 that a rare or endangered plant is growing on their property, the landowner shall notify the CDFG at least 10 days prior to impacting land uses to allow CDFG to salvage the plants.

Sections 1925–1926 of the Code state that CDFG, in cooperation with the Department of Food and Agriculture, shall enforce the provisions of the California Desert Native Plants Act (Sections 80001–80006 of the California Food and Agricultural Code). Thus, for example, official tags and seals issued by the San Bernardino County Agricultural Commissioner are required to transport cacti and Joshua Trees (*Yucca breviflora*) on public roadways.

The California Endangered Species Act (CESA) (Fish and Game Code Sections 2050-2116) later expanded upon the original NPPA and enhanced legal protection for plants, but the NPPA remains part of the Fish and Game Code. To align with federal regulations, the CESA created the categories of “threatened” and “endangered” species. It converted all “rare” wildlife species into the Act as threatened species, but did not do so for rare plants. Thus, there are three listing categories for plants in California: rare, threatened, and endangered. A CESA Section 2081 (a) permit is required for take of candidate or listed threatened and endangered plants for scientific, educational, or management purposes, and a CESA Section 2081 (b) permit is needed for incidental take of listed threatened and endangered plants from all activities, except those specifically authorized by the NPPA. Since rare plants are not included in the CESA, mitigation measures for impacts to rare plants are specified in a formal agreement between the Department and the project proponent.

The Wildlife and Habitat Data Analysis Branch of CDFG maintains a “Special Plants” list consisting of approximately 2000 native plant taxa that are tracked by the Department's Natural Diversity Database (NDDDB). These plant taxa are either officially State or federally listed, proposed, or candidate species, or other species, subspecies, or varieties that are of concern due to reasons such as rarity, threats, or the species' close association with declining habitats, or for which more information is needed. Status and threat rankings are assigned to the plant taxa on the Special Plants list, which is available on the Department's web page (<http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/SPPlants.pdf>).

The California Native Plant Society (CNPS) publishes and maintains an Inventory of Rare and Endangered Vascular Plants of California in both hard copy and electronic versions (<http://cnps.web.aplus.net/cgi-bin/inv/inventory.cgi>). The Inventory assigns plants to one of several categories expressing the species' perceived rarity and threat levels. A plant need not be in the Inventory to be considered a rare, threatened, or endangered species under the CEQA. In addition, the CDFG recommends, and local governments may require, protection of plants that are regionally significant, such as locally rare species, disjunct populations of more common plants, or plants on the less sensitive CNPS Lists.

Wetlands Conservation Policy of 1993: This policy provides for the protection, preservation, restoration, enhancement, and expansion of wetland habitats in California. Primarily it acts to ensure no overall net loss of wetlands within the state and achieve a long-term net gain in the quantity, quality, and permanence of wetlands acreage and values in California in a manner that fosters creativity, stewardship, and respect private property. The administering agencies are the CDFG, the California Environmental Protection Agency (Cal-EPA), and the Regional Water Quality Control Board (RWQCB).

California Environmental Quality Act (CEQA): Title 14 California Code of Regulations the CEQA was established by the state legislature to inform both state and local governmental decision-makers and the public about significant environmental effects of proposed activities, to identify ways to avoid or reduce significant adverse effects on the environment, and to disclose the reasons why a project is approved if significant environmental impacts would result. For California's public agencies, the CEQA enables the identification of significant environmental effects, the design of measures to avoid significant environmental effects, where feasible, or the design of measures that fully mitigate significant environmental effects.

CEQA generally applies to discretionary land use projects that require approval by a local government body. This includes building projects as well as planning documents such as general plans and zoning ordinances. The CEQA typically does not apply when only ministerial approval is necessary, such as a building permit application, but there are exceptions to this rule. The CEQA lead agency begins the review process by preparing an initial study that discloses whether a project has the potential to cause significant environmental impacts in one or more land use categories (e.g., traffic, biological resources, cultural resources). If so, the agency must prepare an Environmental Impact Report (EIR). If the lead agency determines that no significant impacts could result from project implementation, the agency prepares a Negative Declaration. If the project could entail significant environmental impacts, but the lead agency determines that all potentially significant impacts could be mitigated to below a level of significance, then the agency prepares a Mitigated Negative Declaration.

The EIR required under the CEQA and the EIS required under the NEPA are similar documents, yet have some crucial differences. For example, CEQA requires the least environmentally impacting alternative to be followed unless the lead agency identifies specific policy reasons justifying a less environmentally protective alternative, whereas NEPA simply requires the impacts of each alternative be listed. Under the CEQA the lead agency is required to analyze the environmental impact of the project, but also must look to the impacts of reasonable alternatives, including a "no project alternative." The lead agency must identify the environmentally superior alternative, and when this is the "no project alternative" the agency must also identify the environmentally superior alternative that would meet the main goals of the project. If the lead agency selects a project with greater environmental impact, it must adopt a Statement of Overriding Considerations that identify specific economic, legal, social, technological, or other considerations that outweigh the project's significant, unmitigated impacts.

5.4.2.3 Regional

West Mojave Plan: This habitat conservation plan and federal land use plan amendment, released in December 2004, provides a comprehensive framework for the conservation of the Desert Tortoise, the Mohave Ground Squirrel, and nearly 100 other sensitive plant and wildlife species—and the natural communities of which they are a part—while providing a streamlined program for complying with the requirements of the California and federal Endangered Species Acts. The West Mojave Plan covers the 6.2-million-acre West Mojave Plan Area (WMPA)—including 3.2 million acres of public land and 3.0 million acres of private land—in portions of San Bernardino, Inyo, Kern and Los Angeles counties. The entire Victorville Planning Area lies within the WMPA.

The proposed West Mojave Plan presents a multi-species conservation strategy applicable to public and private lands throughout the WMPA. It would amend the Bureau of Land Management’s California Desert Conservation Area (CDCA) Plan for public lands, and would serve as a habitat conservation plan for private lands. Local jurisdictions and state agencies that become signatories to the West Mojave Plan would be issued “incidental take” permits covering 49 listed, threatened, or otherwise sensitive plant and wildlife species. In exchange, such jurisdictions would require the payment of a development fee (currently \$770 per acre) to cover the West Mojave Plan’s costs for land acquisition, land management, and other operations. This would streamline the City’s CEQA review process by providing a simplified means of mitigating impacts to sensitive plant and wildlife species potentially impacted by development projects within City limits. If the City chooses not to sign on to the West Mojave Plan, the City will be required to determine appropriate mitigation for potentially significant biological impacts on a case-by-case basis.

The West Mojave Plan characterizes Mojave Narrows Regional Park (on the City’s border) as a “biological hotspot.” The park is owned by the state Wildlife Conservation Board and is operated by San Bernardino County Department of Regional Parks. It comprises 850 acres, with 450 acres devoted to habitat. Under an approved West Mojave Plan, groundwater levels would be monitored and maintained in a manner specifically designed to conserve biological resources along the Mojave River⁷. Therefore, even though this area lies just outside of the Victorville General Plan Planning Area’s limits, requirements to conserve groundwater resources could affect land use decisions within the Planning Area.

Appendix B to the West Mojave Plan identifies specific conservation responsibilities for the City of Victorville. These actions are presented in Section 5.4.4.6 below and would be required if the City agrees to become a signatory to the Plan.

City of Victorville Joshua Tree Ordinance: Title 13, Chapter 13.33, of the City’s Municipal Code reads addresses the City’s Joshua Tree Ordinance. The term “Joshua tree” means a living tree of the botanical name of *Yucca Brevifolias* [stet; the correct scientific name

⁷ Page 2-77 of the West Mojave Plan specifies that groundwater levels would be maintained in accordance with the Mojave Basin Adjudication (Physical Solution/Stipulated Judgment & Interlocutory) of April 1993.

is *Yucca brevifolia*] (Ord. 1224 § 1 (part), 1988). Section 13.33.010 (Purpose and Intent) provides that ... “proper and necessary steps be taken in order to protect and preserve, to the greatest extent possible, Joshua trees in all areas of the city so as to preserve the unique natural desert environment throughout the city and for the health, safety and welfare of the community (Ord. 1224 § 1 (part), 1988).” The Ordinance applies to all property within the corporate limits of the city, particularly: (1) Any existing lot in a subdivision already cleared and graded with improvements installed as required by the conditions of the original subdivision; and (2) Any occupied residential properties. (Ord. 1224 § 1 (part), 1988).

Section 13.33.040 prohibits Joshua tree removal and provides for enforcement. Providing that: (1) It is unlawful for any person to cut, damage, destroy, dig up, or harvest any Joshua tree without the prior written consent of the director of parks and recreation or his designee; and (2) A violation of this section is a misdemeanor punishable by up to six months in jail and/or a five-hundred-dollar fine (Ord. 1224 § 1 (part), 1988).

Size and health of trees are addressed in Title 15, Chapter 15.06.080, Section 2, Subsection A, Number IV which reads: “All Joshua Trees, as per Chapter 13.33 of the Victorville Municipal Code, shall be indicated by showing the exact center of its trunk as established by a licensed surveyor. Its tag number, trunk diameter and height must be indicated. The health and proposed disposition of the tree must be indicated. The application shall include a detailed plan for protecting, preserving, relocating the tree, which may be affected by the proposed grading. The details of which shall conform to Chapter 13.33 of the Victorville Municipal Code as amended.”

5.4.3 Thresholds of Significance

Significant impacts relative to biologic resources are evaluated in this section based on Appendix G of the CEQA Guidelines. Implementation of the proposed project may have a significant adverse impact if it would do any of the following:

- 1) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.
- 2) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Game or US Fish and Wildlife Service.
- 3) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

- 4) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.
- 5) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- 6) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

5.4.4 Project Impacts

General Plan 2030 Provisions: The Resource Element of the General Plan 2030 contains the following provisions applicable to Biological Resources:

GOAL #4: Conservation of Important Habitat: Preserve Land Containing Native Habitat that Sustains Rare, Threatened or Endangered Plants and Wildlife Species.

Objective 4.1: Preservation of natural communities that support rare, threatened and/or endangered plants and wildlife species throughout the planning area.

Policy 4.1.1: Encourage development to preserve natural habitat that supports rare, threatened or endangered plants and wildlife (i.e., “sensitive” species), or require restoration of the same type of impacted habitat within an existing, planned or potential conservation area.

Implementation Measure 4.1.1.1: The City will compile and maintain up-to-date geographical database of the spatial distribution and composition of natural habitat that supports sensitive species throughout the planning area. The status and condition of water resources which support the habitat will be integrated into the database.

Implementation Measure 4.1.1.2: Continue to require biological surveys and an assessment of impacts to biological resources for projects on undeveloped property of one-acre or more in size or expected to contain natural habitat, drainages or nests of migratory birds. The surveys and assessment should be conducted as part of the City’s CEQA implementation procedures and in cooperation with USFWS and CDF&G. Update City’s database of sensitive habitats with findings of project-level biological surveys and assessments.

Implementation Measure 4.1.1.3: Continue to work the Corps and their permit program that regulates the discharge of dredged or fill material into Waters of the

U.S. to ensure that individual projects comply with federal laws natural drainages and the Mojave River.

Policy 4.1.2: Support and participate in the West Mojave Plan

Implementation Measure 4.1.2.1: Assign appropriate City staff to monitor and report on West Mojave Plan activities and to develop staff-level procedures to enable effective implementation of the City's responsibilities under the Plan.

Objective 4.2: Permanent Conservation of Mojave River Corridor Ecological Values

Policy 4.2.1: Generally prohibit private or public development projects or major infrastructure facilities on land within the Mojave River Corridor, inclusive of its floodplain, where biological surveys have determined there is habitat that supports rare, threatened and/or endangered plants or wildlife. Allow minor encroachments into such habitat, for critical public facilities and recreational trails, where reliable assurances are provided that no loss of sensitive species would occur.

Implementation Measure 4.2.1.1: Compile and maintain mapping of biological habitat features and occurrences of sensitive species along Mojave River Corridor.

Implementation Measure 4.2.1.2: Cooperate with water management agencies to maintain ground water levels in the Mojave River to help support threatened, endangered, and otherwise biologically sensitive species that occur in and around the Mojave River.

Implementation Measure 4.2.1.3: In pursuing actions that may affect the river, cooperate with the USFWS and CDFG to ensure that potential adverse effects on sensitive biological resources are avoided and minimized to the extent feasible, and mitigated appropriately in cases where significant impacts cannot be avoided.

Scope of Impact Analysis: This analysis considers impacts to biological resources that would occur with implementation of the proposed General Plan 2030; whether growth would result in changes which would effect through habitat modifications, on any species identified as a candidate, sensitive, or special status species, riparian habitat, wetlands, wildlife corridors, local policies or ordinances, or habitat conservation planning. These potential impacts are weighed against proposed General Plan 2030 provisions applicable to biological resources.

5.4.4.1 Would the project 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

California Department of Fish and Game; or by the U.S. Fish and Wildlife Service?

Impact Discussion:

Development within incorporated and SOI areas have the potential to impact species that are federal or state protected, or candidate for protection, including those listed in Table 5.4-1. Those species most at risk include the Arroyo Toad, Desert Tortoise, Bald Eagle, Mojave Ground Squirrel, Yellow-billed Cuckoo, Willow Flycatcher, Least Bell's Vireo, and California Species of Special Concern that may have potential to occur in the Planning Area, particularly in the Northern Sphere Expansion area.

Conversion of open space that affects Mojave creosote bush scrub, desert saltbush scrub, rabbit bush scrub, Joshua tree woodland, and riparian communities associated with the Mojave River and its floodplain, or other habitat supporting native species may directly affect occupied habitat, and 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 and result in significant adverse impacts. Development that would result from the General Plan 2030 may directly and indirectly affect other plant and wildlife that would result in loss of prey, species diversity, or other resources used by resident or migratory species, resulting in significant adverse impacts. Increases in population are expected to result in additional effects to existing buffers between the urban and open space areas.

Additional direct and indirect impacts to protected species may result from increased populations of domestic and resulting feral populations of dogs and cats as the development encroaches upon native habitat areas.

Policy 4.1.1 of the proposed General Plan 2030 Resource Element intends to encourage development in a manner which will preserve natural communities. The maintenance of an up-to-date geographical database (Implementation Measure 4.1.1.1) of the spatial distribution and composition of natural habitat that supports sensitive species throughout the Planning Area will serve as a planning tool to determine potential areas of preservation. Further, integration of the condition of water resources supporting the habitat will aid in assessing the health of the habitat over time and allowing for consideration of corrective measures. Implementation Measure 4.1.1.2 addresses the requirement for biological surveys for undeveloped properties expected to contain biological resources, coordination with CEQA and USFWS in the preparation of biological surveys and assessments, and keeping the City's database of sensitive habitats current. Combined, Policy 4.1.1 implementation measures provide the tools to ensure substantial adverse effects on sensitive habitats or species are identified and mitigated.

For Policy 4.1.2, if the City of Victorville becomes a signatory to the West Mojave Plan, and the City would be issued "incidental take" permits covering 49 listed, threatened, or otherwise sensitive plant and wildlife species. In exchange, the City would require the

payment of a development fee (currently \$770 per acre) to cover the West Mojave Plan's costs for land acquisition, land management, and other operations. This would streamline the City's CEQA review process by providing a simplified means of mitigating impacts to sensitive plant and wildlife species potentially impacted by development projects within City limits. The benefit is that the City would not be required to determine appropriate mitigation for potentially significant biological impacts on a case-by-case basis.

Should the City decide not to become a signatory of the West Mojave Plan, mitigation measures will be needed to ensure the City implements West Mojave Plan's conservation strategies that focus on protection of specific species. These mitigation measures are added to the project as Mitigation Measures BIO-1 through BIO-7, and described in Section 5.4.6 below. These mitigation measures address protection of the Mohave Ground Squirrel, Desert Tortoise and Burrowing Owl, as well as for the creation of buffers and mitigation banks, assuring that adequate mitigation is in place prior to land use conversion approvals, and the reduction of illegal dumping for predator reduction. These measures also seek to protect biological resources which may be present in the large undeveloped expanses of the proposed Northern Expansion area.

For Policy 4.2.1, conservation of the Mojave River and its floodplain, may avoid direct impacts of occupied habitat, and avoid take or harm of individual species as defined by federal and state agencies. The maintenance of up-to-date mapping of habitat and species occurrences (Implementation Measure 4.2.1.1) will serve as a planning tool to determine status and potential areas of disturbance for projects which proposed to encroach into the river corridor. Biological surveys and an assessment of impacts to biological resources (as set forth in Policy 4.1.1) would also aid in determining the potential for levels of impacts to sensitive river corridor resources. Implementation Measure 4.2.1.2 protects threatened, endangered, and otherwise biologically sensitive species in and around the Mojave River by providing that the City work with the water management agencies and with the USFWS and CDFG to avoid and minimize impacts. Implementation Measure 4.2.1.3 provides that the City should have as a resource protection goal the preservation, restoration, and possible expansion of the river's undeveloped floodplain.

Separate from the proposed Resource Element, the City requires an assessment of biological habitat and potential impacts to listed or sensitive species as part of the City's routine CEQA compliance program, for new development projects in undeveloped areas. The City, with concurrence from USFWS, has designated an area within the urbanized part of the community, where surveys to detect Desert Tortoise are not required, based on past negative survey results and the characteristics of the land and nearby improvements that have eliminated tortoise habitat or represent significant barriers to tortoise movement and sustainability. A map of this no-survey area is maintained at the Planning Division.

With the above listed Goal, Objective, Policies and Implementation Measures and Mitigation Measures BIO-1 through BIO-7, potential adverse impacts to sensitive habitat or species would be less than significant.

Impact Finding: Less than Significant.

5.4.4.2 Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?

Impact Discussion:

Area growth induced by implementation of the General Plan will have the potential to adversely affect, directly and indirectly, riparian habitat or other sensitive natural communities as identified by state and federal agencies. Such habitats may be directly affected by ongoing development or indirectly affected by development of adjacent buffer areas, and public use/access areas. Mojave River water withdrawals as well as withdrawals from other water sources in and near the Planning Area have the potential to contribute to a continued loss of riparian resources. Grading for development, development, and infrastructure extension, may adversely affect limited desert riparian habitat. Most of the riparian habitat will be located in areas designated as open space. Because of the environmental conditions that create the desert habitats, impacts have the potential to become a more significant consequence and recovery from temporary effects take substantially longer to recover than areas which receive more rainfall.

All of the above objectives, policies and implementation measures will service either directly or indirectly to protect riparian habitat or sensitive natural communities. In particular, Policy 4.1.1 intends to encourage development in a manner which will preserve natural communities. Implementation Measure 4.1.1.2 requires the City continue to work with the USFWS and CDFG to ensure that individual projects comply with federal and state laws protecting sensitive plant and wildlife species, and that appropriate surveys are conducted at according to agency determined protocol.

If the City of Victorville becomes a signatory to the West Mojave Plan (Policy 4.1.2), the City, in working closely with the federal and state agencies, would be issued “incidental take” permits covering 49 listed, threatened, or otherwise sensitive plant and wildlife species. Conservation of the Mojave River and its floodplain (Policy 4.2.1), may avoid direct impacts of occupied habitat, and avoid take or harm of individual species as defined by federal and state agencies. The maintenance of up-to-date mapping of habitat and species occurrences (Implementation Measure 4.2.1.1) will serve as a planning tool to determine status and potential areas of disturbance for projects which proposed to encroach into the river corridor. Implementation Measure 4.2.1.2 protects threatened, endangered, and otherwise biologically sensitive species in and around the Mojave River by providing that the City work

with the water management agencies and with the USFWS and CDFG to avoid and minimize impacts. Objective 4.2 and its supporting Policy and Implementation Measures provide for the permanent conservation of the river and its undeveloped flood plain.

Upon implementation of the above Objectives, Policies, and Implementing Measures of the General Plan 2030, potential adverse impacts to riparian habitat or other sensitive natural communities are expected to be reduced to levels of insignificance.

Impact Finding: Less than Significant.

5.4.4.3 Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Impact Discussion:

The Planning Area has the potential to support isolated wetlands which may be within the jurisdiction of the U.S. Corps of Engineers, who regulates compliance with Section 404 of the Clean Water Act. Implementation of the General Plan 2030 may directly or indirectly affect such wetlands. Natural sediment deposition, flood control management, and downstream effects are Regional and local issues that are within the scope of the General Plan. Development may adversely affect other water resources regionally and locally.

Several of the above Implementation Measures address working with the agencies to protect sensitive resources. Implementation Measure 4.1.1.3 specifically calls out that the City shall continue to work with the Corps and their permit program that regulates the discharge of dredged or fill material into Waters of the U.S. In addition, Implementation Measure 4.2.1.2 states that the City will cooperate with water management agencies to maintain ground water levels in the Mojave River. Having jurisdiction over waters of the U.S., any proposed actions that would reduce the width of the undeveloped floodplain should be carefully evaluated (Implementation Measure 4.2.1.3).

Upon implementation of the above Objectives, Policies, and Implementing Measures of the General Plan 2030, potential adverse impacts to federally protected wetlands are expected to be reduced to levels of insignificance.

Impact Finding: Less than Significant.

5.4.4.4 Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Impact Discussion:

General Plan 2030 implementation 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. Desert species typically spatially range within their habitat based on periodic rain cycles. Development of the Victorville area, including expansion of roads, and increased population will adversely affect the ability of wildlife to move through the Planning Area, specifically, the Northern Sphere Expansion area. Habitat fragmentation could occur as a result of planned development in that area. Buffer areas around developments have limited benefits, as development is still considered to infringe upon established corridors. Development near sensitive areas will also introduce or propagate predatory species and domestic and feral populations of dogs and cats which may further affect desert species.

Proposed General Plan 2030, Goal#4 policy implementation measures address species movement/corridors. In Implementation Measure 4.1.1.3, the City shall continue to work with the USFWS and CDFG to ensure that individual projects comply with federal and state laws protecting sensitive plant and wildlife species. In areas so designated by the agencies, appropriate surveys shall be conducted and appropriate mitigation applied. In areas so designated by the agencies, appropriate surveys shall be conducted at the times of year necessary to detect all sensitive species for which potentially suitable habitat exists on a given site and appropriate mitigation applied.

To reduce predator attraction, Mitigation Measure BIO-6 is added to the project to require the City work to improve trash collection, recycling programs, and illegal dumping in open areas (Mitigation Measure BIO-6). This measure requires the City to 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 Northern Expansion Area), and reduce illegal dumping of bulk items (e.g., furniture, appliances, tires, batteries). Residential impact from such waste products will be mitigated to less than significant prior to permitting land use conversion.

Mitigation Measure BIO-8 addresses creation of a specific and detailed wildlife corridor map for the Northern Expansion Area. This measure requires the City to work with state and federal agencies to create the map to identify movement corridors and refuge areas for mammal, migratory bird species, and other desert species dependent on transitory resources based on rainfall. The wildlife corridor and refuge area map will be used for preparation of biological assessments prior to permitting for land use conversion.

Upon implementation of the above Objectives, Policies, and Implementing Measures of the General Plan 2030, potential adverse impacts to the movement of native resident or migratory species or wildlife corridors are expected to be reduced to levels of insignificance.

Impact Finding: Less than Significant.

5.4.4.5 Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Impact Discussion:

As discussed under Section 5.4.2.3, Joshua trees are protected by Chapter 13.33 of the Victorville Municipal Code, which prohibits the destruction or removal of Joshua trees without written consent from the Director of Community Services. The provisions of this code presently apply to all property within the corporate limits of the City. The County will continue to control the SOI area under SOI and subsequent annexation occur. As such, this code will continue to apply to the expansion as proposed and implementation of the General Plan update, and impacts will be less than significant.

The existing City policy reduces impacts relative to conflicts with local policies or ordinances protecting biological resources to less than significant levels.

Impact Finding: Less than Significant.

5.4.4.6 Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Impact Discussion:

The proposed West Mojave Plan presents a multi-species conservation strategy applicable to public and private lands throughout the WMPA. It would amend the Bureau of Land Management's California Desert Conservation Area (CDCA) Plan for public lands, and would serve as a habitat conservation plan for private lands. The City of Victorville may become a signatory to the West Mojave Plan, and would be issued "incidental take" permits covering 49 listed, threatened, or otherwise sensitive plant and wildlife species. In exchange, the City would require the payment of a development fee (currently \$770 per acre) to cover the West Mojave Plan's costs for land acquisition, land management, and other operations. This would streamline the City's CEQA review process by providing a simplified means of

mitigating impacts to sensitive plant and wildlife species potentially impacted by development projects within City limits. If the City chooses not to sign on to the West Mojave Plan, the City will be required to determine appropriate mitigation for potentially significant biological impacts on a case-by-case basis.

Appendix B to the West Mojave Plan identifies the following specific conservation responsibilities for the City of Victorville. These actions would be required if the City agrees to become a signatory to the Plan:

- Burrowing Owl: (RAP-6) Abbreviated surveys at sites where Desert Tortoise clearance surveys are required.
(RAP-10) Eviction or relocation if Burrowing Owls are found.
(RAP-9) Provide educational brochures to landowners.
(M-15) Report incidental take and relocations annually.
- Desert Tortoise: Follow tortoise conservation strategy as outlined in EIS Section 2.2.4.2
- Ferruginous Hawk: (Rap-1,14) Require raptor-safe electrical distribution lines.
(M-23, AM-22, AM-105). Retrofit problem poles based on monitoring results.
- Mohave Ground Squirrel: Follow conservation strategy as outlined in EIS Section 2.2.4.3
- Mojave River Species⁸: (AM-14, MR-1) Cooperate with water management agencies to maintain ground water levels in the Mojave River.
- Prairie Falcon: (RAP-2) Require development projects to stay 1/4 mile away from occupied nests, unless the line-of-sight from the edge of development is obscured. Prohibit construction or disturbance near nest sites during the nesting season.
(RAP-3) Impose blasting restrictions on new mines.

If the City of Victorville becomes a signatory to the West Mojave Plan (Policy 4.1.2), the City's CEQA review process would be streamlined by providing a simplified means of mitigating impacts to sensitive plant and wildlife species potentially impacted by development projects within City limits. The benefit is that the City would not be required to determine appropriate mitigation for potentially significant biological impacts on a case-by-case basis. The conservation strategies of the West Mojave Plan presented above are specifically applicable to the City of Victorville, and were developed through a lengthy and comprehensive review of biological issues of concern across the wider region.

⁸Southwestern Pond Turtle, Brown-crested Flycatcher, Least Bell's Vireo, Southwestern Willow Flycatcher, Summer Tanager, Yellow Warbler, Yellow-breasted Chat, Mojave River Vole.

Should the City decide not to become a signatory of the West Mojave Plan, Mitigation Measures BIO-1 through BIO-7 are added to the project to ensure Victorville's conservation strategies are similar those proposed by the West Mojave Plan.

With the above Implementation Measure and Mitigation Measures BIO-1 through BIO-7, the potential adverse impacts relative to conflicts with the provisions of an adopted Habitat Conservation Plan would be less than significant.

Impact Finding: Less than Significant.

5.4.5 Cumulative Impacts

Impact Discussion:

The increase in development that will occur with implementation of the General Plan 2030 will result in significant impacts to biological resources. Land and habitat within the Planning Area (and greater County and State areas) are finite. Multiple projects resulting from the General Plan as well as other areas outside the Planning Area, contribute cumulatively to development increases which will result in the direct and indirect loss of native habitat.

The General Plan 2030 proposes to maintain over 20,000 acres, approximately 21% of the Planning Area, as Open Space. This proposal represents a considerable increase over existing conditions; currently only 3% of in City land are is designated as Open Space. Proposed Mitigation Measure BIO-5 further supports the preservation of biological resources within Open Space areas by requiring appropriate biological surveys and assessments to be conducted, and if warranted, impacts mitigated, prior to development of the undeveloped areas within the proposed Northern Expansion Area. The protection of biological resource the General Plan 2030 Goal, Policies and Implementation Measures and other Mitigation Measures described in this section.

By maintaining areas for Open Space and including the proposed Goal, Policies, Objectives and Implementation Measure, discussed above, and Mitigation Measures BIO-1 through BIO-7, the project potential cumulative adverse impacts relative to biological resources would be less than significant.

Impact Finding: Less than Significant.

5.4.6 Mitigation Measures

BIO-1: The Mohave Ground Squirrel is a state-listed species known to occur in natural open spaces within the City of Victorville. The City shall continue working with the CDF&G to ensure that individual projects comply with state laws protecting this species. In areas so designated by the agencies, appropriate surveys shall be conducted and appropriate mitigation applied.

BIO-2: The Desert Tortoise is a federally and state-listed species with potential to occur in natural open spaces within the City of Victorville. The City shall continue working with the USFWS and CDF&G to ensure that individual projects comply with federal and state laws protecting this species. In areas so designated by the agencies, appropriate surveys shall be conducted and appropriate mitigation applied. The exception is the urbanized area identified by the USFWS as a designated Desert Tortoise no-survey area, a map of which is maintained at the Planning Division.

BIO-3: The Burrowing Owl is a California Species of Special Concern that is known to occur in agricultural fields and natural open spaces within the City of Victorville. This species has declined markedly, and continues to decline, across large parts of its range. Focused surveys for the Burrowing Owl shall be required for all projects that propose the development of agricultural fields or natural open spaces that are contiguous with larger open space areas capable of supporting Burrowing Owls. Burrowing Owl surveys, and any mitigation measures to be undertaken in the case of positive survey results, shall comply with current CDF&G recommendations.

BIO-4: The City shall coordinate with state and federal agencies for the creation of buffers and mitigation banks for sensitive species. The City shall work with adjacent local governments and the County to conserve critical habitat and minimize recreational use in sensitive areas supporting protected or sensitive species. As feasible, the City shall work with the USFWS to establish mitigation banks or other conservation easements for the SOI areas supporting sensitive species. For areas of unique habitat qualities, replacement compensation and restoration mitigation may not be adequate for some habitat loss to reduce the impact to less than significant.

BIO-5: Prior to permitting conversion of undeveloped land in the Northern Expansion Area, the City shall ensure that appropriate biological surveys and assessments are conducted, and if warranted, adequate mitigation is provided to reduce biological resource impacts to less than significant to the greatest extent possible.

BIO-6: To reduce predator attraction, the City shall work to improve trash collection, recycling programs, and illegal dumping in open areas. The City 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 Northern Expansion Area), and reduce illegal dumping of bulk items (e.g., furniture, appliances, tires, batteries). Residential impact

from such waste products will be mitigated to less than significant prior to permitting land use conversion.

BIO-7: The City shall work with state and federal agencies to create a specific and detailed wildlife corridor map for the Northern Expansion Area. The map will identify movement corridors and refuge areas for mammal, migratory bird species, and other desert species dependent on transitory resources based on rainfall. The wildlife corridor and refuge area map will be used for preparation of biological assessments prior to permitting for land use conversion.

5.4.7 Level of Significance After Policies/Mitigation Measures – Less than Significant.

5.5 CULTURAL RESOURCES

This section addresses issues related to existing cultural (archaeological, historical, ethnohistorical resources) found within the Planning Area. Potential Project impacts on these resources, and any mitigation measures necessary to resolve impacts are also discussed. Information referenced in this section on cultural resources was obtained from the *Cultural Resources Technical Report, City of Victorville General Plan*, prepared by CRM Tech, August 5, 2005 ("Project Cultural Resources Report"). Information referenced in this section on paleontological resources was obtained from the *Paleontological Resources Technical Report, City of Victorville General Plan* ("Project Paleontological Resources Report"), prepared by CRM Tech, February 6, 2008. These reports were prepared in support of the General Plan 2030, and are contained in Appendices E and F of this EIR

5.5.1 Existing Conditions

5.5.1.1 Cultural Resources

The term "cultural resource" refers to any physical evidence of human activities that possesses potential historical, archaeological, or traditional cultural value. Examples most frequently noted as cultural resources are buildings, structures, historic districts, archaeological sites, and such objects as statues and street fixtures. Cultural resources also include non-traditional property types, including historical landscapes and natural features that have acquired cultural significance in history. In order to be considered potentially significant, cultural resources usually need to meet a certain age criterion. In the State of California, the age threshold is generally set at 50 years from the present time. Remains of prehistoric Native American cultures are of particular concern to modern day tribal descendants, particularly with respect to 'sacred' sites.

In order to inventory previously identified cultural resources and prepare an impact assessment of the Planning Area, CRM TECH implemented a historical/archaeological resources records search, pursued historical and ethnohistorical background research, carried out a reconnaissance-level field survey, consulted with City staff and the Mohave Historical Society, and contacted Native American representatives from four different tribes in the vicinity. An account of the methods and results of the research, and the final conclusion of this study are presented herein.

Archaeological Context

To understand Native American cultures prior to European contact, archaeologists have devised chronological frameworks on the basis of artifacts and site types that go back some

12,000 years. Currently, the chronology most frequently applied in the Mojave Desert divides the region's prehistory into five periods marked by changes in archaeological remains, reflecting different ways in which Native peoples adapted to their surroundings. According to the Project Cultural Resources Report, the five periods are as follows: the Lake Mohave Period, 12,000 years to 7,000 years ago; the Pinto Period, 7,000 years to 4,000 years ago; the Gypsum Period, 4,000 years to 1,500 years ago; the Saratoga Springs Period, 1,500 years to 800 years ago; and the Protohistoric Period, 800 years ago to European contact.

This time frame is based on general changes in artifact remains from large stone projectile points with few stone tools for grinding food products, to smaller projectile points with an increase in the number of milling stones. The scheme also notes increases in population, changes in food procurement and resource exploitation, and more cultural complexity over time. During the Protohistoric Period, there is evidence of contact with the Colorado River tribes and the introduction of pottery across the Mojave Desert.

The more recent Native American history in California, beginning with the first European contact, is chronologized by anthropologists and historians as follows:

- 1500-1770s Long-distance contact with Europeans
- 1770s-1830s Mission Period
- 1830s-1850s Rancho Period
- 1850s-1880s American migration to California
- 1880s-present Reservation Period

Ethnohistory

The first Native American group to historically occupy the Mojave Desert was the Shoshoneans. This group was comprised of a broad band of people who spoke similar languages. These bands moved west from the Great Basin, a vast inland region of the Western United States, into the Mojave Desert. It is believed that these bands were well established 1200 to 1500 years ago and possibly as early as 3000 years ago. One of these bands of people, the Serrano, occupied an area from the southern fringe of the San Bernardino Mountains, east to Twentynine Palms and north into the Mojave Desert. The name "Serrano" was derived from a Spanish term meaning "mountaineer" or "highlander."

Prior to European contact, the Serranos were primarily gatherers and hunters, and occasional fishers. Their settlements were situated on the valley floor near available water sources, especially in the desert region, where the availability of a permanent water source and availability of willows and tules from the creeks and rivers for dwelling construction were determining factors in the nature, duration, and distribution of Serrano settlements.

The Serranos fabricated a number of tools for food preparation. These include mortars and mutates (a ground stone tool used for processing grain and seeds), either portable or located on boulder outcrops; stone-lined earthen ovens or hearths. Tools and implements were fashioned from stone, bone, and wood for use as knives, scrapers, projectile points, drills, awls,

hammers, grinding stones, spoons, bows, arrows, throwing sticks, musical instruments, and the like. Pottery vessels took the form of jars, bowls, and seed-parching trays. The Serrano also made elaborate ceremonial regalia, baskets, bags, and nets.

Like most southern California tribes, the Serranos created rock-art panels, in the form of both petroglyphs and pictographs, that may have played a role during tribal ceremonies, honoring such occasions as adolescent rites of passage, marriages, births and deaths.

Although contact with Europeans may have occurred as early as 1771 or 1772, Spanish influence on Serrano lifeways was negligible until 1819, when a mission *assistencia* was established on the southern edge of Serrano territory. Between then and the end of the mission era in 1834, most of the Serranos in the San Bernardino Mountains and the high desert were removed to the nearby missions. At present, most Serrano descendants are found on the San Manuel and the Morongo Indian Reservations, where they participate in ceremonial and political affairs with other Native American groups on an inter-reservation basis.

Historic Context

The present-day Victor Valley area received its first European visitor, the famed Spanish explorer Francisco Garcés, in 1776, and the first Euroamerican settlements appeared in the valley as early as 1860. Despite these "early starts," due to its harsh environment, development in the arid high desert country of southern California was slow and limited for much of the historic period, and the Victor Valley remained only sparsely populated until the second half of the 20th century.

Garcés traveled through the Victor Valley along an ancient Indian trading route, known today as the Mojave Trail. In the early 1830s, part of this trail was incorporated into an important pack-train road known today as the Old Spanish Trail, which extended between southern California and Santa Fe, New Mexico. Some 20 years later, when the historic wagon road known as the Mormon Trail or Salt Lake Trail was established between Utah and southern California, it followed essentially the same route across the Victor Valley area. Since then, the Victor Valley has always served as a crucial link for a succession of major transportation arteries, where the heritage of the ancient Mojave Trail was carried on by the Santa Fe Railroad since the 1880s, by the National Old Trails Highway and U.S. Route 66 during the early and mid-20th century, and finally by today's I-15.

The City of Victorville traces its roots to a station on the Santa Fe Railroad, which was completed by the California Southern Railway Company, a Santa Fe subsidiary, in 1885. With the coming of the railroad, settlement activities began in earnest in the Victor Valley in the 1880s, and reached a peak in the 1910s. The Victor townsite, with a grid pattern of streets bounded by today's A, G, 1st, and 11th Streets, was laid out in 1886, and included approximately 200 acres. By 1890, Victor had become a settlement of approximately 100 residents. In 1901, the name of the town was changed to Victorville to avoid confusion with Victor, Colorado.

With the availability of fertile lands and the abundance of ground water, agriculture played a dominant role in the early development of the Victor Valley area. During the late 19th and early 20th centuries, settlers in the valley attempted a number of money-making endeavors, such as growing alfalfa and deciduous fruits and raising poultry, with only limited success. Around the turn of the century, large deposits of limestone and granite were discovered, prompting cement manufacturing to become the leading industry in the valley. In 1916, the Southwestern Portland Cement Company (SPCC) began operation approximately one mile north of downtown Victorville on the northwest side of today's state Route 18. The Victorville plant is one of three Portland cement plants in the high desert area of San Bernardino County. The Golden State Portland Cement Company, built in 1910 in nearby Oro Grande, was the first large-scale industrial production plant in the area. The Kaiser Cement and Gypsum Corporation in Lucerne Valley dates to 1956.

The Victorville SPCC plant became a major employer in the area and has been credited as an impetus for the growth and success of the town. It is one of only five SPCC plants in the nation and, of the three cement plants in the high desert area, it is the oldest continually operating plant.

By the early 1920s, automobiles were gaining popularity, and more and better roads were being demanded throughout the country. In 1926, as a result of the 1916 Federal-Aid Highway Act as amended in 1925, U.S. Route 66 was established as one of the main arteries of the National Highway System which intended to link hundreds of predominantly rural communities with larger urban centers, providing easier transport and distribution of grain and produce. A segment of this route, which linked Chicago with Los Angeles, ran through Victorville along what are now 7th and D Streets. The configuration of Route 66 through the essentially flat prairie lands was particularly significant to the trucking industry, which by 1930 had come to rival the railroad for preeminence in freight shipping.

During the Depression of the 1930s, Route 66 symbolized the "road to opportunity" as masses of people followed its course out of the Dust Bowl and into California. During the 1930s, thousands of unemployed male youths from virtually every state were put to work as laborers on road gangs to pave the final stretches of the highway. As a result, Route 66 was completely paved by the mid- to late 1930s.

In the 1940s, Route 66 facilitated military mobilization across the country, and provided access to the Victorville Army Air Field (later George Air Force Base), which was established in 1941, five miles from downtown Victorville. Although it was primarily used as a flight training school, after the Japanese attack on Pearl Harbor in December 1941, hundreds of planes were flown to the field to guard against attacks on the mainland. In 1947, when the United States Air Force became a separate and co-equal branch of the armed forces, the base was redesignated as Victorville Air Force Base and in 1950 it was renamed again in honor of the late Brigadier General Harold H. George. During and after WWII, George Air Force Base added a new driving force in the local economy with its 6,000 civilian and military employees. After being

deactivated in 1992, the former base was converted for civilian use as the Southern California Logistics Airport.

Also in the 1940s, the town of Victorville had expanded further to the southwest along Route 66 and Hesperia Road, the two main thoroughfares through town. While military housing was available on the base, a new development boom spread to nearby Victorville and Adelanto, providing for the numerous military and civilian employees that worked on the base.

During the post-World War II period, Americans became more mobile than ever before, resulting in a variety of new businesses geared toward the car culture. Along Route 66, roped-off areas known as auto camps sprang up, eventually evolving into motels and motor courts with adjoining restaurants, tourist shops, and swimming pools. Through Victorville, the highway was lined with a variety of retail and tourist-related businesses with a distinctive western flavor. The "out in the country" feel of the town was further enhanced by dude ranches and apple orchards, making the community a popular spot for visitors and a favorite locale for filming Hollywood B westerns.

Several small satellite communities arose in the Planning Area by the 1950s, including Adobe Corners and Mountain View along State Highway 18 to the west of downtown, and Mojave Heights near the intersection of National Trails Highway and Adelanto Road (present-day Air Expressway), half way between George Air Force Base and downtown Victorville. Smaller clusters of buildings also appeared elsewhere in the Planning Area, such as along Stoddard Wells Road to the north of downtown. These areas marked the beginnings of development on the outskirts of downtown.

In 1962, the City of Victorville was incorporated with a population of approximately 8,110 and an area of 9.7 square miles. Ten years later, Route 66 was replaced by Interstate 15, which cuts through the city in a generally southwest-northeast direction a little less than a mile north of the original downtown area. In more recent years, Victorville has become one of the fastest growing cities in California, largely as a "bedroom community" in support of the industrial and commercial centers in the Greater Los Angeles area.

Known Historical/Archaeological Sites

According to records on file at the Archaeological Information Center (AIC) at the San Bernardino County Museum, the northern and southern portions of the existing City boundaries have been the locations of much recent growth, necessitating several cultural resource surveys for development projects (Figure 5.4-1 Areas Previously Surveyed for Cultural Resources.). The northwestern portion of the City around the Southern California Logistics Airport, has been surveyed extensively. Those studies encountered numerous archaeological sites and a number of historic-period buildings or other built environment features. Meanwhile, much of the central portion of the Planning Area remains unsurveyed for cultural resources. The western and northeastern portions, too, have not been extensively surveyed for cultural resources, reflecting the fact that development projects, usually the trigger

for such surveys, have not been as widespread in those areas. In all, approximately one-third of the total acreage within the Planning Area has been covered by project-related surveys, leaving most of the Planning Area yet to be surveyed systematically and intensively.

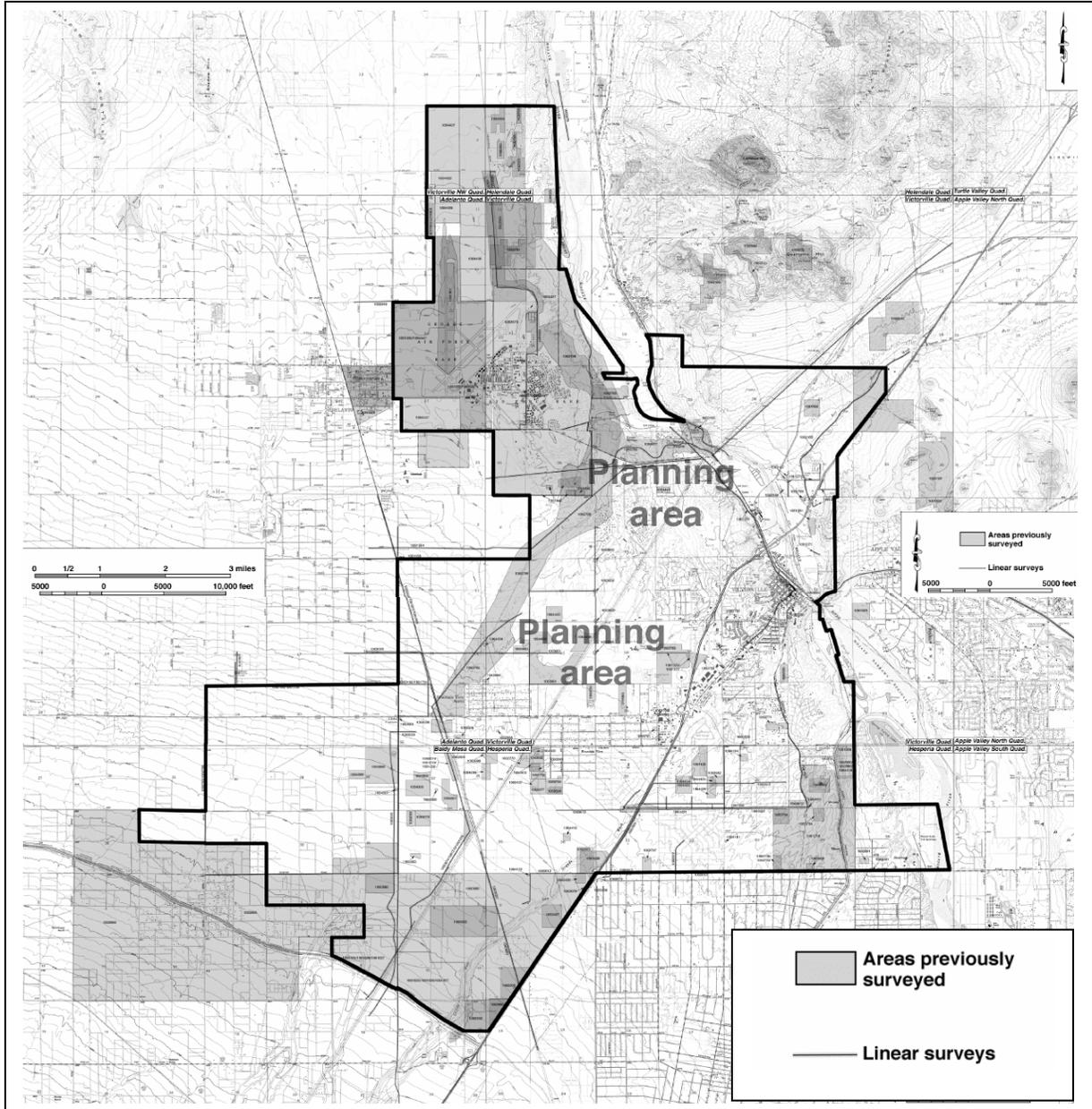


Figure 5.4-1. Areas Previously Surveyed for Cultural Resources.

Due in part to some of these previously completed surveys, at least 178 historical/archaeological sites have been discovered within and adjacent to the Planning Area and recorded into the California Historical Resource Information System, including 50 prehistoric (i.e., Native American) sites and 128 historic-period sites. Nine of the 50 prehistoric sites have

historic-period components. A total of 16 additional pending sites have been reported within the boundaries of the Planning Area, including 3 prehistoric resources and 13 historic-period sites.

At least 14 prehistoric Native American campsites and two habitation sites have been identified within or immediately adjacent to the boundaries of the Planning Area. Many of the prehistoric habitation and use areas are situated along or near the banks of the Mojave River, near the confluence of seasonal drainages such as the Oro Grande Wash and the Bell Mountain Wash, or near springs in the Turner Springs area. One such site, CA-SBR-60, is a habitation site at the mouth of the Mojave River narrows, immediately adjacent to the Planning Area. At least 18 of the recorded prehistoric sites in the Planning Area were identified as food processing sites and hearths where Native Americans ground, prepared, and cooked plant and animal resources for food. Several stone quarries and reduction sites where prehistoric Native Americans manufactured stone tools have also been found, as have four rock art sites and one major Indian trail. These prehistoric resources represent some of the relics from thousands of years of Native American habitation in the Planning Area before Europeans arrived. Very few prehistoric-use sites or isolates have been found on the valley floor in the western portion of the Planning Area, indicative of a reliance on the Mojave River and its tributaries by prehistoric Native Americans.

Among the historic-period sites recorded in the Planning Area are several prominent early roads, including the Old Spanish Trail, the Mormon Trail, the Mojave Road, the National Trails Highway, and U.S. Routes 66 and 395; power and telephone transmission lines from the early 20th century; the remains of past mining activities; late-19th century homesteads, ranches, and townsites; commercial, industrial, and residential buildings and foundations; irrigation features, wells, and reservoirs; military structures from World War II; and numerous refuse scatters, all indicative of early settlement and land development activities. Many of these sites are situated in Victorville's downtown area, along National Trails Highway, within and near the Southern California Logistics Airport, and in the Mojave Heights/Turner Springs areas. However, historic-period sites are scattered virtually throughout the Planning Area, reflective of the efforts of early settlers to establish roads and homesteads in the valley and along the Mojave River.

During the most recent decades, residential developments and the accompanying commercial districts have turned vacant land in the southern portion of the Planning Area into a new population center, engulfing the small neighborhoods of Adobe Corners and Mountain View. Meanwhile, in the northwestern portion of the Planning Area, the Southern California Logistics Airport was established after George Air Force Base was decommissioned in December 1992 and has been in operation since. In contrast, the areas to the northeast of downtown Victorville and on the western skirt of the city have remained largely rural in character throughout the historic period and into modern times.

As can be expected, a number of the recorded buildings in the Planning Area are concentrated in the downtown area, especially along D Street, formerly a part of Route 66 that ran through

the heart of downtown Victorville. The construction dates of these properties range from the early 1900s to the mid-1940s.

Designated or Eligible Heritage Properties

Of the previously recorded historical/archaeological sites in the Planning Area, 10 have been previously evaluated and determined eligible for listing on the National Register of Historic Places. These are listed by type of site, recordation number and general location below:

- Prehistoric camp site (CA-SBR-72) Along west side of Mojave River
- Road (CA-SBR-2910H) Across the Planning Area
- Hearth (CA-SBR-6304) Along west side of Mojave River
- Prehistoric camp site (CA-SBR-6313) Along west side of Mojave River
- Historic period refuse disposal site (CA-SBR-6533H) Near intersection of Seneca Road and Adelanto Road
- Railroad (CA-SBR-6793H) Across the Planning Area
- Power transmission line (CA-SBR-7694H) Across the Planning Area
- Power transmission line (CA-SBR-10315H) Across the Planning Area
- Power transmission line (CA-SBR-10316H) Across the Planning Area
- Crossing (P1584-1) Crossing over Mojave Narrows

Three sites have been proclaimed as California Historic Landmarks. These include:

- Mormon Road Across the Planning Area
- Old Spanish Trail Across the Planning Area
- Mojave Road Across the Planning Area

In addition, the Victorville Chamber of Commerce has listed 17 historic sites as designated points of interest in the downtown area. These include:

- Indian Marie's Grave Site 17150 C Street
- The Barrel House 16805 D Street
- First National Bank 16849 D Street
- McDougal Cottage 16805 Yucca Avenue
- Methodist Church 15557 5th Street
- Old Sheriff's Office 14343 Civic Drive
- Old Victor School 15476 6th Street
- Victor Valley Memorial Park 17150 C Street
- Victorville "V" Corner of Forrest Avenue and Hesperia Road
- The Chantry House 15604 6th Street
- Victor Valley Junior High School Gymnasium Corner of Forrest Avenue and 7th Street
- 8th Street Community Center 15615 8th Street
- U. S. Highway 66 National Trails Highway and 7th Street,

- The Jail
 - Victorville Hardware
- Victorville
16830 E Street
15582 7th Street

Ethnohistorical Research

For information on possible sites of Native American traditional cultural value, the Project Cultural Resource Study summarized available literature on Serrano culture and history. In particular, the location of a Serrano village site near Victorville has been identified by ethnographers and Serrano cultural authorities to be of potential Native American cultural significance. The location is identified as the territory of the *Maviatem* clan, where a village group belonging to the Coyote moiety resided. While some research indicates that the village was situated to the southeast of Victorville, its precise location is unclear. In fact, the Project Cultural Resource Study reports that no evidence of an active Indian village was noted during 19th-century U.S. land surveys of the Victorville area, and it is possible that the Indian village was located farther to the southeast along the Mojave River, outside the boundaries of the Planning Area.

Contact with Native American Representatives

As part of the Project Cultural Resource Study research procedures, CRM TECH contacted the State of California's Native American Heritage Commission (NAHC) in Sacramento to request a records search in the commission's sacred lands file. In response to CRM TECH's inquiry, the NAHC reported that the sacred lands record search identified no Native American cultural resources in the Planning Area.¹ However, noting that "the absence of specific site information in the sacred lands file does not indicate the absence of cultural resources in any project area," Following the NAHC recommendations, CRM TECH contacted six Native American representatives and the four tribal organizations they represent to solicit local Native American input regarding areas of possible cultural resource concern within the Planning Area. Responses were received from all four tribal organizations.

Britt Wilson, Cultural Resources Coordinator for the Morongo Band of Mission Indians, replied in writing on behalf of the tribe on April 12, 2005. Recognizing the traditional cultural affiliation between the tribe and the Victorville area, the letter states the tribe's intent to participate in a formal government-to-government consultation process with the City of Victorville, as provided by Senate Bill (SB) 18. The tribe has requested copies of all pertinent materials, including the record search results, the cultural resources survey report, and policy statements of the General Plan that relate specifically to Native American cultural resources. Based on review of these documents and input gathered from tribal elder(s), the tribe may request in-person meetings between tribal and city officials and visitation rights to key Native American sites. Furthermore, the tribe has recommended that specific policies be included in the General Plan that reference SB 18 and clearly state the requirements for conducting Phase I cultural

¹ More information, including contacts, letters and responses, is provided in Appendix 2 of the CRM TECH Cultural Resources Technical Report.

resource surveys and archaeological monitoring, with particular attention to the treatment of artifacts and the curation and/or repatriation of those artifacts to local tribes.

John Valenzuela, Chairperson of the San Fernando Band of Mission Indians, and Goldie Walker, representative of the Serrano Band of Indians, both replied by telephone on May 9, 2005. Mr. Valenzuela and Ms. Walker accept the city's invitation to participate in government-to-government consultation. Mr. Valenzuela expressed serious concern regarding future development in this area, especially in areas surrounding the Mojave River and Mojave Narrows, which includes the site of a Native American village, *Topi Povie*. Ms. Walker requests that she be contacted regarding any archaeological discoveries encountered during future development within the Planning Area.

Bernadette Ann Brierty, Cultural Resource Coordinator for the San Manuel Band of Mission Indians, replied in writing on July 18, 2005. The letter states the tribe's intent to participate in a formal government-to-government consultation process with the City of Victorville, as provided by SB 18. The tribe requests copies of all pertinent materials, including the record search results, the cultural resources survey report, the Victorville General Plan, sections of a draft EIR report that relate specifically to Native American cultural resources and proposed mitigation measures, and a schedule of public hearings or scoping meetings. The San Manuel Band concerns regarding the General Plan include the fulfillment of the SB 18 consultation process by the City of Victorville with the tribe and the treatment, confidentiality, and permanent inventory of archaeological sites, Native American human remains, and ceremonial/spiritual artifacts.

Field Reconnaissance

After completion of the records search and other preliminary research work, CRM TECH conducted a field reconnaissance "windshield survey" of the Planning Area and spot-checking previously identified cultural resources or anticipated locations of prehistoric or historic features. Aside from inspecting the current conditions of the previously recorded properties, the main purpose of the field reconnaissance was to examine and evaluate the sensitivity of the Planning Area for cultural resources that are yet to be identified, from both the prehistoric and the historic periods. The observations during the reconnaissance, by and large, confirmed the preliminary sensitivity assessment extrapolated from the other avenues of research discussed above. The results of the field reconnaissance are discussed below.

During the field reconnaissance, it was noted that the areas along the Mojave River, the Oro Grande Wash, and the Bell Mountain Wash, including the drainages and springs near Turner Springs, with available water sources in the various canyons and a relative abundance of plant and presumably animal resources to be exploited, would have provided a more favorable environment for habitation to prehistoric Native peoples as well as early settlers. It can be expected that archaeological remains from both prehistoric and historic-period activities will be discovered along the benches and terraces overlooking these drainages rather than on the eroded, constantly changing stream beds. In addition, the downtown Victorville area is highly

sensitive for the presence of unknown subsurface historic-period archaeological deposits dating to the city's early history. The relatively level valley floor in the Planning Area, a drier, harsher environment, is less likely to contain intact archaeological deposits from the prehistoric period. Archaeological remains from the historic period, however, have been found scattered over the surface of the valley floor as a result of previous studies, and may occur virtually anywhere in the Planning Area.

For built-environment features, it was observed that historic-period buildings, especially residences, can be found in essentially all urbanized neighborhoods in the Planning Area, either in relatively concentrated clusters or in isolated occurrences, except in the most recent developments in the southern portion of the Planning Area. The most notable concentration of early 20th century buildings, both residential and commercial, is found in the downtown area around Victorville's traditional town center, including A through E Streets, 1st through 11th Streets, and southwest from A Street along 6th Street, 7th Street, Yucca Avenue, and Forrest Avenue. A number of local historical sites designated by the Victorville Chamber of Commerce, including the first school and the first church in Victorville, were observed in the downtown area during the field reconnaissance.

A number of early- and mid-20th century buildings were found to the southwest of the town center, between Interstate 15 and Hesperia Road. Some of these neighborhoods appear to be early tract developments and reflect the growth of the city between the 1920s and the mid-1950s. The former George Air Force Base hosted a relatively high concentration of slightly later buildings dating to the 1941-1960 period, as well as buildings of a more recent vintage. In the more rural sections of the Planning Area, historic-period buildings were scattered amongst modern buildings. These buildings tend to be relatively plain and utilitarian, lacking any particular architectural style or integrity. The former George Air Force Base, now the Southern California Logistics Airport (SCLA) has been undergoing intensive conversion to an industrial park with 5,000 acres of multimodal business space, integrated air cargo with rail, ground and port access.² Thus, many buildings have undergone modification or demolition.

5.5.1.2 Paleontological Resources

Paleontological resources constitute the remains of prehistoric plant and animal life, exclusive of any human remains. These resources include the localities where fossils were collected as well as the sedimentary rock formations from which they were derived. The defining character of fossils or fossil deposits is their geologic age which is typically regarded as older than 10,000 years, the generally accepted temporal boundary marking the end of the last late Pleistocene glaciation and the beginning of the current Holocene epoch. Fossil remains commonly include marine shells; the bones and teeth of fish, reptiles, and mammals; leaf assemblages; and petrified wood. Fossil traces include internal and external molds (impressions) and casts created by these organisms. It is often the case that fossil resources generally occur only in areas of sedimentary rock (e.g., sandstone, siltstone, mudstone, claystone, or shale).

² Southern California Logistics Airport Specific Plan and EIR documentation. Prepared by City of Victorville Planning Department. http://www.victorvillecity.com/Real_Estate/SCLA_Industrial_Areas.html

Occasionally fossils will be exposed at the surface through the process of natural erosion or as a result of disturbances associated with man made excavations; however, they generally lay buried beneath the surficial soils. Thus, the absence of surface fossils does not preclude the possibility of their being present within subsurface deposits, while the presence of fossils at the surface is often a good indication that more remains may be found below the surface.

The Project Paleontological Resource Study inventories previously identified paleontological resources recorded at the San Bernardino County Museum and the Natural History Museum of Los Angeles County. To prepare the study, CRM TECH also conducted a reconnaissance-level field survey.

Paleontological Sensitivity Criteria

The paleontological sensitivity for a geologic formation is determined by the potential for that formation to produce nonrenewable fossils. This determination is based on what fossil resources it has produced in the past at other nearby locations. A geologic formation is defined as a stratigraphic unit identified by its lithic characteristics (e.g., grain size, texture, color, mineral content) and stratigraphic position. There is a direct relationship between fossils and the geologic formations within which they are enclosed, and with sufficient knowledge of the geology and stratigraphy of a particular area and its paleontological resource potential, it is possible for paleontologists to reasonably determine its potential to contain significant nonrenewable vertebrate, invertebrate, or plant fossil remains.

The Society of Vertebrate Paleontology issued a set of standard guidelines intended to assist paleontologists to assess and mitigate any adverse effects/impacts to nonrenewable paleontological resources. The Society of Vertebrate Paleontology defined three potential categories of potential paleontological sensitivity for geologic units that might be impacted by the proposed project. These categories are high, low, and undetermined.

- **High:** Geologic units assigned to this category are considered to have a high potential for containing significant nonrenewable vertebrate, invertebrate, or plant fossils because fossils have been recovered nearby from the same geologic formation.
- **Low:** Geologic units are assigned to this category when few significant nonrenewable vertebrate, invertebrate, or plant fossils have been recovered from the same unit nearby.
- **Undetermined:** Geologic units are assigned to this category when there is little or no past history available to base a sensitivity assessment on.

Paleontological Setting

The Planning Area is located within the Western Mojave Desert, characterized by a high-elevation desert landscape marked by scattered, isolated mountains and numerous broad, shallow basins, some with dry lake beds at their low points. Many of these basins have

pediment surfaces developed along the margins, separating the mountains from the basins. These pediment surfaces are commonly covered by desert pavement that protects them from sheetwash and channeling. The mountains and intermountain valleys of the Western Mojave Desert tend to have a northwest-southeast trend that is controlled mainly by faulting.

The basin areas are filled with sediments ranging in geologic age from Miocene to Recent. In the Barstow area, these sedimentary rocks are interbedded with both acidic and basic flows of volcanic rocks. The Hesperia-Victorville area is located on the Victorville Fan, which was generally considered to have a high potential for containing nonrenewable vertebrate fossil remains. However, recent studies indicate that these sediments, while potentially fossiliferous, are not as fossiliferous as the ancestral Pleistocene-age Mojave River sediments.

Plio-Pleistocene Mojave River deposits are distributed between the Cajon Pass and Barstow areas. These older Mojave River sediments pass through the Planning Area in roughly a linear fashion, beginning in the north where the river enters the Planning Area today and exiting the southeast corner around Spring Valley Lake.

The geomorphology within the Planning Area is characterized by mountains, terraces, and basins. It features elevated and mountainous terrain of igneous and metamorphic bedrock in the northeast; relatively level areas of coalescing alluvial fans within the north-central portion and the eastern and western edges of the midsection; ancestral and current Mojave River sediments; Recent alluvium at lower elevations in the northwest and southwest corners; and surficial deposits of Holocene alluvium that likely cover subsurface deposits of the Victorville Fan in the vicinity of the Oro Grande Wash in the south central region of the Planning Area.

Features of the landscape reflect an area shaped by dynamic forces of sediments carried by wind and water (Figure 5.5-2 Typical Landscapes In and Around the Planning Area). Elevations across the Planning Area range from approximately 2,500 feet above mean sea level in the lower southwestern area to 4,200 feet above mean sea level in the mountainous northeastern area.



Figure 5.5-2. Typical Landscapes In and Around the Planning Area.

Known Paleontological Resources

The Project Paleontological Resources Report identifies a number of previously reported vertebrate paleontological localities within the Planning Area and general vicinity. Older Quaternary deposits are exposed along the western flanks of the mountains in the northeastern portion down to the Mojave River, where they are represented as fan deposits derived from the elevated terrain. These deposits are also found along the bluffs on the western side of the Mojave River from fluvial sources. Similar older Quaternary deposits, mostly as fan deposits, are exposed between the area around the Southern California Logistics Airport, from Interstate 15 eastward to the Mojave River, and in many major drainages, especially the Oro Grande Wash in the southwestern portion of the Planning Area. Any excavations in these older Quaternary deposits have a good chance of encountering significant fossil vertebrate remains.

Several fossil vertebrate localities were found within these older Quaternary deposits inside the Planning Area, all located on the western side of the Mojave River primarily on or near the bluffs. These localities include the fossil specimens of *Equus* (horse) and *Mammuthus columbi* (extinct mammoth) southwest of Bryman, *Equus occidentalis* (extinct horse) and *Bison latifrons* (extinct bison) in the central portion of the Planning Area, and *Camelops* (camel) in the southern portion between Interstate 15 and Spring Valley Lake.

Pleistocene sediments within the relatively level areas of the Planning Area were laid down by the ancestral Mojave River. These relatively undisturbed sediments are highly sensitive to paleontological resources. According to the Project Paleontological Resources Report, about 18 different fossil specimens have been identified in these sediments located to the west of

Victorville. Among some of these fossil specimens are *Mammuthus meridionalis* (extinct southern mammoth), *Equus* (extinct horse), *Hemiauchenia* (extinct llama), *Camelops* (extinct large camel), *Lepus* (jackrabbit), *Sylvilagus* (cottontail rabbit), *Thomomys* (pocket gopher), *Dipodomys* (kangaroo rat), *Perognathus* (pocket mouse), *Paramylodon harlani* (extinct giant ground sloth), *Arctodus* sp. cf. *A. simus* (extinct short-faced bear), and *Sorex* sp. (shrew).

Field Reconnaissance

On December 7, 2007, CRM TECH carried out a reconnaissance-level field survey of the Planning Area. Due to the size of the Planning Area and the nature of this study, the survey methods consist mainly of conducting a "windshield survey" along Interstate 15, State Route 18, Bear Valley Road, Air Expressway Boulevard, Hesperia Road, Helendale Road and other public roadways, but also included inspecting and identifying geological formations and exposed soils along the way. The main purpose of the field reconnaissance was to verify geologic deposits and formations and to help evaluate the sensitivity of the Planning Area for paleontological resources that may be encountered during future excavation and construction activities.

During the field reconnaissance, it was observed that the area around the Quartzite, Sparkhule and Silver Mountains consisted of bedrock materials that are not conducive to the preservation of fossil resources due to their igneous and metamorphic origins. Slightly to moderately sloping alluvial-fan deposits were noted further north in the Brisbane Valley and Wild Wash areas where the surface soils are Holocene-age alluvium of coarse-grained sand with high concentrations of gravel and large cobbles. This type of rough and rocky soil is not conducive to the preservation of paleontologic resources because of their pulverizing and grinding nature.

To the northwest of this elevated and mountainous area, along the eastern bank of the Mojave River, are Pleistocene-age coarse-grained alluvial soils with islands of well-developed desert pavement. These soil types also have a low potential to contain paleontological resources. Surface exposures west of the Mojave River did not exhibit desert pavement and are probably Holocene-age alluvium.

The Lower Narrows area contains Pleistocene-age alluvial fan deposits formed by the erosion of the western flanks of the Silver and Sparkhule Mountains and from the elevated terrain outside of the Planning Area to the southeast. Similar older Quaternary sediments are also present along the western side of the Mojave River and around the area where the Southern California Logistics Airport is located.

The south-central portion of the Planning Area contains soils consistent with that of the Victorville Fan deposits. These Pleistocene-age alluvial soils are medium-to-coarse grained with low-to-moderate concentrations of gravels and cobbles. This type of soil has the potential to contain fossil remains.

The areas along Mojave River drainage contain fine- and medium-grained sediments attributable to depositional processes of the ancestral Mojave River. These soils are conducive to the

preservation of fossil remains, and have been determined to have a high potential to contain fossil remains of extinct Pleistocene-age mammals from the last Ice Age. Soils within the present-day bed of the Mojave River, however, appear to be recent sands and small gravels washing down from higher elevations. These sediments are considered to have a low level of sensitivity because fluvial activity within the river channel would have likely destroyed any dissemble trace of fossil remains.

The relatively level terrain of the southwestern portion of the Planning Area contains fine-grained alluvial soils that have developed on the surface over time. The surface exposures in these portions of the Planning Area are, in all likelihood, Holocene-age alluvium with a low level of sensitivity for yielding paleontological resources.

5.5.2 Regulatory Framework

The following information presents a general discussion of certain federal and state statutes and regulations, as well as available funding and assistance programs that may be applicable to an understanding of the project's regulatory setting.

5.5.2.1 Federal

National Historic Preservation Act. The National Historic Preservation Act (NHPA) of 1966, as amended, mandates that all federal agencies assume responsibility for the preservation of significant historic properties owned or controlled by the U.S. government. Under federal criteria, in order for a building or structure to be significant, it must be found eligible for listing in the National Register of Historic Places. The NRHP comprises the nation's inventory of historic places and the national repository of documentation on the variety of historic property types, significance, abundance, condition, ownership, needs, and other information. Federal listing generally requires that a building or structure be at least fifty years of age and possess "the quality of significance in American history, architecture, archaeology, engineering and culture. . . present in districts, sites, buildings, structures and objects that possess integrity of location, design, setting, material, workmanship, feeling and association."³

Section 106 of the NHPA requires federal agencies to take into account the effect of an undertaking on any historic properties prior to approval of the undertaking. Historic properties are defined as prehistoric or historic sites, buildings, structures, districts, and objects included in or eligible for inclusion in the NRHP and artifacts, records, and remains related to such properties. Cultural resources may be eligible for nomination to the NRHP if they "possess integrity of location, design, setting, materials, workmanship, feeling and association" and if those resources are: (1) associated with significant themes in our Nation's history; (2) significant persons in our Nation's history; (3) embody distinctive construction characteristics or works of a master; or (4) have yielded or have the potential to yield information important

³ 36 Code of Federal Regulations (CFR) Part 800.

to history or prehistory.⁴ When delegated the responsibility for Section 106 compliance, as in some programs funded by the U.S. Department of Housing and Urban Development (HUD), a local government agency may also take the lead in the enforcement of the NHPA.

In conjunction with the NHPA, the Secretary of the Interior maintains the National Register of Historic Places (NHRP), a nation-wide inventory of districts, sites, buildings, structures, objects, or other features of national, state, or local historical significance. According to statutory definition, any property listed in or determined to be eligible for listing in the National Register constitutes a "historic property." Currently, there are no National Register-listed resources located within the City of Victorville's Planning Area, but 10 sites have been determined to be eligible for listing, as listed above in Section 5.5.1.1 under the heading "Designated or Eligible Heritage Properties".

National Trails System Act of 1968. The National Trails System Act (Public Law 90-543) (16 USC 1241-1251) was enacted to "promote the preservation of, public access to, travel within, and enjoyment and appreciation of the open air, outdoor areas and historic resources of the Nation." The act recognizes and commemorates historic travel routes associated with important events in our nation's history. As defined, national historic trails "follow as closely as possible and practicable the original trails or routes of travel of national historic significance" and "shall have as their purpose the identification and protection of the historic route and its historic remnants and artifacts for public use and enjoyment." National scenic trails are "so located as to provide for maximum outdoor recreation potential and for the conservation and enjoyment of the nationally significant scenic, historic, natural, or cultural qualities of the areas through which such trails may pass." Two national historic trails (Juan Bautista De Anza National Historic Trail, Old Spanish National Historic Trail) and one national scenic trail (Pacific Crest National Scenic Trail) exist, in part, in southern California. The Old Spanish National Historic Trail traverses the Planning Area.

Executive Order 13195 (Trails for the 21st Century), as signed by President Clinton on January 18, 2001, specifies, in part: "Federal agencies will, to the extent permitted by law and where practicable-and in cooperation with Tribes, States, local governments, and interested citizen groups-protect, connect, promote, and assist trails of all types throughout the United States. This will be accomplished by: (a) Providing trail opportunities of all types, with minimum adverse impacts and maximum benefits for natural, cultural, and community resources; (b) Protecting the trail corridors associated with national scenic trails and the high priority potential sites and segments of national historic trails to the degrees necessary to ensure that the values for which each trail was established remain intact. . .(i) Promoting trails for safe transportation and recreation within communities; (j) Providing and promoting a wide variety of trail opportunities and experiences for people of all ages and abilities."

5.5.2.2 State

⁴ 36 CFR 60.4.

California Government Code. Sections 25373 and 37361 of the California Government Code (CGC), authorizes county and city governments to enact zoning ordinances for the protection and regulation of buildings and structures of special historical value. Section 65860 of the CGC enlarges the scope of those zoning powers to allow those agencies to regulate the use of buildings, structures, and land between business, industry, residential, and open space. Victorville does not have a historical preservation ordinance.

With regards to California Native American traditional tribal cultural places,⁵ Senate Bill 18, as approved by the Governor on September 29, 2004, stipulates that, subject to the limitations outlined therein, certain tribal consultation and notice requirements shall apply to local governments when adopting or amending general and specific plans. As specified in SB 18 and as outlined in the Governor's Office of Planning and Research's "Supplement to General Plan Guidelines – Tribal Consultation Guidelines"⁶ (Tribal Consultation Guidelines), prior to adoption or amendment of a general or specific plan, the local government must: (1) notify the appropriate California Native American tribe of the opportunity to conduct consultation for the purpose of preserving or mitigating impacts to cultural places; (2) refer the proposed action to those tribes that are on the NAHC contact list that have traditional lands within the agency's jurisdiction; and (3) send notice of a public hearing, at least ten days prior to the hearing, to tribes that have filed a written request for such notice. Pursuant to Section 65352.3, only if a tribe is identified by the NAHC and the tribe requests consultation after being contacted by a local government, must the local government consult with the tribe on the plan proposal.

California Public Resources Code. Pursuant to Section 5020.1(k) of the PRC, a "historic resource" must be listed on a "local register of historical resources." A "local register" is a "list of properties officially designated or recognized as historically significant by a local government pursuant to a local ordinance or resolution." Resources that are listed in a local historic register or deemed significant in a historical resource survey as provided under Section 5024.1(g) of the PRC are to be presumed historically or culturally significant unless "the preponderance of evidence" demonstrates they are not. Section 5020.1 establishes the threshold of "substantial adverse change" as inclusive of demolition, destruction, relocation, or other alteration activities that would impair the significance of the historic resource. Section 5097.5 of the PRC makes it a misdemeanor for anyone to knowingly disturb any archaeological, paleontological, or historical features situated on public lands.

The State Historic Preservation Plan identifies the following Statewide preservation goals: (1) Increase the number of private and public historic resources that are protected and preserved in all geographical regions of the State; (2) Increase the number of individuals and organizations who understand the value of historic preservation through education and community outreach programs; (3) Improve California's economy by using historic preservation tools and incentives to promote jobs and stimulate investment in local communities; (4) Expand and diversify the existing funding base for historic preservation programs while seeking dependable, long-term

⁵ Public Resources Code (PRC) Sections 4097.9 and 5097.995.

⁶ Governor's Office of Planning and Research, Supplement to General Plan Guidelines – Tribal Consultation Guidelines, April 15, 2005.

sources of economic support; (5) Encourage and implement historic preservation as a regular component of public policy planning at all levels of government; (6) Ensure that the identification of and information about historic and cultural resources in California is comprehensive, available in a consistent and complete format, and continually acquired; and (7) Promote the preservation and the stewardship of cultural resources among a diversified State population representing all levels of the socio-economic spectrum.⁷

The California Register of Historical Resources, established in 1992, is the State of California's counterpart to the National Register of Historic Places. Its listings include all properties listed in or officially determined eligible for listing in the National Register. Together with the California Register, the Office of Historic Preservation (OHP) maintains two other registers to promote historic preservation in the state: California Historical Landmarks, a designation for properties of statewide historic importance, and Points of Historical Interest, for properties of countywide or regional importance. At present, there are three sites located within the Planning Area that are listed as California Historical Landmarks as listed above in Section 5.5.1.1 under the heading "Designated or Eligible Heritage Properties".

Properties included in any of these registers are eligible for a number of state historic preservation incentives, such as property tax reduction, benefits provided by the California Heritage Fund, alternative building regulations under the State Historic Building Code, special historic preservation bond measures, and seismic retrofit tax credits.

California Environmental Quality Act. For projects with no federal involvement, the California Environmental Quality Act (CEQA) similarly requires lead agencies to take the necessary action to prevent substantial adverse changes to "historical resources" (PRC §21084.1). Although termed differently in the NHPA and the CEQA, "historic properties" and "historical resources" both refer to a special class of cultural resources that meet the definitions set forth in the statutes and their implementation regulations.

"Historic properties," as defined by the Advisory Council on Historic Preservation and relevant to the CEQA, include "prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior" (36 CFR 800.16(l)). The eligibility for inclusion in the National Register is determined by applying the following criteria:

- The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and
- (a) that are associated with events that have made a significant contribution to the broad patterns of our history; or
 - (b) that are associated with the lives of persons significant in our past; or

⁷ California Department of Parks and Recreation, Office of Historic Preservation, Forging a Future with a Past – A Comprehensive Statewide Historic Preservation Plan for California, December 1997, p. 4; California Department of Parks and Recreation, Office of Historic Preservation, Comprehensive Statewide Historic Preservation Plan for California, 2000-2005, May 2001, p. 20.

- (c) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- (d) that have yielded, or may be likely to yield, information important in prehistory or history. (36 CFR 63)

CEQA guidelines state that the term "historical resources" applies to any such resources listed in or determined to be eligible for listing in the California Register of Historical Resources, included in a local register of historical resources, or determined to be historically significant by the Lead Agency (Title 14 CCR §15064.5(a)(1)-(3)).

Regarding the proper criteria of historical significance, CEQA guidelines mandate that "a resource shall be considered by the lead agency to be 'historically significant' if the resource meets the criteria for listing on the California Register of Historical Resources" (Title 14 CCR §15064.5(a)(3)). A resource may be listed in the California Register if it meets any of the following criteria:

- (1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
- (2) Is associated with the lives of persons important in our past.
- (3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
- (4) Has yielded, or may be likely to yield, information important in prehistory or history. (PRC §5024.1(c))

In summary, any property that meets one or more of the criteria for listing in the National Register or the California Register, or that is officially designated a historical resource by a local government agency, falls under the protection of the NHPA and/or the CEQA. Depending on the nature, significance, integrity, and current condition of the property, the proper form of protection may range from on-site preservation to project effect mitigation, such as in-depth documentation for historic buildings and data recovery excavation for archaeological sites.

California Penal Code. Under the provisions of the California Penal Code (CPC), it is a misdemeanor offense for any person, other than the owner, to willfully damage or destroy archaeological or historical features on public or privately owned land (14 CPC Part I, Section 622.5).

California Health and Safety Code. Section 7050.5 of the Health and Safety Code (H&SC) stipulates that if human remains are discovered during construction, the project owner is required to contact the county coroner. No further disturbance shall occur until the county coroner has made a determination of origin and disposition pursuant to Section 5097.98 of the PRC. If the remains are determined to be prehistoric, the county coroner must notify the NAHC which will determine and notify a Most Likely Descendant (MLD). With the permission

of the property owner, the MLD may inspect the site of the discovery (within 24 hours of notification by the NAHC). The MLD may recommend scientific removal and non-destructive analysis of human remains and items associated with Native American burial practices.

5.5.3 Thresholds of Significance

Significant impacts relative to cultural resources are evaluated in this section based on Appendix G of the CEQA Guidelines. Implementation of the proposed project may have a significant adverse impact if it would do any of the following:

- 1) Cause a substantial adverse change in the significance of a historic resource as defined in Section 15064.5 of the State CEQA Guidelines.
- 2) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5 of the State CEQA Guidelines.
- 3) Directly or indirectly destroy a unique paleontological resource, site, or unique geologic feature.
- 4) Disturb any human remains, including those interred outside of formal cemeteries.

5.5.4 Project Impacts

General Plan 2030 Provisions: The Resource Element of the General Plan 2030 contains the following provisions applicable to Cultural Resources:

GOAL #5: PRESERVATION OF IMPORTANT CULTURAL RESOURCES
– Protect Identified Archaeological, Paleontologic Resources And Historic Resources within the Planning Area.

Objective 5.1: Preserve known and expected cultural resources.

Policy 5.1.1: Determine presence/absence of and consider impacts to cultural resources in the review of public and private development and infrastructure projects.

Implementation Measure 5.1.1.1: As a City Planning Department function, maintain maps illustrating areas that have a moderate-high probability of yielding important cultural resources as a result of land alteration projects.

Implementation Measure 5.1.1.1: Establish a transmittal system with the Archaeological Information Center (AIC) at the San Bernardino County Museum, Redlands. When a project is in its initial phase, the City may send a location map to the AIC for a transmittal-level records search. The transmittal identifies the presence

or absence of known cultural resources and/or previously performed studies in and near the project area. The AIC also offers recommendations regarding the need for additional studies, if warranted.

Implementation Measure 5.1.1.2: When warranted based on the findings of reconnaissance level surveys by a qualified professional archaeologist and/or transmittals from the AIC, require Phase I cultural resource assessments by qualified archaeologists, historians, and/or architectural historians, especially in areas of high sensitivity for cultural resources, as shown on the maps maintained in the City Planning Department. The scope of such a survey shall include, as appropriate, in-depth records search at the AIC, historic background research, intensive-level field survey, consultation with the Mohave Historical Society, and consultation with the appropriate Native American representatives and tribal organizations.

Implementation Measure 5.1.1.3: Complete a planning area-wide assessment of the paleontologic sensitivity, based on a review of geologic formations and a review of paleontologic records that identify those formations that have yielded or are expected to yield fossil materials of importance to the scientific community.

Policy 5.1.2: Prohibit destruction of cultural and paleontologic materials that contain information of importance to our knowledge of the evolution of life forms and history of human settlement in the planning area, unless sufficient documentation of that information is accomplished and distributed to the appropriate scientific community. Require mitigation of any significant impacts that may be identified in project or program-level cultural and paleontologic assessments as a condition of project or program approval.

Implementation Measure 5.1.2.1: Enact a historic preservation ordinance and/or prepare a historic preservation plan to outline the goals and objectives of the City's historic preservation programs and present an official historic context statement for the evaluation of cultural resources within the City's jurisdiction.

Implementation Measure 5.1.2.3: Assist local property owners in finding and taking advantage of incentives and financial assistance for historic preservation that are available through various federal, state, or city programs.

Implementation Measure 5.1.2.4: Require paleontologic monitoring of land alteration projects involving excavation into native geologic materials known to have a high sensitivity for the presence of paleontologic resources.

Scope of Impact Analysis: This analysis considers impacts to cultural resources that would occur with implementation of the proposed General Plan 2030; whether growth would result in changes which would affect historic resources, archaeological resources, disturb or destroy unique paleontological resources or sites, or disturb human remains.

5.5.4.1 Cause a substantial adverse change in the significance of a historic resource as defined in Section 15064.5 of the State CEQA Guidelines?

Impact Discussion:

For historic-period buildings and other features of built environment, the downtown area bounded by A, E, 1st, and 11th Streets and the corridors extending southwest along 6th Street, 7th Street, Yucca Avenue, and Forrest Avenue contain the densest concentration of early 20th century residences (Figure 5.5-3 Sensitivity Assessment for Historic Period Buildings). The strip of historic Route 66 between 1st Street and Stoddard Wells Road forms a business district with distinct historical character and should be considered highly sensitive for historic-period commercial buildings. The segment of National Trails Highway between Air Expressway and the Interstate 15 freeway also hosts a number of historic-period commercial and industrial buildings. The neighborhoods to the southwest of the downtown area between the Interstate 15 freeway and Hesperia Road feature a relatively high percentage of mixed-vintage residences from the early and mid-20th century, including some buildings that are now approaching the age threshold to be considered potentially historic. Sporadic historic-period buildings can be found throughout much of the Planning Area, with the exception of where recent large subdivisions have been developed.

Most of the City's historic structures are located in already urbanized areas. Future development pursuant to the proposed General Plan land use and infrastructure plans could result in redevelopment of these urbanized areas, and could potentially impact the historic resources.

Policy 5.1.2 of the Resource Element would encourage the preservation and restrict the destruction of identified historical resources. Implementation Measure 5.1.2.1 promotes enactment of a historical preservation ordinance which would formalize procedures for identifying and protecting historical resources. Implementation Measure 5.1.2.2 further supports protection of historical resources by requiring the City to assist property owners utilize financial incentives for preservation. Implementation Measure 5.1.2.4 requires that mitigation of impacts to historic resources comply with Secretary of Interior Standards.

Upon implementation of the above listed Goal, Objective, Policy and Implementation Measures of the General Plan 2030, potential adverse impacts relative to historical resources are expected to be reduced to levels of insignificance.

Impact Finding: Less than Significant.

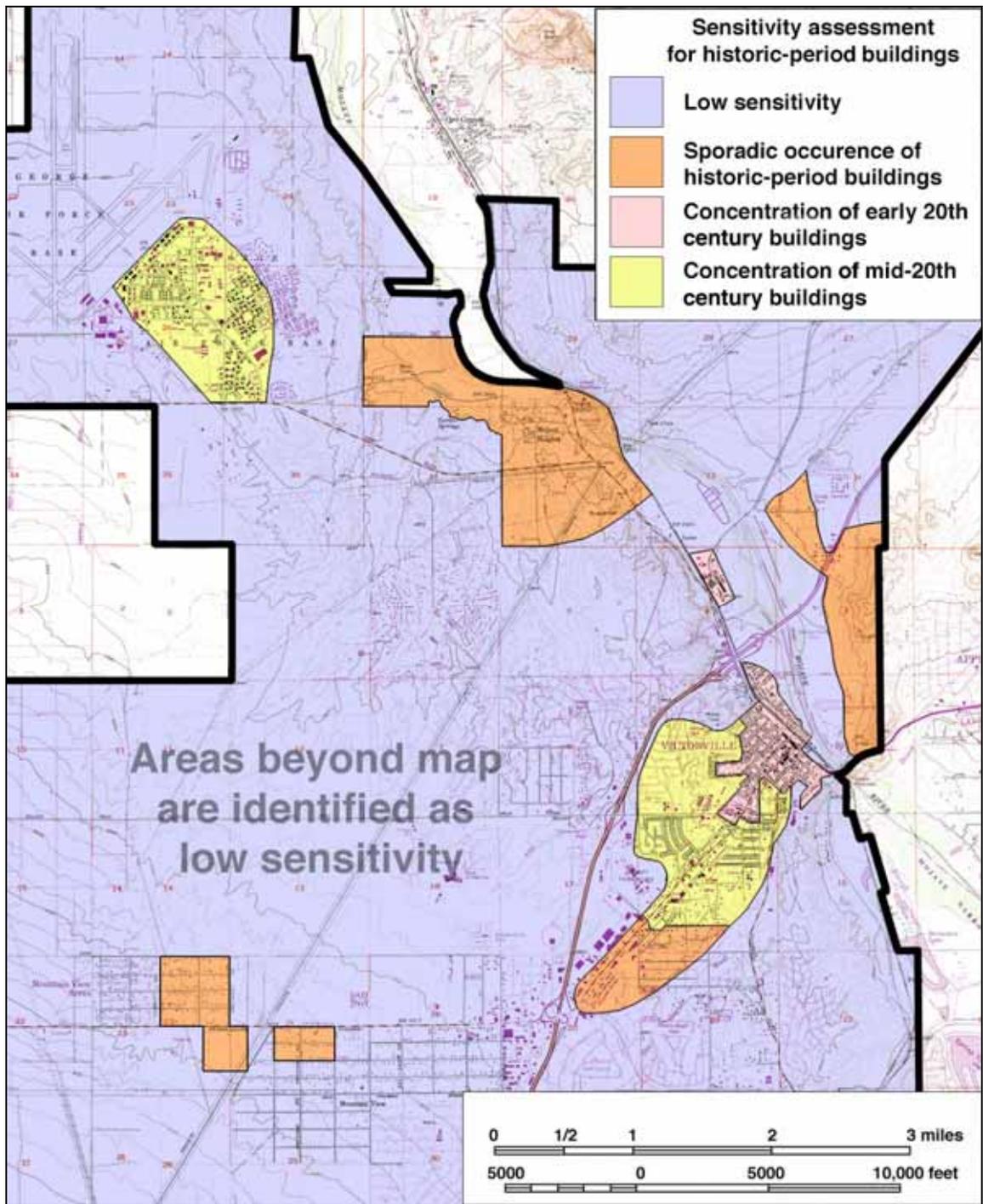


Figure 5.5-3. Sensitivity Assessment for Historic Period Buildings.

5.5.4.2 Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5 of the State CEQA Guidelines?

Impact Discussion:

Areas within one mile of the Mojave River and its tributaries, namely the Oro Grande Wash and the Bell Mountain Wash, and around the drainages and springs near Turner Springs appear to be highly sensitive for both prehistoric and historic-period resources (Figure 5.5-4 Sensitivity Assessment for Archaeological Resources). The actual drainage beds are highly eroded and always changing, thus have a low sensitivity. However, the shorelines and terraces near these water sources provided resources for prehistoric Native American inhabitants. These areas were also visited by early pioneers and settlers, as evidenced by the location of a segment of the Mormon Trail near Turner Springs and the location of downtown Victorville along the Mojave narrows. Areas approximately 1-2 miles from these natural water sources are moderately sensitive for both prehistoric and historic-period resources. The valley floor, making up the balance of the Planning Area, while low in sensitivity for prehistoric archaeological resources, exhibits a moderate sensitivity for historic-period sites. The downtown area demonstrates a moderate sensitivity for archaeological resources from the historic period, mostly due to the possibility of unknown subsurface artifact deposits that may be present.

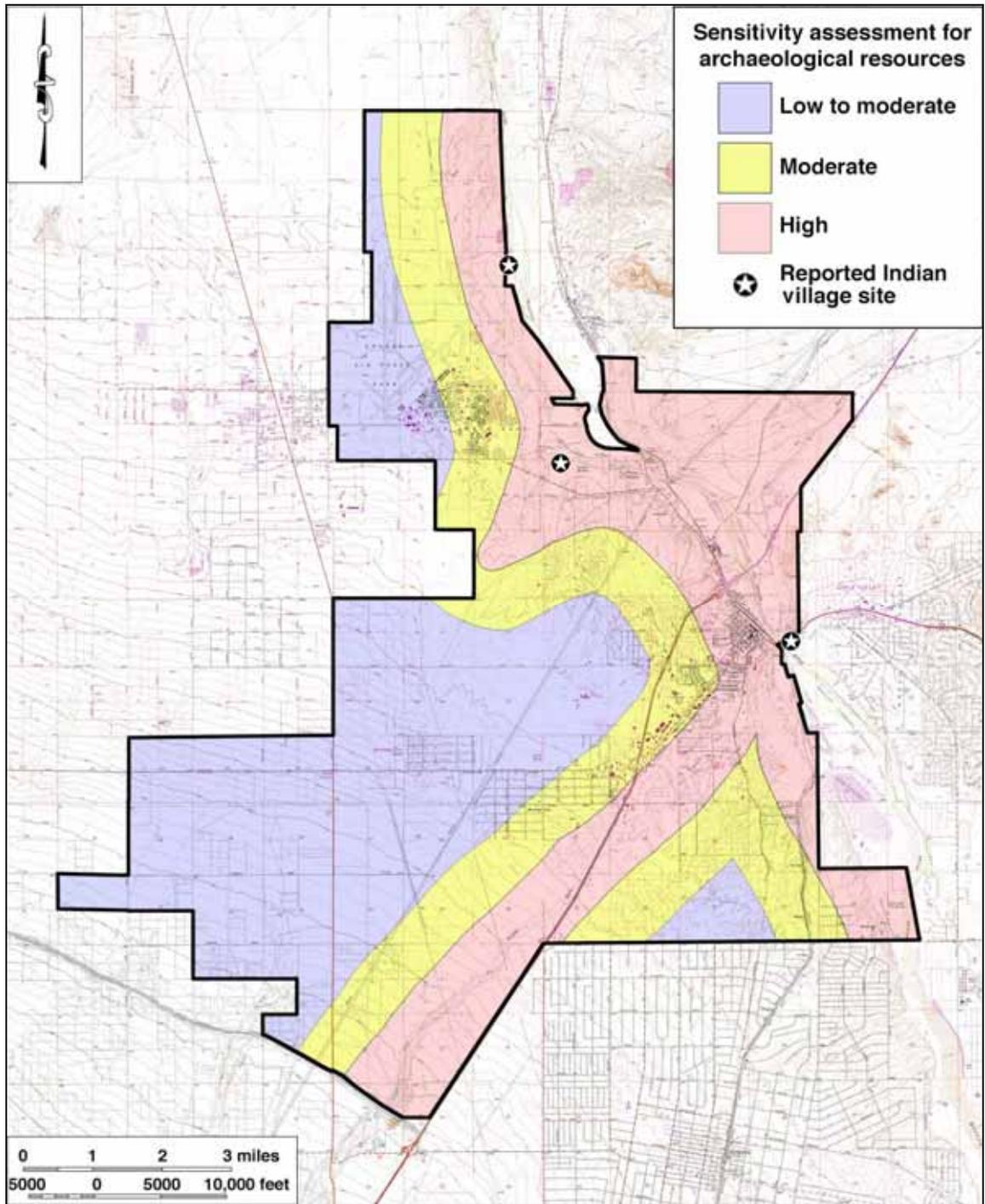


Figure 5.5-4. Sensitivity Assessment for Archaeological Resources.

Much of the northeast quadrant of the Planning Area remains undeveloped. Archaeological resource surveys of this area have not been conducted. As noted above, areas within one mile of the Mojave River and its tributaries, and around the drainages and springs are expected to be highly sensitive for both prehistoric and historic-period resources. Future development pursuant to the proposed General Plan land use and infrastructure plans in the northeast quadrant could impact potential archaeological resources.

As discussed above, Goal #5 and Objective 5.1 of the proposed Resource Element of the General Plan 2030 addresses cultural resources, inclusive of archaeological resources. Under this Goal and Objective, the proposed Resource Element offers Policies 5.1.1.1, 5.1.2, and 5.1.3 and their respective Implementation Measures that are intended to protect archaeological resources. Policy 5.1.1 encourages the protection of cultural resources for which sensitivity is known as well as for sites with unknown levels of sensitivity. Implementation Measure 5.1.1.1 provides that the City maintain and keep updated maps of known cultural resource areas. Implementation Measures 5.1.1.2, and 5.1.1.3 define procedures for obtaining records search data from the AIC at the San Bernardino County Museum, performing recommended AIC follow-up actions based on the results of the records search, and for consultation with both the Mohave Historical Society and Native American representatives. Implementation Measure 5.1.1.4 provides a similar procedure for sites of unknown sensitivity.

Policy 5.1.2 prohibits the destruction of cultural materials of importance, unless appropriate documentation is accomplished and distributed, and/or mitigation is provided and approved as a project/program condition. Implementation Measures 5.1.2.3, 5.1.2.4, and 5.1.2.5 define procedures for filing site record forms, reports of surveys, test excavations, mitigation, and data recovery programs, as well as filing preliminary and final reports, and for cataloguing collected or recovered artifacts. Implementation Measure 5.1.2.6 requires monitoring of areas having potential for buried archaeological resources by a qualified archaeologist with authority to temporarily halt or redirect earthwork if finds are uncovered. Implementation Measure 5.1.2.7 requires the development of a program detailing measures for avoidance or preservation of sites when proposed as a form of mitigation.

Policy 5.1.3 and its Implementation Measures define procedures for consultation with Native American tribes and the treatment of identified artifacts.

The City requires that standard conditions be placed upon every project. As such, in addition to the above General Plan 2030 provisions, the Mitigation Measures CUL-1, CUL-3 and CUL-4, outlined in section 5.5.6, below shall be incorporated into every project.

Upon implementation of the above listed Goal, Objective Policy and Implementation Measures of the General Plan 2030 and the above mitigation measures, potential adverse impacts relative to archaeological resources are expected to be reduced to levels of insignificance.

Impact Finding: Less than significant with mitigation.

5.5.4.3 Directly or indirectly destroy a unique paleontological resource, site, or unique geologic feature?

Impact Discussion:

The results of the record searches, literature review, and field reconnaissance suggest that the likelihood of encountering paleontological resources during future development projects depends on the location within the Planning Area, depth of disturbance, and the sediment lithologies encountered. These lithologies have been ranked according to their paleontological sensitivity, ranging from low to high (Figure 5.5-5 Sensitivity Assessment for Paleontological Resources).

Geologic maps consulted for this study indicate the Planning Area contains several different lithostratigraphic units of differing geologic ages, but that the surface geology appears to be mainly fine-grained Holocene-age alluvium. However, this Recent alluvium is known to develop on top of, and in some cases from, older potentially fossil-bearing sediments. The geologic mapping indicates Pleistocene-age sediments outcrops exist within some portions of the Planning Area. This implies, that the Recent alluvium on the surface has a variable thickness, which might be determined from geotechnical boring logs, should they be available.

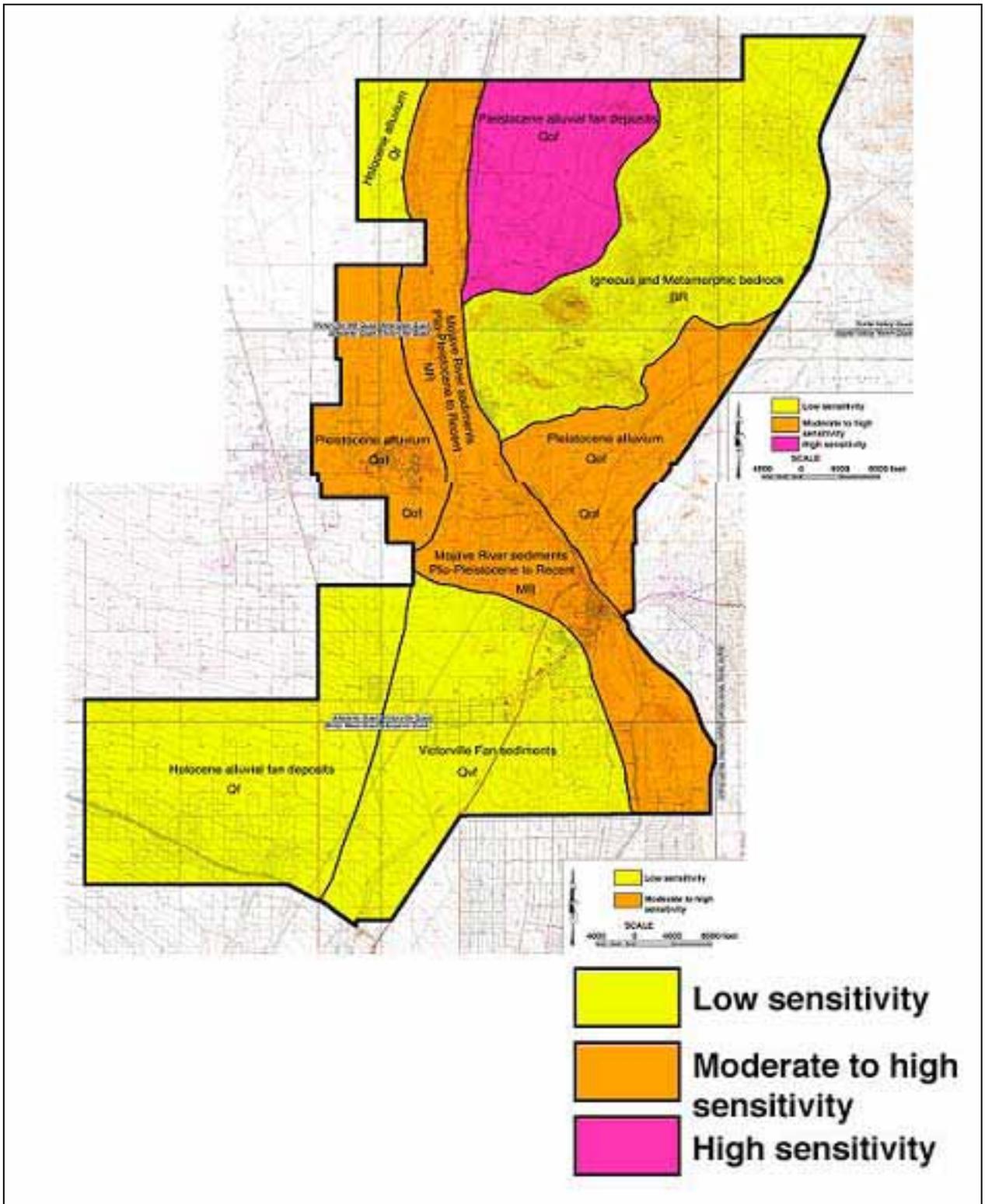


Figure 5.5-5 Sensitivity Assessment for Paleontological Resources.

In general terms, the lower-lying and relatively level terrain of the southwestern portion of the Planning Area consists of surficial deposits of younger Quaternary/Holocene alluvium derived as fan deposits from the San Gabriel Mountains to the south. Similar Holocene alluvial deposits also occur in the northwestern portion of the Planning Area. Generally, these deposits do not contain significant vertebrate fossil remains, at least in the uppermost layers, but they are often underlain by older Quaternary deposits that may contain significant paleontological resources.

The elevated terrain around the Silver, Sparkhule, and Quartzite Mountains and extending to the Lower Narrows consists of bedrock of igneous and metamorphic origins and is considered low in sensitivity for paleontological resources (Figure 5.5-5).

Older Quaternary/Pleistocene deposits are exposed to the northwest of the mountains. Similar sediments are also found along the western side of the Mojave River, around the Southern California Logistics Airport, in the central portion of the Planning Area. These deposits have a moderate to high level of sensitivity for containing fossil resources.

The southeastern portion of the planning, in general, consists of Victorville Fan sediments. Recent paleontologic investigations reported to the San Bernardino County Museum indicate that these Pleistocene-age alluvial fan deposits are not as fossiliferous as the ancestral Plio-Pleistocene Mojave River sediments.

Monitoring programs have been completed at many project sites within the Planning Area, located mostly within the Victorville Fan sediments. The findings from these projects substantiate the findings that the Victorville Fan sediments generally have a low potential for containing any significant nonrenewable paleontological resources but, if appropriate lithologies are present, fossils may be preserved within these sediments.

Gravelly sandy surface wash deposits in the current Mojave River drainage channel represent active fluvial deposits that are unlikely to contain significant vertebrate fossils. However, sediments of the ancestral Mojave River may contain Pleistocene-age soils at an unknown depth and therefore this area is considered moderately to highly sensitivity for paleontological remains, especially if excavations are deep. Also, the areas with PlioPleistocene-age Mojave River sediments exposed at or near the surface are considered sensitive for significant, non-renewable paleontological resources. These areas are confined mainly to the southern and western edges of the present Mojave River drainage, especially near the Southern California Logistics Airport.

The results above indicate that the potential for future development projects in the Planning Area to impact significant paleontological resources ranges from low to high, depending on the location, depth of disturbance, and the sediment lithologies encountered.

Future development pursuant to the proposed General Plan land use and infrastructure plans in the Planning Area will require monitoring to ensure that potentially important paleontological resources are identified and protected.

As discussed above, Goal #5 and Objective 5.1 of the proposed Resource Element of the General Plan 2030 addresses cultural resources, inclusive of paleontological resources. Under this Goal, the proposed Resource Element offers Policy 5.1.2 and its Implementation Measures to protect paleontological resources. These General Plan provisions require monitoring, encourage the identification and preservation, and restrict the destruction of paleontological resources. Policy 5.1.2 prohibits destruction of paleontological resources without appropriate documentation and/or mitigation. Implementation Measures 5.1.2.8 and 5.1.2.10 require the conduct of a records check, literature review, field visit and review of available geotechnical studies to help determine sensitivity and monitoring actions. Implementation Measure 5.1.2.9 adds the requirement for field surveys for areas of unknown sensitivity.

Upon implementation of the above Policy and Implementation Measures of the General Plan 2030, potential adverse impacts relative to paleontological resources are expected to be reduced to levels of insignificance.

Impact Finding: Less than Significant.

5.5.4.4 Disturb any human remains, including those interred outside of formal cemeteries?

Impact Discussion:

At least 14 prehistoric Native American campsites and two habitation sites have been identified within or immediately adjacent to the boundaries of the Planning Area. Many of the prehistoric habitation and use areas are situated along or near the banks of the Mojave River, near the confluence of seasonal drainages such as the Oro Grande Wash and the Bell Mountain Wash, or near springs in the Turner Springs area. One such site, CA-SBR-60, is a habitation site at the mouth of the Mojave River narrows, immediately adjacent to the Planning Area. At least 18 of the recorded prehistoric sites in the Planning Area were identified as food processing sites and hearths where Native Americans ground, prepared, and cooked plant and animal resources for food. Several stone quarries and reduction sites where prehistoric Native Americans manufactured stone tools have also been found, as have four rock art sites and one major Indian trail. Given the size of the Planning Area which includes areas not previously surveyed, there is evidence to suggest that human remains have the potential to be encountered during excavation activities associated with project development.

Policy 5.1.3, as above, provides for protection of Native American beliefs and traditions by avoidance of or minimization of impacts to Native American cultural resources. Implementation Measure 5.1.3.3 directly addresses the potential for encountering human remains.

The City requires that standard conditions be placed upon every project. As such, in addition to the above implementation measures, Mitigation Measures CUL-2 shall be incorporated into every project.

Upon implementation of the above listed Implementation Measure and mitigation measure, potential adverse impacts relative to human remains resources are expected to be reduced to levels of insignificance.

Impact Finding: Less than significant with mitigation.

5.5.5 Cumulative Impacts

Impact Discussion:

The increase in population that will occur with implementation of the General Plan has the potential to result in a significant cumulative impact to cultural resources. Land within the Planning Area (and greater County and State areas) is finite. Multiple projects resulting from the General Plan as well as other areas outside the Planning Area, will contribute cumulatively to population increases which could result in the direct and indirect loss of cultural resources, especially in high sensitivity areas. However, as discussed in Section 5.5.4, the Resource Element of the General Plan 2030 offers a Goal, Objective, Policies and Implementation Measures intended to reduce these potential impacts to less than significant levels. Consequently, no cumulative impacts are expected.

Impact Finding: None.

5.5.6 Mitigation Measures

The City requires that standard conditions be placed upon every project. As such, the following mitigation measure shall be incorporated into every project:

CUL-1: The applicant shall provide for an on-site paleontological/archaeological inspector to monitor all grading operations, or a letter from said licensed professional indicating that monitoring is not necessary during grading. Further, if disturbed resources are required to be collected and preserved, the applicant shall be required to participate financially up to the limits imposed by Public Resources Code Section 21083.2. The results of said monitoring shall be filed with the Development Director or his designee prior to the final approval of the development.

CUL-2: 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.

CUL-3: In the event that Native American cultural resources are discovered during project development/construction, all work in the immediate vicinity of the find shall cease and a qualified archaeologist meeting Secretary of Interior standards shall be hired to assess the find. Work on the overall project may continue during this assessment period.

CUL-4: If significant Native American cultural resources are discovered, for which a Treatment Plan must be prepared, the developer or his archaeologist shall contact the Morongo Band of Mission Indians ("Tribe"). If requested by the Tribe, the developer or the project archaeologist shall, in good faith, consult on the discovery and its disposition (e.g. avoidance, preservation, return of artifacts to tribe, etc.)

5.5.7 Level of Significance After Policies/Mitigation Measures – Less than Significant.

5.6 GEOLOGY AND SOILS

This section addresses issues related to geology and soils which may threaten the health, safety, and property of the residents living and working in the Victorville Planning Area. Potential earthquake hazards include seismically induced surface rupture, ground shaking, ground failure, and liquefaction, soil loss and erosion along with slope instability leading to mudslides, landslides, and subsidence. Other factors include that would be located on expansive soils, and having soils incapable of supporting septic tanks or alternative wastewater disposal systems were sewers are not an option.

5.6.1 Existing Conditions

5.6.1.1 Geology

The Planning Area is within the southern portion of the Mojave Desert Geomorphic Province of California. The Mojave Desert is bounded on the north and northwest by the Tehachapi Mountains, on the west by the Garlock fault, on the east by the Colorado River, and on the south and southwest by the San Andreas Fault. The Mojave Desert Province is characterized by broad alluvial basins of Cenozoic sedimentary and volcanic materials overlying older plutonic and metamorphic rocks. The plutonic and metamorphic rocks are exposed as eroded hills throughout the region. The alluvial basins are up to several thousand feet thick.

A major portion of the Victorville Planning Area is located on top of a gently sloping large alluvial fan situated to the northeast of the San Bernardino Mountains and referred to as the Cajon Fan (or Victorville Fan). The alluvial deposits are classified as Younger Alluvium and consist of interbedded sand and gravel with lesser amounts of silt and clay. Caliche deposits, composed primarily of calcium carbonate, are present within the upper few feet. The sand and gravel deposits are generally unconsolidated to weakly consolidated sediments. The alluvium was derived from erosion of the San Gabriel and San Bernardino Mountains to the south.¹

The Mojave River runs along the alluvial fan's eastern margin. The Mojave River channel and associated tributaries have dissected the alluvium and continue to deposit younger alluvium in active channels. Regionally, the ground surface slopes gently downward in a northwest direction at a gradient of less than two percent.

¹Victorville 2 Hybrid Power Project. Certification for Application. February 2007.

5.6.1.2 Seismicity

Fault Systems

The Planning Area is located in seismically active Southern California, a region that has experienced numerous earthquakes in the past. The Alquist-Priolo Special Studies Zones Act specifies that an area termed an “Earthquake Fault Zone” is to be delineated if surrounding faults that are deemed “sufficiently active” or “well defined” after a review of seismic records and geological studies.

Five fault systems affect the Victorville Planning Area including the San Andreas, Helendale, North Frontal, Landers, and San Jacinto faults. Figure 5.6-1 depicts known regional seismic hazards. The San Andreas Fault is located approximately twenty-four miles south of the Planning Area and is considered most likely to produce a major earthquake within the planning period. The Helendale Fault, located approximately nine miles northeast of the Planning Area, could also be responsible for a moderate earthquake with a Richter magnitude of approximately 5.9. A third major fault system, the San Jacinto Fault, is located approximately twenty-six miles south of the Planning Area and runs parallel to the San Andreas Fault. The North Frontal fault zone of the San Bernardino Mountains is located approximately five and one-half miles southeast of the Planning Area along the base of the Ord Mountains. This active fault has the potential to produce a moderate earthquake with a Richter magnitude of 6.2. The Landers fault is located approximately fifty miles southeast of the Planning Area. The Landers Fault was discovered as a result of a 7.4 Richter magnitude sized earthquake on June 28, 1992. Although the epicenter (i.e., a surface point directly above the earthquake’s focus) was approximately fifty miles from the Planning Area, intense local ground shaking occurred. However, no substantial damage to buildings or facilities in the Planning Area was reported.

Ground Shaking

Because the area is seismically active, ground shaking and movement along one or more of the active or potentially active faults in the region is highly likely. The estimated Peak Horizontal Ground Acceleration (PGA) in the area with 10 percent probability of being exceeded in 50 years is 0.35g for alluvial soil conditions. This PGA would most-likely be the result of movement along the Helendale-S.

As shown in Table 5.6-1, movement along the Helendale – S. Lockhart (9.2 miles to the northeast of the Southern California Logistics Airport (SCLA)) could potentially generate a maximum estimated site intensity of IX. This intensity is based on the Modified Mercalli (MM), a scale which qualitatively measures the shaking effects of earthquakes. A rating of IX on the MM scale would suggest violent shaking and heavy damage to structures.

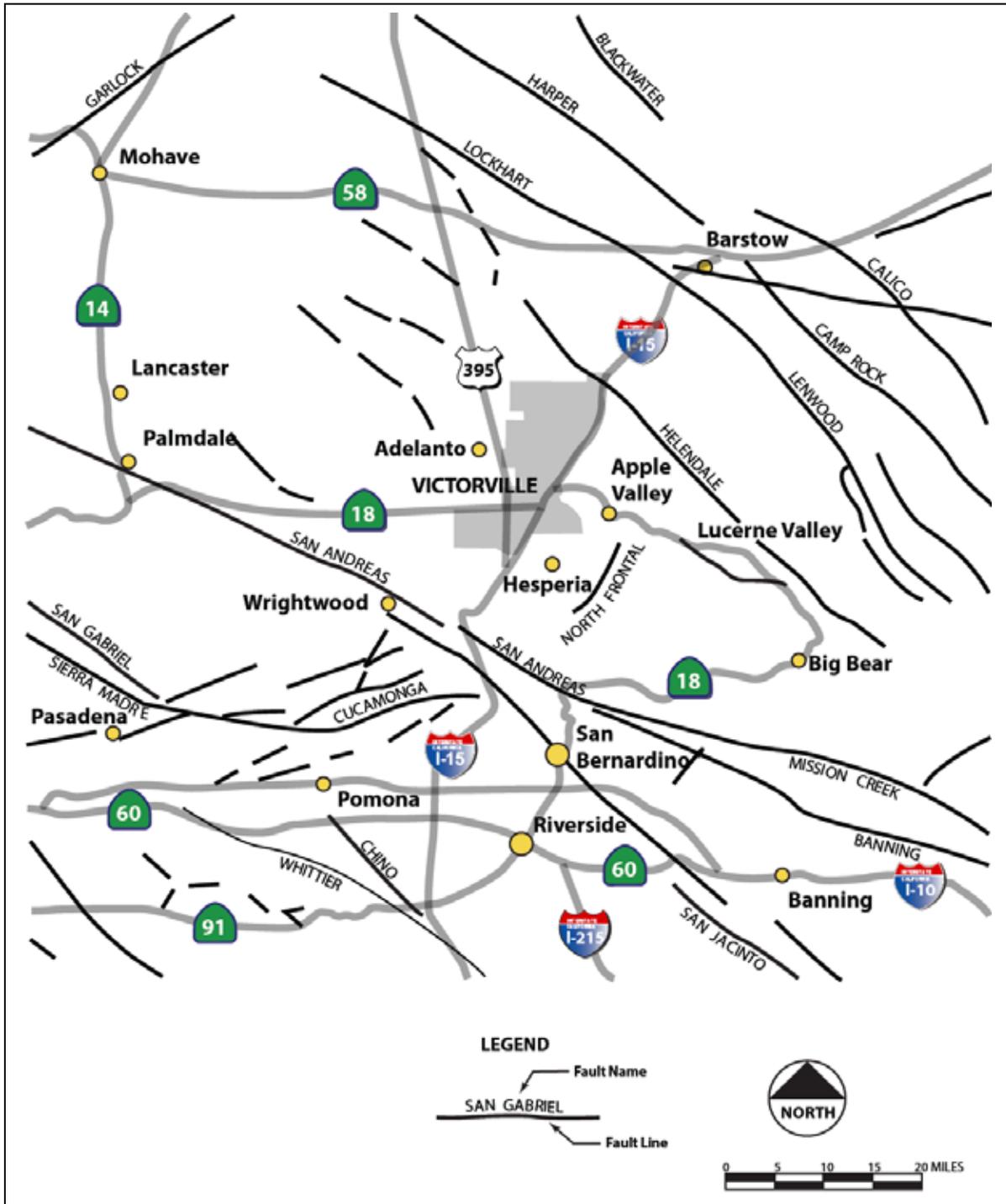


Figure 5.6-1. City of Victorville General Plan 2030 Regional Seismic Hazards

**Table 5.6-1
Active and Potentially Active Faults within 30 Miles of SCLA**

Abbreviated Fault Name	Approximate Distance ¹ (Miles)	Estimated Maximum Credible Magnitude	Estimated Peak Site (Acc. G) ²	Estimated Site Intensity (MM) ³
Helendale – S. Lockhart	9.2	7.1	0.33	IX
North Frontal Fault Zone (West)	20.7	7.0	0.17	VIII
Lenwood-Lockhard-Old Woman Springs	22.7	7.3	0.15	VIII
Cleghorn	23.3	6.5	0.08	VII
San Andreas – 1857 Rupture	24.4	7.8	0.20	VIII
San Andreas – Mojave	24.4	7.1	0.12	VII
San Andreas – Southern	24.7	7.4	0.15	VIII
San Andreas – San Bernardino	24.7	7.3	0.14	VIII
Cucamonga	25.4	7.0	0.13	VIII
San Jacinto - San Bernardino	28.3	6.7	0.08	VII
Gravel Hills – Harper Lake	29.1	6.9	0.08	VII

¹ Distance is approximate from the SCLA.
² Acc .g = Acceleration in Gravity
³ MM = Modified Mercalli, a scale which qualitatively measures the shaking effects of earthquakes.

Ground Rupture

Although located in an acknowledged seismically active area, the Planning Area is not located on a fault trace as designated by mapping and site investigations conducted as part of the Alquist-Priolo Earthquake Fault Zoning Act.²

Liquefaction

Portions of the Planning Area, especially those areas along the Mojave River, may be susceptible to liquefaction. Liquefaction results when water-saturated, sandy, unstable soils are subject to intense shaking, such as that caused by an earthquake. These soils lose cohesiveness causing unreinforced structures to fail. The primary factors for increased liquefaction susceptibility include areas subject to high seismicity, shallow groundwater, and young, poorly consolidated sandy alluvium. When this type of sandy alluvium is present, liquefaction susceptibility is generally considered high if groundwater depth is less than ten feet beneath the ground surface, moderate if ground water depth is between ten and thirty feet, and low if groundwater depth is greater than thirty feet. Liquefaction is usually not considered a hazard if the groundwater table is greater than fifty feet in depth. Detailed studies have not been prepared to indicate the precise location of Planning Areas prone to liquefaction.

² Victorville 2 Hybrid Power Project. Certification for Application. February 2007.

Slope Stability

The majority of the Planning Area consists of generally flat terrain which is not prone to significant slope stability problems. The gently sloping topography is occasionally dissected by an intermittent stream channel with moderate slopes, to nearly vertical slopes adjacent to the Mojave River. A method used by the United States Department of Agriculture (USDA) categorizes soil types according to a variety of characteristics including slope. The terrain studies conducted for the General Plan 2030 identified soil types that had slopes of between 9% and 15%, and those greater than 15%, as follows:

- Gentle - This category refers to terrain with a slope gradient of less than 9%. Slopes in this category will generally sustain more intensive land uses with the least management.
- Moderate - Slope gradient of 10 to 15%. Terrain generally will support residential and agricultural land use, though caution must be used to prevent serious erosion.
- Steep - Slope gradients above 15%. If plant cover is removed, the slope is highly susceptible to erosion or gully formation. If the gradient is 50% or more, construction activities could cause widespread slope failure.

Those portions of the Planning Area found to have slope gradients in either of the above categories are identified in Figure 5.6-2.

Subsidence

Subsidence due to groundwater withdrawal has been documented in various regions of the Mojave Desert, such as in the area around Lancaster in Los Angeles County and in the southern portion of San Bernardino County. According to the Victorville 2 Hybrid Power project located at the SCLA in their Certification for Application with the California Energy Commission, there are no reports of subsidence in the area. Pumping of area water wells is not expected to affect the aquifer sufficiently to cause subsidence in the area. In addition, subsidence is not considered an issue in the area because the Victor Valley Wastewater Reclamation Authority (VWVRA)³ treatment plant and the City of Adelanto recharge water into the local aquifer. Based on the information provided by RWQCB staff, subsidence due to groundwater withdrawal in the Planning Area is considered unlikely.⁴

³ The VWVRA is a California Joint Powers Authority that owns and operates regional wastewater collection and treatment facilities that serve the Victor Valley.

⁴ Communication with Jay Cass of the Lahontan Regional Water Quality Control Board contact information as contained in: Victorville 2 Hybrid Power Project. Certification for Application. February 2007.

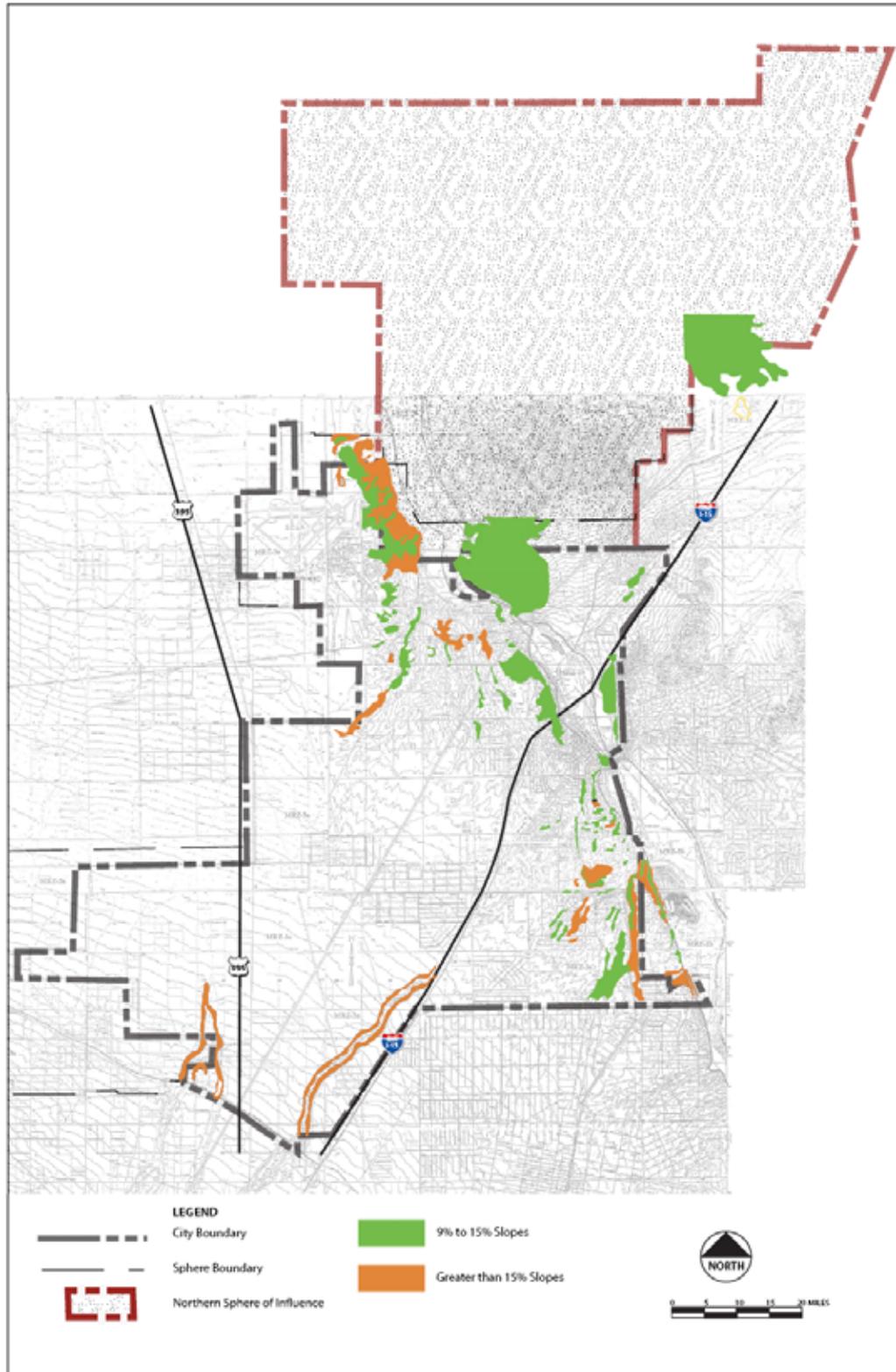


Figure 5.6-2. City of Victorville General Plan 2030 Slope Hazards

Collapsible Soils

Alluvial soils in arid and semi-arid environments have the tendency to possess characteristics that make them prone to collapse with increase in moisture content. There are areas within the Planning Area where the potential exists for collapsible soils.

Expansive Soils

Expansive soil consists of fine-grained clay which occurs naturally. It is generally found in areas that were historically a flood plain or lake area, but can occur in hillside areas also. Expansive soil is subject to swelling and shrinkage, varying in proportion to the amount of moisture present in the soil. As water is initially introduced into the soil (by rainfall or watering), an expansion takes place. If dried out, the soil will contract, often leaving small fissures or cracks. Excessive drying and wetting of the soil can progressively deteriorate structures over the years because it can lead to differential settlement within buildings and other improvements.

Soils in most of the Planning Area are composed mainly of sands, silty sands, and sand with silt. For that reason, the expansion potential of the soil is generally low, as indicated in the Soil Conservation Survey of San Bernardino County⁵. There are some clay horizons in the subsurface that exhibit moderate expansion potential, but these areas are relatively deep and would not be expected to pose significant expansive soil issues for the Planning Area.

Erosion

Erosion is the displacement of solids (soil, mud, rock, and other particles) by wind, water or ice and by downward or down-slope movement in response to gravity. Due to the generally flat terrain of the vast majority of the Planning Area, it is not prone to significant slope stability problems. Those areas near the intermittent streams and the Mojave River where terrain is steep have a greater potential for slope stability and erosion.

Per the Soil Conservation Service (SCS), soils exist in the area that are classified as Wind Erodibility Groups 1 and 2, which are indicated as highly erodible. Wind Erodibility Groups include:

- Group 1 consists of sands, fine sands, and very fine sands. These soils are generally not suitable for crops. They are extremely erodible, and vegetation is difficult to establish.
- Group 2 consists of loamy sands, loamy fine sands, and loamy fine sands. These soils are very highly erodible.
- Group 3 consists of sandy loams, coarse sandy loams and fine sandy loams. These soils are highly erodible.

⁵ U.S. Department of Agriculture, Soil Conservation Service, 1986. Soil Survey of San Bernardino County, California Mojave River Area.

SCS land capability classes located in the Planning Area include:

- Ile = soils that have moderate limitations that reduce the choice of plants or that require moderate conservation practices. Soil is erodible.
- Ille = soils that have severe limitations that reduce the choice of plants or that require moderate conservation practices. Soil is erodible.
- VIIe = soils that have very severe limitations that make them unsuitable for cultivation. Soil is erodible. The –I suffix means that the limitations are caused by slope or by an actual or potential erosion hazard.
- Irr = when irrigated
- Non = when not irrigated

5.6.2 Regulatory Framework

5.6.2.1 Federal

The National Earthquake Hazards Reduction Program (NEHRP), established under the Earthquake Hazards Reduction Act of 1977 (Public Law 95-124), is the federal program established to address the nation’s earthquake threat. Under the NEHRP, the Federal Emergency Management Agency (FEMA), a part of the United States Department of Homeland Security, is responsible for supporting program implementation activities, including the development of technical design and construction guidance documents.

Following the San Fernando earthquake in 1971, the United States Department of Housing and Urban Development published a non-engineering document, entitled “Home Builder’s Guide to Earthquake Design.” In July 1992, that document was reprinted as a joint FEMA and HUD document (FEMA 232) and subsequently updated in August 1998 and June 2006. FEMA’s “Homebuilder’s Guide to Earthquake Resistant Design and Construction, FEMA 232”⁶ incorporates and references the prescriptive provisions of the 2003 edition of the “International Residential Code” (IRC).⁷ In addition, FEMA 232 discusses the significant changes in the 2006 edition of the IRC, including revised seismic design maps.

5.6.2.2 State

Seismic Hazards Mapping Act. Prompted by damaging earthquakes in northern and southern California in 1990, the State Legislature passed the Seismic Hazards Mapping Act (SHMA), codified in Sections 2690 through 2699.6 in Division 2, Chapter 7.8 of the PRC, which became operative on April 1, 1991. The SHMA was adopted for the purpose of

⁶ Building Seismic Safety Council, Homebuilder’s Guide to Earthquake Resistant Design and Construction, FEMA 232, Federal Emergency Management Agency, June 2006.

⁷ In 1993, the International Code Council (ICC) was established to develop a single set of comprehensive and coordinated national model construction codes. The initial edition of the ICC’s “International Building Code” (IBC) and “International Residential Code” (IRC) were published in 2000 and updates were issued in 2003 and 2006. The State of California continues to utilize the “California Building Standards Code” (Title 24, Parts 1 through 12, CCR) which is based off the 2006 IBC, and has not formally adopted the IBC or IRC.

protecting the public from the effects of strong ground shaking, liquefaction, landslides and other ground failure, and other hazards attributable to earthquakes. As required under the SHMA, the California Department of Conservation, Division of Mines and Geology (DMG)⁸ was directed to delineate the various "seismic hazard zones" throughout the State. As specified under Section 2696(a) therein, the "State Geologist shall compile maps identifying seismic hazard zones, consistent with the requirements of Section 2695. The maps shall be compiled in accordance with a time schedule developed by the director and based upon the provisions of Section 2695 and the level of funding available to implement this chapter."

The State Mining and Geology Board's (SMGB's) "Guidelines for Evaluating and Mitigating Seismic Hazards in California, Special Publication No. 117"⁹ provides guidelines for evaluating and mitigating seismic hazards (other than surface fault rupture) and for recommending mitigation measures as required under Section 2695(a) of the Public Resources Code (PRC). Mitigation means those measures that are consistent with established practice and that will reduce seismic risk to acceptable levels. As defined in Section 3721(a) therein, "acceptable level" means that level that provides reasonable protection of the public safety, though it does not necessarily ensure continued structural integrity and functionality of the project. As further specified therein: "The fact that a site lies outside a mapped zone of required investigation does not necessarily mean that the site is free from seismic or other geologic hazards, nor does it preclude lead agencies from adopting regulations or procedures that require site-specific soil and/or geologic investigations and mitigation of seismic or other geologic hazards."¹⁰

Alquist-Priolo Earthquake Fault Zoning Act. Following the 1971 San Fernando earthquake, the State Legislature passed the Alquist-Priolo Earthquake Fault Zoning Act (APEFZA), formerly called the Alquist-Priolo Special Studies Zone Act, as codified in Section 2621 *et seq.* in Chapter 7.5 of Division 2 of the PRC. The APEFZA, which became effective in 1973, was adopted to "provide policies and criteria to assist cities, counties, and State agencies in the exercise of their responsibilities to prohibit the location of developments and structures for human occupancy across the trace of active faults." As defined therein, an "active fault" is one along which surface displacement has occurred within Holocene time (during the past 11,000 years).

The purpose of the APEFZA is to regulate land development near active faults in an effort to mitigate the hazard of surface fault rupture. The law requires the State Geologist to establish regulatory zones, known as "earthquake fault zones," around the surface traces of active faults and to issue appropriate maps. Earthquake fault zones are regulatory zones around active faults, defined by turning points connected by straight lines. The lines are identified by

⁸ Now the California Geological Survey (CGS).

⁹ State Mining and Geology Board, Guidelines for Evaluating and Mitigating Seismic Hazards in California, Special Publication No. 117, March 13, 1997.

¹⁰ *Op. Cit.*, Guidelines for Evaluating and Mitigating Seismic Hazards in California, Special Publication No. 117, p. 15.

roads, drainages, and other features on the ground. The zones vary in width, but average about one-quarter mile wide.¹¹

Earthquake fault zones encompass surface traces of active faults that have a potential for future surface rupture that may pose a risk to existing or future structures. If a property is undeveloped, a fault study may be required before the parcel can be subdivided or before most structures can be permitted. If a property is developed, the APEFZA requires that all real estate transactions within the earthquake fault zone must contain a disclosure of those potential hazards by the seller to prospective buyers.

Under the APEFZA, local agencies must regulate activities within those zones, as defined by an appropriate setback from the fault trace. Pursuant to Section 2623 of the PRC, “cities and counties shall require, prior to the approval of a project, a geologic report defining and delineating any hazard of surface fault rupture. If the city or county finds that no undue hazard of that kind exists, the geologic report on the hazard may be waived, with the approval of the State Geologist.” The geologic report required under the APEFZA must meet the criteria and policies established by the SMGB, as codified in Sections 3600-3603 in Title 14 of the CCR.

Field Act. In response to the 1933 Long Beach earthquake, the State Legislature gave the State the authority to approve public school construction plans, inspect new school construction, and inspect existing schools for safety. The Field Act, codified in Sections 17280-17317 and Sections 81130-81149 of the California Education Code (CEC), is administered by the Division of the State Architect (DSA), within the State Department of General Services.

According to Title 24, Part I of the California Building Standards Code: “School buildings constructed pursuant to these regulations are expected to resist earthquake forces generated by major earthquakes of the intensity and severity of the strongest experienced without catastrophic collapse, but may experience some repairable architectural and structural damage.”

California Building Code. The State of California Department of General Services (DGS) Buildings Standards Commission (BSC) is responsible for administering California's building codes, including adopting, approving, publishing, and implementing codes and standards. Established in 1953 by the California Building Standards Law, the BSC is an independent commission within the State and Consumer Services Agency. Commission members are appointed by the Governor and confirmed by the State Senate. The BSC is responsible for administering California's building standards adoption, publication, and implementation processes of the California Code of Regulations, Title 24. Unless exempted by law, all buildings in California are required to comply with the standards contained in California Code of Regulations, Title 24. Specifically, buildings that the state has the authority

¹¹ California Department of Conservation, Division of Mines and Geology, Fault-Rupture Hazard Zones in California, Special Publication 42, Revised 1997, Supplements 1 and 2 added in 1999, p. 6.

to regulate are required to comply with the model code provisions and amendments adopted by the state, whereas buildings the state does not have the authority to regulate are required to comply only with the model codes as they are referenced in Title 24.

California Porter-Cologne Water Quality Control Act. Porter-Cologne establishes the principal State program for water quality control. Under Porter-Cologne, the State Water Resources Control Board (SWRCB) is mandated to implement the provisions of the Clean Water Act (CWA).¹² To implement and enforce the provisions of Porter-Cologne and the CWA, Porter-Cologne divides the State into nine regional boards that, under the guidance and review of the SWRCB, implement and enforce the provisions of both the State and federal statutes. Porter-Cologne provides for the development and periodic review of water quality control plans to regulate water quality, and is a comprehensive plan for protecting the quality and maximizing the beneficial use of the State's waters. Inherent in the control of water quality is the control of erosion and runoff, as further discussion in Section 5.6.2.3, below.

5.6.2.3 Regional

Lahontan Regional Water Quality Control Board. As per the California Porter-Cologne Water Quality Control Act, the Planning Area is under the jurisdiction of the Lahontan Region. One of the responsibilities of the Lahontan Region¹³ includes the issuance and approval of National Pollutant Discharge Elimination System (NPDES) permits per the federal CWA for the regulation of point source discharges. Construction activities that disturb more than one acre are required to obtain coverage under California's General Permit for Discharges of Storm Water Associated with Construction Activity, Water Quality Order 99-08-DWQ (Construction General Permit). Activities subject to permitting include clearing, grading, stockpiling, and excavation. The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP) which specifies Best Management Practices (BMPs) that will reduce or prevent construction pollutants from leaving the site in storm water runoff and will also minimize erosion associated with the construction project. The SWPPP must contain site map(s) that show the construction site perimeter; existing and proposed structures and roadways; storm water collection and discharge points, general topography both before and after construction; and drainage patterns across the site. Additionally, the SWPPP must describe the monitoring program to be implemented.

¹² Details of the Federal Clean Water Act are presented in Section 5.8, Hydrology and Water Quality, Section 5.8.2.1.

¹³ Additional responsibilities of the Lahontan Regional Water Quality Control Board are presented in Section 5.8, Hydrology and Water Quality, Section 5.8.2.3.

5.6.2.4 Local

City of Victorville Municipal Code: Portions of several chapters of the Municipal Code apply to geology and soils. These include: Title 15, Buildings and Construction, Municipal Code Chapter 15.04 *Building Code*, Chapter 15.06 *Grading*, Chapter 15.20 *Flood Damage Prevention*, Chapter 15.38 *Earthquake Hazard Reduction for Unreinforced Masonry Buildings*, all contain provisions relative to geology and soils.

5.6.3 Thresholds of Significance

Significant impacts relative to geology and soils are evaluated in this section based on Appendix G of the CEQA Guidelines. Implementation of the proposed project may have a significant adverse impact if it would do any of the following:

- 1) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: (i) Rupture of 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? (Refer to Division of Mines and Geology Special Publication 42). (ii) Strong seismic ground shaking? (iii) Seismic-related ground failure, including liquefaction? (iv) Landslides?
- 2) Result in substantial soil erosion or the loss of topsoil?
- 3) 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?
- 4) Be located on expansive soil, as defined in Table 18-I-B of the Uniform Building Code (1994), creating substantial risks to life or property?
- 5) 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?

5.6.4 Project Impacts

General Plan 2030 Provisions: Of the proposed General Plan 2030, the Resources and Safety Elements are two of the General Plan elements mandated by State Government Code (Section 65302(g)). They are intended to identify and, whenever possible, reduce the impact of geology and soils hazards which may threaten the health, safety, and property of the residents living and working in the Victorville Planning Area. The applicable goals address

protection of the community from geologic hazards and natural and man-made hazards that may contribute to geologic and soils concerns,

Within the proposed General Plan 2030 Resources Element the following goals, objectives, policies, and implementation measures would apply to geology and soils:

GOAL #1: Sufficient, Safe Water Supply.¹⁴

Objective 1.3: Protect ground water quality.

Implementation 1.3.1.2: Assess and mitigate impacts on surface and groundwater quality as a routine aspect of the City's CEQA implementation procedures.

GOAL #3: Protection From Natural Hazards - Protect the Community from Flooding And Geologic Hazards.

Objective 3.2: New development is located and designed to avoid or mitigate seismic and geologic hazards.

Policy 3.2.1: Results of preliminary geotechnical investigations shall be considered by the City's decision-makers, prior to approval of all discretionary actions to allow for public or private development projects.

Implementation 3.2.1.1: Preliminary geotechnical investigations and reports shall be conducted for all new development and major redevelopment projects, public and private, to identify seismic and other geologic hazards, and to define measures to eliminate or reduce such hazards to an acceptable level.

Within the proposed General Plan 2030 Safety Element the following goals, objectives, policies, and implementation measures would apply to geology and soils:

GOAL #1: Protection From Hazards - Protect The Community Against Natural And Man-Made Hazards.

Objective 1.1: Restrict land uses in areas identified as susceptible to natural and man-made hazards.

Policy 1.1.1: Develop and maintain an accurate, up-to-date and complete database that identifies the locations, scope and potential severity of natural and man-made hazards affecting the Planning Area.

¹⁴ Although oriented toward water supply and flooding, this goal is included herein as it contains policies and implementation measures that help to control soil erosion.

Implementation Measure 1.1.1.1: Establish and maintain a digital database to identify hazards throughout the Planning Area.

Implementation Measure 1.1.1.3: Work with federal, state and county agencies to develop, acquire and expand data and mapping of hazards within the Planning Area. This shall occur as part of the annual general plan monitoring/reporting effort, or more frequently, as staffing and funding resources permit.

Objective 1.2: Identify and mitigate geologic hazards in the land use and development project planning process.

Policy 1.2.1: Require an adequate assessment of site specific geologic hazards and required mitigation measures prior to granting discretionary approval for a land use plan, development project or public infrastructure plan or project.

Implementation Measure 1.2.1.1: Require complete geologic/geotechnical investigations as a standard procedure in the land use and project-level planning process. This applies to all projects subject to CEQA and other projects in areas where the City's Building Official determines there is a possible threat of liquefaction, subsidence, expansive soils, landslides or mudslides. Mitigation of soils/geotechnical constraints shall be defined prior to approval of projects involving discretionary permits, or prior to issuance of grading permits for projects that do not require discretionary approvals.

Implementation Measure 1.2.1.2: Apply the California Building Code slope regulations on all new developments located on slopes in excess of 15 percent.

Implementation Measure 1.2.1.3: Apply the slope protection combining district zoning regulations to development projects proposed on areas with slopes in excess of 15 percent, to protect against erosion on slopes greater than five feet in height.

Implementation Measure 1.2.1.4: Require seismic safety measures identified in the California Building Code to be incorporated into all new development. Examples of these measures include structural bracing, roof system bracing, and increased size of footings.

Objective 1.5: Alleviate hazards associated with unreinforced masonry structures erected prior to development of modern building codes

Policy 1.5.1: Pursue Community Development Block Grant (CDBG) or other public funding for structural retrofitting of unreinforced masonry structures.

Implementation Measure 1.5.1.1: Apply CDBG and other funding sources to assist private property owners with structural retrofitting of their unreinforced masonry structures, to meet current Building Code standards for seismic safety.

Implementation Measure 1.5.1.2: Give preference for CDBG funding for structural retrofitting of unreinforced masonry structures to projects located on properties comprising all or part of a historic site, a historic building or other improvements recognized as historic, as defined in Section 15064.5(a) of the California Environmental Quality Act Guidelines.

Implementation Measure 1.5.1.3: Continue Building Division inspections of buildings which are suspected of being constructed with unreinforced masonry.

Scope of Impact Analysis: This analysis considers impacts of geology and soils hazards that would occur with implementation of the proposed General Plan 2030. The proposed General Plan 2030 anticipates substantial growth in the Planning Area during the next 20 years, over which time there is the potential risk of exposing people and structures to the adverse effects of earthquake rupture, ground shaking, ground failure including liquefaction and landslides. There is also the potential for soil erosion or placement of structures on a geologic unit or soil that is unstable or could become unstable, as well as issues of expansive soil and soils incapable of being able to support the use of septic tanks or wastewater disposal systems where sewers are not available.

5.6.4.1 Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: (i) Rupture of 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? (Refer to Division of Mines and Geology Special Publication 42). (ii) Strong seismic ground shaking? (iii) Seismic-related ground failure, including liquefaction? (iv) Landslides?

Impact Discussion:

Surface rupture is not anticipated to be a hazard since there are no known or suspected fault traces within the Planning Area. The Planning Area is not located on a fault trace as designated by mapping and site investigations conducted as part of the Alquist-Priolo Earthquake Fault Zoning Act.

Although there are no known or suspected fault traces within the Victorville Planning Area, the regional area's fault systems could produce earthquakes that cause substantial ground

motion in the Planning Area that could result in serious injuries or deaths, as well as significant property damage. The level of impact resulting from any seismic activity will depend on factors such as distance from epicenter, earthquake magnitude, soils characteristics, and subsurface geology.

During moderate to strong earthquakes, unreinforced masonry construction may be hazardous to life and property as a result of partial or complete structure collapse. To mitigate this hazard, the City has adopted Chapter 15.38 (Earthquake Hazard Reduction For Unreinforced Masonry Buildings) of the Victorville Municipal Code, in compliance with State law (Government Code Section 8875), which promotes public safety and welfare by reducing the risk of death or injury that may result from such structural damage. The provisions of the chapter set minimum standards for structural seismic resistance established to reduce the risk of life, loss, or injury, but will not necessarily prevent these hazards.

Generally, most unreinforced masonry structures are located in the Old Town area of the City, where buildings were constructed before modern building codes were developed to require design with respect to seismic safety considerations. The City has been actively pursuing funding sources, such as Community Development Block Grant funds, to financially assist property owners with seismic retrofit requirements.

For most of the Planning Area, landslides are not at issue as most of the area is characterized by gently sloping topography of less than 9% grade. (Reference Figure 5.6-2.) However, hillside development on areas when steep slopes are present can increase rates of erosion and exacerbate landslide hazards which may threaten structures. As part of the standard operations of the City Development Services Department, geotechnical investigations are required for new development projects in accordance with the 2007 California Building Code (Sections 1805.3 to 1805.3.5). Additionally, the Victorville Municipal Code (Title 18 – Zoning, Chapter 18.57 SLP-Slope Protection District) contains a “slope protection combining district” as part of the zoning regulations, to require landscaping on manufactured slopes greater than five feet high as a way to minimize erosion potential.

Detailed studies have not been prepared to indicate the precise location of areas prone to liquefaction; therefore, the extent of potential impact cannot be stated conclusively at this time. In any case, project specific geologic studies can detect liquefaction problems prior to the construction of any new building. If the City’s Building Official determines there is a significant probability that a site is susceptible to liquefaction, a geotechnical investigation is required in accordance with the 2007 California Building Code, Section 1802.2.7.

Related to the above issues, the Victorville Municipal Code contains Title 15, Buildings and Construction, Municipal Code Chapter 15.04 (Building Code), and Chapter 15.06 (Grading). Chapter 15.04.020 (Code adoption) adopts the 2007 Edition of the California Building Code known as the California Code of Regulations, Title 24, Part 2. Chapter 15.06.080 (Permit applications) part 2(C) requires an engineering geological investigation for a hillside development that shall include an adequate description of the geology of the site and

conclusions and recommendations regarding the effect of geological conditions on the proposed development.

Within the proposed General Plan 2030 Resources Element Goal #3, serves to protect the community from flooding and geology hazards. Objective 3.2 provides that new development is located and designed to avoid or mitigate seismic and geology hazards. Policy 3.2.1 requires that the results of preliminary geotechnical investigations be considered by the City's decision-makers prior to discretionary project approvals. The geotechnical investigations shall identify and mitigate seismic hazards and other geologic hazards to acceptable levels (Implementation Measure 3.2.1.1).

Within the proposed General Plan 2030 Safety Element Goal #1 provides for protection from natural and man-made hazards. Objective 1.1 serves to restrict land uses in areas identified as susceptible to natural and man-made hazards, accomplished by Policy 1.1.1 which provides that an accurate, up-to-date and complete database be maintained identifying those hazard areas. Objective 1.2 serves to identify and mitigate geologic hazards in the land use and development project planning process, including Policy 1.2.1, which requires assessment of site specific geologic hazards and required mitigation measures prior to granting discretionary project approvals. Its implementation measures require complete geologic/geotechnical investigations as a standard procedure in the land use and project-level planning process (Implementation Measure 1.2.1.1), application of California Building Code slope regulations on new developments projects on slopes in excess of 15 percent (Implementation Measure 1.2.1.2), application of the slope protection combining district zoning regulations (Implementation Measure 1.2.1.3), and require the California Building Code seismic safety measures to be incorporated into all new development (Implementation Measure 1.2.1.4). Objective 1.5 serves to alleviate hazards associated with unreinforced masonry structures erected prior to development of modern building codes, and includes Policy 1.5.1 requires the City to pursue Community Development Block Grant (CDBG) or other public funding for structural retrofitting of unreinforced masonry structures. Its implementation measures require complete application of CDBG and other funding sources to assist private property owners with structural retrofitting (Implementation Measure 1.5.1.1), give preference for CDBG funding to projects located on historic properties as defined by the CEQA Guidelines, (Implementation Measure 1.5.1.2), and that the Building Division continue inspections of buildings believe to constructed with unreinforced masonry (Implementation Measure 1.5.1.3).

Project developments within the Planning Area would be subject to strong ground shaking which may be hazardous to life and property as a result of partial or complete structure collapse. This is especially a concern in unreinforced masonry construction most of which are located in the Old Town area. Hillside development on steep slopes can increase rates of erosion and exacerbate landslide hazards which may threaten structures. Certain Planning Area locations may be prone to liquefaction, as detailed studies of the entire area have not been performed. The Municipal Code contains provisions that require geotechnical investigations and to provide mitigation for unreinforced masonry buildings, for slope areas prone to erosion and landslide, and for areas deemed to have a potential for liquefaction.

Within the proposed General Plan 2030 Resources Element Goal #3, serves to protect the community from flooding and geology hazards and within the Safety Element Goal #1 provides for protection from natural and man-made hazards.

The objectives reinforce the Municipal Code by requiring assessment of site specific geologic hazards and providing mitigation measures prior to granting discretionary project approvals, application of California Building Code slope regulations and seismic safety measures for new developments, pursue public funding for structural retrofitting of unreinforced masonry structures and give preference for funding of projects deemed historic, and providing up-to-date mapping of hazard areas. Therefore, impacts associated with the exposure of people or structures to strong seismic shaking, liquefaction, and landslides under the General Plan 2030 are expected to be less than significant.

Impact Finding: Less than Significant.

5.6.4.2 Would the project result in substantial soil erosion or the loss of topsoil?

Impact Discussion:

The soils in the Planning Area are subject to water and wind erosion during construction activities. Impacts associated with soil erosion include increased soil loss and increased sediment yields downstream from the disturbed areas.

Construction on steep slopes can increase rates of erosion and exacerbate landslide hazards which may threaten structures. In those areas, the City's Building Official can require a geotechnical investigation in accordance with the 2007 California Building Code (Sections 1805.3 to 1805.3.5). Additionally, the Victorville Municipal Code contains a "slope protection combining district" as part of the zoning regulations, to require landscaping on manufactured slopes greater than five feet high as a way to minimize erosion potential.

In compliance with NPDES permitting, construction activity is subject to the Construction General Permit which requires the development and implementation of a SWPPP which specifies BMPs that will reduce or prevent construction pollutants from leaving the site in storm water runoff and will also minimize erosion associated with the construction project. The SWPPP must contain site map(s) that show the construction site perimeter; existing and proposed structures and roadways; storm water collection and discharge points, general topography both before and after construction; and drainage patterns across the site. Additionally, the SWPPP must describe the monitoring program to be implemented.

Municipal Code Chapter 15.06 *Grading*, subpart 15.06.080 (Permit Applications), requires the contents of the application to include a soils engineering report. Also, subpart 15.06.140 (Inspections), (5) Final Reports, requires a report from a soils engineer including certification

of the soil bearing capacity, summaries of field and laboratory tests, lot-by-lot soil expansion rate, location on an “as built” grading plan of each slope test taken in the fill showing the limits of compacted fill and other pertinent information. Chapter 15, subpart 15.20.150 (Flood-related erosion-prone areas), requires that the floodplain administrator require permits for proposed development and that permit applications be reviewed to determine whether the proposed site alterations and improvements will be reasonably safe from flood-related erosion and will not cause flood-related erosion hazards or otherwise aggravate the existing hazard.

The General Plan 2030, Resources Element Goal #1, Objective 1.3 is proposed to protect ground water quality. Policy 1.3.1 requires new development and major redevelopment projects to prepare and implement water quality management plans that incorporate BMPs to minimize, control and filter construction site runoff and various forms of developed site urban runoff, prior to discharge to receiving waters. Implementation Measure 1.3.1.2 supports this by requiring the assessment and mitigation of impacts on surface and groundwater quality (which include erosion control) as a routine aspect of the City’s CEQA process.

Regarding highly erodible soils under wind conditions, all projects constructed in the Mojave Desert Air Basin (MDAB) are subject to Mojave Desert Air Quality Management District (MDAQMD) Rule 403 (Fugitive Dust). MDAQMD Rule 403 does not require a permit for construction activities, per se, but rather, sets forth general and specific requirements for all construction sites (as well as other fugitive dust sources) in the MDAB. The general requirement prohibits a person from causing or allowing emissions of fugitive dust from construction (or other fugitive dust source) such that the presence of such dust remains visible in the atmosphere beyond the property line of the emissions source. MDAQMD Rule 403 also prohibits a construction site from causing an incremental PM_{10} concentration impact at the property line of more than 100 micrograms per cubic meter as determined through PM_{10} high-volume sampling, but the concentration standard and associated PM_{10} sampling do not apply if specific measures identified in the rule are implemented and appropriately documented.

In addition to being located within the MDAB and subject to Rule 403, the project is located within the Mojave Desert Planning Area (MDPA) subjecting it to MDAQMD Rule 403.2 (Fugitive Dust Control for The Mojave Desert Planning Area). Projects located in the MDPA between 0.5 and 100 acres in size are subject to the following measures:

- Use periodic watering for short-term stabilization of disturbed surface areas to minimize visible fugitive dust emissions. For purposes of this Rule, use of a water truck to maintain moist disturbed surfaces and actively spread water during visible dusting episodes shall be considered sufficient to maintain compliance,
- Stabilize graded site surfaces upon completion of grading when subsequent development is delayed or expected to be delayed more than thirty days, except when such a delay is due to precipitation that dampens the disturbed surface sufficiently to eliminate visible fugitive dust emissions, and

- Reduce non-essential earth-moving activity under high wind conditions (i.e., the instantaneous wind speed exceeds 25 miles per hour, or when the average wind speed is greater than 15 miles per hour). For purposes of this Rule, a reduction in earth-moving activity when visible dusting occurs from moist and dry surfaces due to wind erosion shall be considered sufficient to maintain compliance.

Adherence to Rule 403 is mandatory and as such, does not denote mitigation under CEQA. Additional information is provided in Section 5.3 Air Quality.

Project developments within the Planning Area could be subject to erosion or loss of topsoil which can occur from water and/or wind conditions. In addition to compliance with California Building Code provisions, the Victorville Municipal Code contains a “slope protection combining district” as part of the zoning regulations, to require landscaping on manufactured slopes greater than five feet high as a way to minimize erosion potential. Also, the Municipal Code contains provisions for reducing potential runoff which may contain erosion and pollutants. Project developments within the Planning Area are required to obtain a NPDES General Construction Permit, develop and implement a SWPPP, and implement a project-specific BMPs for erosion control. Under the supervision of the City staff, any applicant must comply with these requirements and the Municipal Code to ensure that their project would not violate any water quality standards or waste discharge requirements. Because these are City requirements prior to construction, any impacts would be considered less than significant. In addition, the proposed General Plan 2030, Resources Element Policy I.3.1 requires development projects to prepare and implement water quality management plans that incorporate BMPs. This reinforces the NPDES regulatory requirements. Regarding erodible soils and winds, project construction would be required to comply with MDAQMD Rules 403 and 403.2. Therefore, substantial erosion or loss of topsoil associated with development within the Planning Area under the General Plan 2030 is expected to be less than significant.

Impact Finding: Less than Significant.

5.6.4.3 Would the project 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?

Impact Discussion:

As discussed above, construction on steep slopes can increase rates of erosion and exacerbate landslide hazards which may threaten structures.

There are no reports of subsidence in the area and pumping of area water wells is not expected to affect the aquifer sufficiently to cause subsidence in the Planning Area. In addition, subsidence is not considered an issue in the area because the Victor Valley Wastewater Reclamation Authority treatment plant and the City of Adelanto recharge water into the local aquifer. Based on the information provided by RWQCB staff, subsidence due to groundwater withdrawal in the Planning Area is considered unlikely.¹⁵

Portions of the Planning Area, especially those areas along the Mojave River, may be susceptible to liquefaction. While liquefaction is usually not considered a hazard if the groundwater table is greater than fifty feet in depth, detailed studies have not been prepared to indicate the precise location of Planning Areas prone to liquefaction.

Alluvial soils in arid and semi-arid environments have the tendency to possess characteristics that make them prone to collapse with increase in moisture content. Portions of the Planning Area have the potential to contain collapsible soils.

Related to the above issues, the Victorville Municipal Code contains Title 15, Buildings and Construction, Municipal Code Chapter 15.04 (Building Code), and Chapter 15.06 (Grading). Chapter 15.04.020 (Code adoption) adopts the 2007 Edition of the California Building Code known as the California Code of Regulations, Title 24, Part 2. Chapter 15.06.080 (Permit Applications) part 2(B) requires a soils engineering investigation, regarding the nature, distribution and strength of existing soils, conclusions and recommendations for grading procedures, design criteria for corrective measures. Part 2(C) requires an engineering geological investigation for a hillside development that shall include an adequate description of the geology of the site and conclusions and recommendations regarding the effect of geological conditions on the proposed development. Subpart 15.06.140 (Inspections), in (5)(B) Final Reports, requires a report from a soils engineer including certification of the soil bearing capacity, summaries of field and laboratory tests, lot-by-lot soil expansion rate, location on an “as built” grading plan of each slope test taken in the fill showing the limits of compacted fill and other pertinent information. Also, the City’s Building Official can require a geotechnical investigation in accordance with the 2007 California Building Code (Sections 1805.3 to 1805.3.5). Additionally, the Municipal Code (Title 18 – Zoning, Chapter 18.57 SLP-Slope Protection District) contains a “slope protection combining district” as part of the zoning regulations, to require landscaping on manufactured slopes greater than five feet high as a way to minimize erosion and landslide potential.

Within the proposed General Plan 2030 Safety Element Goal #1 provides for protection from natural and man-made hazards. Objective 1.1 serves to restrict land uses in such areas, accomplished by Policy 1.1.1 which provides that an accurate, up-to-date and complete database be maintained identifying those hazard areas. Objective 1.2 serves to identify and mitigate geologic hazards in the land use and development project planning process, including Policy 1.2.1, which requires assessment of site specific geologic hazards and required mitigation measures prior to granting discretionary project approvals. Its implementation

¹⁵ Communication with Jay Cass of the Lahontan Regional Water Quality Control Board contact information as contained in: Victorville 2 Hybrid Power Project. Certification for Application. February 2007.

measures require complete geologic/geotechnical investigations as a standard procedure in the land use and project-level planning process which applies to all projects subject to CEQA and other projects in areas where the City's Building Official determines there is a possible threat of liquefaction, subsidence, expansive soils, landslides or mudslides (Implementation Measure 1.2.1.1), and application of California Building Code slope regulations, application of the slope protection combining district zoning regulations, and compliance with the California Building Code seismic safety measures (Implementation Measures 1.2.1.2 through 1.2.1.4).

Development under General Plan 2030 in the Planning Area could be impacted by unstable soil conditions, and potentially result in on-or off-site landslide, liquefaction or collapse. Issues of lateral spreading and subsidence are considered unlikely. The Municipal Code contains provisions that require project permitting for new development and which require soils investigations of the distribution and strength of soils, engineering geologic investigations of hillside developments, and inspections and final reports prior to project approvals. Proposed General Plan 2030 Safety Element serves to reinforce the Municipal Code through requiring assessments of site specific geologic hazards and required mitigation measures prior to granting discretionary project approvals including CEQA compliance.

Figure 5.6-2, Slope Stability, provides information for the incorporated and existing SOI within the Planning Area. Because the proposed Northern Expansion Area is largely undeveloped, slope information for this proposed SOI is not currently available. Both the proposed General Plan 2030 Resource and Safety Elements provide measures to ensure that appropriate technical studies are conducted prior to new development (reference Resource Element Implementation Measure 3.2.1.1 and Safety Element Implementation Measures 1.2.1.1 and 1.2.1.2). These measures are expected to ensure that slopes and other geologic conditions in the proposed Northern Expansion Area are properly identified and addressed prior to development. Therefore, potential adverse impacts of soil landslide, liquefaction or collapse from development within the Planning Area under the General Plan 2030 are expected to be less than significant.

Impact Finding: Less than Significant.

5.6.4.4 Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

Impact Discussion:

Soils in most of the Planning Area are composed mainly of sands, silty sands, and sand with silt. For that reason, the expansion potential of the soil is generally low, as indicated in the

Soil Conservation Survey of San Bernardino County¹⁶. There are some clay horizons in the subsurface that exhibit moderate expansion potential, but these areas are relatively deep and would not be expected to pose significant expansive soil issues for the Planning Area.

Municipal Code Chapter 15, subpart 15.06.080 (Permit Applications), requires a soils engineering investigation, including data regarding the nature, distribution and strength of existing soils, conclusions and recommendations for grading procedures, design criteria for corrective measures and other data required by the building official. Subpart 15.06.140 (Inspections), in (5)(B) Final Reports, requires a report from a soils engineer including certification of the soil bearing capacity, summaries of field and laboratory tests, lot-by-lot soil expansion rate, location on an “as built” grading plan of each slope test taken in the fill showing the limits of compacted fill and other pertinent information.

Within the proposed General Plan 2030 Safety Element Goal #1 provides for protection from natural and man-made hazards. Objective 1.2 serves to identify and mitigate geologic hazards in the land use and development project planning process, including Policy 1.2.1, which requires assessment of site specific geologic hazards and required mitigation measures prior to granting discretionary project approvals. Specifically Implementation Measure 1.2.1.1 which requires complete geologic/geotechnical investigations as a standard procedure in the land use and project-level planning process which applies to all projects subject to CEQA and other projects in areas where the City’s Building Official determines there is a possible threat of liquefaction, subsidence, expansive soils, landslides or mudslides.

The expansion potential of the soil is generally low within the General Plan 2030 Planning Area. Municipal Code provisions require soils engineering investigations, including lot-specific soil expansion rates. The proposed General Plan 2030 Safety Element requires complete geologic/geotechnical investigations as a standard procedure in the land use and project-level planning process including areas of possible threat of expansive soils. Therefore, potential adverse impacts of soil erosion from development within the Planning Area under the General Plan 2030 are expected to be less than significant.

Impact Finding: Less than Significant.

5.6.4.5 Would the project 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?

Impact Discussion:

¹⁶ U.S. Department of Agriculture, Soil Conservation Service, 1986. Soil Survey of San Bernardino County, California Mojave River Area.

Soils that would be incapable of supporting septic tanks or alternative wastewater disposal systems would be subject to the same issues of soils stability and expansion as discussed in Sections 5.6.4.3 and 5.6.4.4. Impacts could occur in areas subject to liquefaction, landslide, or collapse.

Municipal Code Chapter 15.06.080 (Permit Applications) part 2(B) requires a soils engineering investigation, regarding the nature, distribution and strength of existing soils, conclusions and recommendations for grading procedures, design criteria for corrective measures. Subpart 15.06.140 (Inspections), in (5)(B) Final Reports, requires a report from a soils engineer including certification of the soil bearing capacity, summaries of field and laboratory tests, lot-by-lot soil expansion rate, location on an “as built” grading plan of each slope test taken in the fill showing the limits of compacted fill and other pertinent information.

The proposed General Plan 2030 Safety Element Goal #1, Objective 1.2, Policy 1.2.1, Implementation Measure 1.2.1.1, requires complete geologic/geotechnical investigations as a standard procedure in the land use and project-level planning process which applies to all projects subject to CEQA and other projects in areas where the City’s Building Official determines there is a possible threat of liquefaction, subsidence, expansive soils, landslides or mudslides (Implementation Measure 1.2.1.1).

Soils incapable of supporting septic tanks or alternative wastewater disposal systems are subject to provisions of the Municipal Code which require soils engineering investigations including soil bearing capacity and soil expansion. The proposed General Plan 2030 Safety Element requires complete soils and geologic/geotechnical investigations as a standard procedure and CEQA compliance where there is a possible threat of liquefaction, subsidence, expansive soils, landslides or mudslides. Therefore, potential adverse impacts of soil incapable of supporting septic tanks or alternative wastewater disposal systems erosion from development within the Planning Area under the General Plan 2030 are expected to be less than significant.

Impact Finding: Less than Significant.

5.6.5 Cumulative Impacts

Impact Discussion:

Compliance with and conformity to adopted plans and policies, including those within the General Plan 2030, is intended to ensure that future development occurs in a manner compatible with adjacent and surrounding planned land uses. The Resources Element and Safety Element of proposed General Plan 2030 contain provisions intended to identify and reduce impacts of earthquake hazards including seismically induced surface rupture, ground

shaking, ground failure, and liquefaction, soil loss and erosion along with slope instability leading to mudslides, landslides, and subsidence. Those Elements also include implementation measures to identify those soils incapable of supporting septic tanks or alternative wastewater disposal systems. Municipal Code provisions also serve to reinforce the proposed General Plan 2030 goals and supporting objectives and policies. As a result, further intensification of the Planning Area and region is not expected to create a significant adverse cumulative impact on the region's existing geology and soils.

Compliance with and conformity to adopted plans and policies, including those within the General Plan 2030, and will help to mitigate the potential cumulative impacts produced by the potential impacts to geology and soils associated with future development within the Planning Area.

Impact Finding: Less than Significant.

5.6.6 Mitigation Measures – None Required.

5.6.7 Level of Significance After Policies/Mitigation Measures – Less than Significant.

5.7 HAZARDS & HAZARDOUS MATERIALS

This section addresses issues related to man-made and natural hazards which may threaten the health, safety, and property of the residents living and working in the Victorville Planning Area. Existing hazards in the Planning Area are expected to occur in existing industrial areas, inclusive of the SCLA, cement mining and other manufacturing and mechanical maintenance operations. The proposed General Plan 2030 anticipates expansion of rail and truck cargo hauling, and continuation of existing mining and industrial operations. Because of the substantial amount of growth anticipated in the Planning Area during the next 20 years, project impacts relative to hazardous materials, airport safety and emergency evacuation plans could occur. Also because of the large amount of vacant undeveloped land in and surrounding the Planning Area and high winds that frequently occur in the Victor Valley, there is a potential for wildland fires to occur. Seismic and other geologic concerns are addressed in Section 5.6, flooding and hydrologic concerns are addressed in Section 5.8, and the capacity of public services providers (police, fire, medical) to respond to Planning Area growth are addressed in Section 5.13.

5.7.1 Existing Conditions

5.7.1.1 Hazardous Materials

Transport and Handling

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. The probability of accidental spills is accentuated by the fact that the region is susceptible to earthquakes.

Hazardous materials are used for a variety of purposes including manufacturing, industrial uses, various small businesses, agriculture, medical uses, schools, and households. Accidents can occur in the production, use, transport and disposal of these hazardous materials. Hazardous chemicals releases may be in the form of solids, liquids or gases. The major truck transportation arteries which traverse the Victorville Planning Area are Interstate 15, US Highway 395, State Highway 18, as well as the Burlington, Northern and Santa Fe Railroad. Such accidents have the potential to expose the public and the environment to hazardous materials releases which could result in consequences ranging from mild to catastrophic.

An accidental release of hazardous materials could require evacuation for a few hours or several days, depending on the hazard and its severity. The release of hazardous materials requires an immediate response in order to protect human health and safety, and/or the environment.

Small quantities of hazardous materials may be transported, stored, used, and handled during construction activities, including small volumes of hydrocarbons and their derivatives (e.g., gasoline, hydraulic fluids) as may be required to operate the associated construction equipment. These materials would not be considered acutely hazardous and, based on their limited quantities and established regulations regarding their use, would not pose a substantial risk to human health and/or safety.

Many of the products found and consumed in the residential environment are considered hazardous wastes when they are discarded because they fit into one or more of the following categories: (1) toxic (i.e., poisonous or lethal when ingested, touched, or inhaled); (2) flammable (i.e., ignites easily); (3) corrosive (i.e., eats away materials and living tissue by chemical action); and/or (4) reactive (i.e., creates an explosion or produces deadly vapors). Examples of such products include adhesives, latex and oil-based paints, paint thinners and strippers, grease and rust solvents, wood and metal cleaners, nail polish and removers, cosmetics, household polishes and cleaners, oven cleaners, drain openers, lighter fluids, fungicides and wood preservatives, and insecticides, herbicides, and rat poisons. San Bernardino County-sponsored Household Hazardous Waste (HHW) collection programs provide a legal means of disposing unwanted household chemicals that cannot be safely disposed of at local landfills.¹

Hazardous Materials Sites

As described below under Section 5.7.2, Regulatory Framework, the California Department of Toxic Substances Control (DTSC) administers the federal Resource Conservation and Recovery Act (RCRA) program, including site cleanup of former military projects. In Victorville, the former George Air Force Base (currently SCLA), was found to contain contaminated soils and was listed as a federal Superfund site. During Phase I investigations of the 5,347-acre facility, 54 sites were identified as known or suspected to have received hazardous materials in the past. Groundwater contaminated with Trichloroethylene (TCE) has been documented both on and off base. Additional hazardous wastes on the base include: asbestos, pesticides, paint, paint thinner, sludges, fuels (jp-4), petroleum lubricant and oils (POLs), leaded tank bottoms, explosives, polychlorinated biphenyls (PCBs), solvents, acids, metals, low level radioactive wastes, and hospital wastes.

Mitigation activities conducted at the former base site included installation of a groundwater extraction and treatment system (Air Stripper), restoration of the existing soil cover, grading or cutting of the surface to produce slopes of 1.5 percent to promote surface runoff and decrease infiltration of surface water into the landfill contents, installation of drainage ditches

¹ County of San Bernardino Fire Department. <http://www.sbcfire.org/hazmat/hhwcollection.asp>

adjacent to the landfill boundaries to prevent surface water from running onto the landfill sites, installation of site perimeter fencing and signage to control site access, and re-establishment of native plant species on the graded surface.² Portions of the base were deemed remediated and suitable for transfer prior to the SCLA project initiation.³

On other portions of the former base site continue to show evidence of TCE contamination. These contaminated sites continue to be designated as Superfund sites, and the United States Environmental Protection Agency (EPA) now has responsibility for cleanup.⁴

The DTSC database for hazardous materials sites shows no additional sites listed in the City of Victorville. The Regional Water Quality Control Board (RWQCB) database shows 216 reports for leaking underground storage tanks, underground storage tanks, and wells in the City of Victorville.⁵ Of these, 47 were reported as underground storage tanks (UST), 53 as leaking underground fuel tanks (LUFT), 21 wells, 4 site designated as spills, leaks, investigation and cleanups (SLIC), 1 land disposal site (Victorville Class III landfill), and 90 contaminated sites on the former George AFB property.

Hazardous waste sites also include industrial facilities that handle, store and dispose of hazardous wastes. These types of facilities range from small generators such as automotive repair facilities and dry cleaners to large industrial manufacturers such as a steel factory or refinery. The County and City Fire Departments maintain lists and hazardous materials business plans of such facilities within their jurisdictions. Database searches for specific projects can also be conducted by private companies having access to the DTSC, RWQCB, CERCLIS⁶, and other databases containing hazardous site information.

5.7.1.2 Airports/Air Traffic

In the northwestern portion of the Planning Area, the Southern California Logistics Airport (SCLA) was established after George Air Force Base was decommissioned in December 1992 and has been in operation since. The former base has been undergoing intensive conversion to an industrial port with 8,500 acres of multimodal business space, integrated air cargo with rail, ground and port access.^{7,8} SCLA is a 2,500-acre world-class aviation and air cargo facility serving international and domestic needs. The airport can accommodate all current-flying

² http://www.envirostor.dtsc.ca.gov/public/profile_report.asp?global_id=36970005; accessed July 2008.

³ DTSC website: http://www.envirostor.dtsc.ca.gov/public/profile_report.asp?global_id=36970005

⁴ <http://yosemite.epa.gov/r9/sfund/r9sfdocw.nsf/vwsoalphabetic/George+Air+Force+Base?OpenDocument#threats>; accessed July 2008.

⁵ Regional Water Quality Control Board Lahonton Region <http://www.geotracker.waterboards.ca.gov/search/>

⁶ U.S. EPA Superfund site information. Comprehensive Environmental Response Compensation And Liability Information System (CERLIS)

⁷ Southern California Logistics Airport Specific Plan and EIR documentation. Prepared by City of Victorville Planning Department. http://www.victorvillecity.com/Real_Estate/SCLA_Industrial_Areas.html

⁸ <http://www.logisticsairport.com/>

commercial and military aircraft with a 24-hour per day tower operation and emergency response capabilities comparable to the world’s largest airports.⁹

SCLA offers 24-hour, seven-day-a-week operations with onsite U.S. Customs. It has been designated a Foreign Trade Zone (FTZ #243) and a Local Agency Military Base Recovery Act (LAMBRA) Zone by the federal government.

Airport facilities include runways, taxiways, airfield lighting, and navigational aids. There are two runways: Runway 17-35 which is 15,050-foot x 150-foot; and Runway 3-21 which is 9,100-foot x 150-foot. Future plans for SCLA propose extending Runway 3-21 862 feet for a total length of 10,000 feet. The width of this runway will remain the same. Additionally, future plans include the location of a partial length parallel runway to be constructed west of Runway 17-35. This runway will be 5,000 feet long with its northern end aligned with Runway 17-35. This runway will be used by C-17 military aircraft for assault landing training operations.¹⁰

Currently, a majority of the operations at SCLA are categorized as General Aviation. As SCLA is a former military base, a portion of the operations are related to military training missions. The smallest portions of the annual operations are categorized as air carrier and air taxi. There are no regularly scheduled commercial flights at SCLA; however, there is regularly scheduled air taxi service. In the future, it is expected that air-cargo operations at SCLA will increase considerably as the capacity of nearby cargo facilities is exceeded.

5.7.1.3 Emergency Planning

Natural and man-made disasters that could impact Victorville Planning Area residents, businesses and property owners are identified in Table 5.7-1. The table also identifies the potential for occurrence, the geographical scope of the potential impact area, and the anticipated level of emergency response that would be required.

Environmental Hazard	Potential for Occurrence			Geographic Scope of Potential Impact Area			Emergency Response Requirement		
	Low	Medium	High	Local	City	Regional	Level I	Level II	Level III
Earthquake									
Surface rupture	•								
Liquefaction			•	•				•	•
Ground-shaking			•		•	•		•	•
Slope failure	•			•			•	•	
Dam failure		•		•				•	•

⁹ <http://www.logisticsairport.com/airport.php>

¹⁰ Comprehensive Land Use Plan for Southern California Logistics Airport, Draft December 2007, Coffman Associates; A Specific Plan was also prepared, February 2004 for the SCLA.

Table 5.7-1 Environmental Risk Assessment Framework									
Environmental Hazard	Potential for Occurrence			Geographic Scope of Potential Impact Area			Emergency Response Requirement		
	Low	Medium	High	Local	City	Regional	Level I	Level II	Level III
Landslide	•			•			•	•	
Flooding									
Local ponding		•		•			•		
100 year flood	•			•			•	•	
500 year flood	•					•			•
Fire									
Industrial		•		•			•	•	
Chemical		•		•			•	•	
Fuel mains		•		•			•	•	
High-rise	•			•			•	•	
Wildland		•		•			•	•	
Chemical Contamination									
Road spill		•		•			•	•	
Airborne		•			•			•	
Subsurface		•		•				•	
Radiological	•			•				•	•
Severe Airborne Pollution Episode	•					•			
Major Accident									
Industrial	•			•			•	•	
Major Road		•		•			•	•	
Aircraft		•		•			•	•	
Railway		•		•			•	•	
Water Shortage	•			•			•		

Source: Victorville Fire Department

Each potential for occurrence of the hazard to public safety and welfare has been assessed according to the following levels of risk:

- **Low Risk** - The level of risk below which no specific action is deemed necessary. The occurrence of a specific event is unlikely.
- **Medium Risk** - The level of risk at which specific action is required to protect life and property, though the probability of the event taking place is low to moderate.
- **High Risk** - Risk levels are significant and occurrence of a particular emergency situation is highly probable or inevitable. One or more actions are urgently required to protect life, property and/or the environment

The geographic scope of the potential area that could be affected with the occurrence of one of the hazards is delineated into three levels:

- **Local** - The affected geographic area is localized or site specific;
- **Citywide** - The affected area includes a significant portion or all of the City; and

- Regional - The affected area includes the entire City of Victorville and the surrounding region.

The State Office of Emergency Services (OES) has established three levels of emergency response to peacetime emergencies, which are based on the severity of the situation and the availability of local resources in responding to that emergency. The three levels of emergency response include:

- Level 1 - A minor-to-moderate incident wherein local resources are adequate in dealing with the current emergency.
- Level 2 - A moderate-to-severe emergency where local resources are not adequate in dealing with the emergency and mutual assistance would be required on a regional or statewide basis.
- Level 3 - A major disaster where local resources are overwhelmed by the magnitude of the disaster and state and federal assistance are required.

Those hazards of greatest concern to Victorville Planning Area residents are localized risk, as identified in Table 5.7-1.

5.7.1.4 Wildland and Urban Fires

There are two distinct components of the fire issue: wildland fires and urban fires. The National Fire Protection Association (NFPA)¹¹ defines a wildland fire as "[a]ny forest, grass, brush or tundra fire involving lands not under cultivation." Wildland fires can be naturally caused (e.g., by lightning) or caused by man. An urban fire is a fire that occurs in developed areas which may include structures and vehicles. 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.

Within the Planning Area low level brush (such as Russian Thistle or tumbleweeds) and other weeds have the potential of growing on developed lots, vacant lots, and in the urban interface. The accumulation of brush and weeds, in general, has the potential to result in fire that can spread, especially during high wind conditions. In urban areas, fires can quickly jump to developed property and structures. The occurrence of brush and weeds presents a greater potential for wildland fire in the urban interface, as maintenance of such vegetation usually occurs in the urban areas.

¹¹ Established in 1896, NFPA serves as a leading advocate of fire prevention and authoritative source on public safety, specifically building codes and standards.

As described in Section 5.4, Biological Resources, the Victorville General Plan Planning Area contains the following native plant communities: Mojave creosote bush scrub, Mojave Desert saltbush scrub, rabbitbush scrub, Mohavean juniper woodland and scrub, ruderal (disturbed) communities, Joshua tree woodland, and riparian communities associated with the Mojave River and its floodplain, including transmontane alkali and freshwater marsh, Mojave riparian forest, and southern willow scrub. Most of these communities are found in undeveloped open areas, and not within the currently existing urban/developed areas. As development occurs, brush and vegetation would be removed in the immediate area of new structures, however, such development is expected to encroach upon some of these plant community areas, and maintenance of any residual vegetation would be required. As such, there is potential in these plant community areas for wildland fires to occur.

5.7.2 Regulatory Framework

5.7.2.1 Federal

Hazardous Materials

Hazardous Materials Transportation Act: 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.

Resource Conservation and Recovery Act (RCRA): Under the RCRA, the U.S. Environmental Protection Agency (EPA) sets standards for transporters of hazardous waste. The hazardous waste program, under RCRA Subtitle C, establishes a system for controlling hazardous waste from the time it is generated until its ultimate disposal – in effect, from "cradle to grave". The underground storage tank (UST) program, under RCRA Subtitle I, regulates underground storage tanks containing hazardous substances and petroleum products.

Airports/Air Traffic

Federal Aviation Administration (FAA): The FAA is an agency of the DOT with authority to regulate and oversee all aspects of civil aviation in the U.S. The FAA's major roles include:

- Regulating U.S. commercial space transportation

- Encouraging and developing civil aeronautics, including new aviation technology
- Regulating civil aviation to promote safety, especially through regional offices called Flight Standard District Offices (FSDO)
- Developing and operating a system of air traffic control and navigation for both civil and military aircraft
- Researching and developing the National Airspace System and civil aeronautics
- Developing and carrying out programs to control aircraft

Transportation Security Administration (TSA): The TSA, a division of the U.S. Department of Homeland Security is responsible for protection of the nation's transportation systems to ensure freedom of movement for people and commerce. In addition to airports, the TSA is responsible for highways, railroads, buses, mass transit systems, ports. Specific to airports, TSA provides security officers at airport checkpoints, passenger and baggage screening, and air cargo screening.

Emergency Planning

Federal Emergency Management Agency (FEMA): On March 1, 2003, the FEMA became part of the U.S. Department of Homeland Security (DHS). The primary mission of the Federal Emergency Management Agency is to reduce the loss of life and property and protect the Nation from all hazards, including natural disasters, acts of terrorism, and other man-made disasters, by leading and supporting the Nation in a risk-based, comprehensive emergency management system of preparedness, protection, response, recovery, and mitigation.

Wildland and Urban Fires

National Fire Plan (NFP): The NFP, a joint effort of the U.S. Department of Agriculture (USDA) Forest Service and the Department of the Interior (DOI) was developed in August 2000, following a landmark wildland fire season, with the intent of actively responding to severe wildland fires and their impacts to communities while ensuring sufficient firefighting capacity for the future.¹² The NFP addresses five key points: Firefighting, Rehabilitation, Hazardous Fuels Reduction, Community Assistance, and Accountability. The agencies are working to implement the key points outlined in the NFP by taking the following steps.

- Assuring that necessary firefighting resources and personnel are available to respond to wildland fires that threaten life and property;
- Conducting emergency stabilization and rehabilitation activities on landscapes and communities affected by wildland fire;
- Reducing hazardous fuels (dry brush and trees that have accumulated and increase the likelihood of unusually large fires) in the country's forests and rangelands;

¹² Healthy Forests and Rangelands. <http://www.forestsandrangelands.gov/overview/index.shtml>

- Providing assistance to communities that have been or may be threatened by wildland fire, and,
- Committing to the Wildland Fire Leadership Council, an interagency team created to set and maintain high standards for wildland fire management on public lands.

National Fire Protection Association (NFPA): Established in 1896, NFPA serves as the world's leading advocate of fire prevention and is an authoritative source on public safety. NFPA's 300 codes and standards influence every building, process, service, design, and installation in the United States, as well as many of those used in other countries. NFPA's focus on true consensus has helped the association's code-development process earn accreditation from the American National Standards Institute (ANSI). Virtually every building, process, service, design, and installation in society today is affected by NFPA documents including, for example, the Uniform Fire Code, Standards for Portable Fire Extinguishers, and Standard for the Installation of Sprinkler Systems.

5.7.2.2 State

Hazardous Materials

State Water Resources Control Board (SWRCB) and the Regional Water Quality Control Boards (RWQCBs): Among the responsibilities of the SWRCB and the RWQCBs is water pollution prevention and control.¹³ The SWRCB is required by California Government Code 65962.5 to maintain a list of all underground storage tanks (UST) for which an unauthorized release report is filed pursuant to Section 25295 of the Health and Safety Code. As one of their responsibilities, the regional boards assist responsible parties in responding to leaking underground storage tanks (LUSTs). The Lahontan (6V) RWQCB located in Victorville is the regional board responsible for the project area. The regional board may require the property owner to perform a soil and groundwater investigation and/or cleanup.

Department of Toxic Substances Control (DTSC): The State DTSC administers the federal 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). Per California Government Code 65962.5 databases are kept updated on site cleanups; hazardous waste shipments for generators, transporters, treatment, storage, and disposal facilities; currently active hazardous waste transporters; and the status of site cleanup projects, hazardous waste management projects, school sites, and military projects.

California Code of Regulations (CCR), Title 13: California regulates the transportation of hazardous waste originating or passing through the state per CCR, Title 13. Hazardous waste must be regularly removed from generating sites by licensed hazardous

¹³ Per the Federal Water Pollution Control Act, Title 33, Navigation and Navigable Waters, Chapter 26, Water Pollution Prevention and Control. Navigable waters include groundwater.

waste transporters. Transported materials must be accompanied by hazardous waste manifests. Caltrans sets the standards for hazardous materials trucks in California. Caltrans also has emergency chemical spill identification teams at locations throughout the state.

Hazardous Substances Highway Spill Containment Act: 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. 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. 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.

Proposition 65: Proposition 65, (California Safe Drinking Water and Toxic Enforcement Act of 1986), now a part of the Hazardous Waste Control Law in Chapter 6.5 of the California Health and Safety Code, requires government employees that witness an illegal discharge of hazardous waste to report to the Board of Supervisors within 72 hours. The Site Remediation/Local Oversight Program is tasked by the Board to take and process such reports. Reporting under Proposition 65 is required in addition to all other hazardous materials release notifications required by law. In accordance with Section 25507 of the Health and Safety Code, all hazardous material handlers are required to notify the local administering agency or Certified Unified Program Agency (CUPA), as well as the State Office of Emergency Services (OES), of any release or threatened release of a hazardous material. All hazardous materials emergencies should be immediately reported to local fire or police departments.

Airports/Air Traffic

No state agencies have oversight of FAA requirements. The San Bernardino County Department of Airports provides for the management, maintenance and operation of six county-owned airports. The County also assists private and municipal airport operators with planning, interpretation, and implementation of FAA general aviation requirements.

Emergency Planning

Office of Emergency Services (OES): The 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. OES provides support for nuclear incidents, earthquakes, hazardous incidents mitigation, fires, and law enforcement and victim services support. 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.

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.

Wildland and Urban Fires

California Department of Forestry and Fire Protection (CAL-FIRE): CAL-FIRE protects the people of California from fires, responds to emergencies, and protects and enhances forest, range, and watershed values providing social, economic, and environmental benefits to rural and urban citizens. CAL-FIRE partners with the U.S. Forest Service (USFS), Bureau of Land Management (BLM), county and local jurisdictions for prevention planning and response.

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

The CAL-FIRE has a legal responsibility to provide fire protection on all State Responsibility Areas (SRA) lands, which are defined based on land ownership, population density and land use. For example, CAL-FIRE does not have responsibility for densely populated areas,

agricultural lands, or lands administered by the federal government referred to as Local Responsibility Areas (LRA) and Federal Responsibility Areas (FRA).

Public Resources Code Section 4201 through 4204 direct CAL-FIRE to map fire hazard within SRA, based on relevant factors such as fuels, terrain, and weather. These statutes were passed after significant wildland-urban interface fires; consequently these hazards are described according to their potential for causing ignitions to buildings. These zones, referred to as Fire Hazard Severity Zones (FHSZ), provide the basis for application of various mitigation strategies to reduce risks to buildings associated with wildland fires. Specifically, the zone determines the requirements for unique building codes designed to reduce the ignition potential to buildings. The FHSZ are classified as Very High, High, or Moderate in SRAs or as Very High, High, Moderate, or Unzoned in LRAs.

These maps have been created by CAL-FIRE's Fire and Resource Assessment Program (FRAP) using data and models describing development patterns, potential fuels over a 30-50 year time horizon, terrain, and expected burn probabilities to quantify the likelihood and nature of vegetation fire exposure to new construction.

Both the San Gabriel and San Bernardino Mountains are located south, approximately ten miles of the City of Victorville. While the mountains are designated as “Very High” and “High” zones, the City of Victorville is designated as “Moderate” and “Unzoned”. The area south of Hesperia is designated as “High”. All these areas, including the Planning Area are designated as LRAs, thus, as above, are not within the CAL-FIRE area of responsibility.¹⁴ The interface area between Hesperia and the Mountains are the responsibility of SRA and FRA responders.

5.7.2.3 Regional

Hazardous Materials

San Bernardino County Fire Department – Hazardous Materials Division: 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. The Fire Department is 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,

¹⁴CAL-FIRE's Fire and Resource Assessment Program:
http://frap.cdf.ca.gov/webdata/maps/san_bernardino_sw/fhszl06_1_map.62.jpg and
http://frap.cdf.ca.gov/webdata/maps/san_bernardino_sw/fhszs_map.62.jpg

store, and/or generate hazardous materials/wastes. Facilities that handle hazardous materials or generate hazardous waste must obtain a permit from the CUPA.

Airports/Air Traffic

San Bernardino County Department of Airports: The San Bernardino County Department of Airports provides for the management, maintenance, and operation of six County-owned airports. The department also assists the County's private and municipal airport operators in the planning, interpretation, and implementation of the 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, which would be adopted by the County of San Bernardino and approved by the State Division of Aeronautics. Of 15 public use airports, only the SCLA is located in the Victorville Planning Area.

Private Runway: Currently there is a private runway just to the north of the existing City limits, within the SOI. An application has been in process with the County on two occasions to legalize the use of the runway for private business purposes. While the current amount of use appears to be minimal, the City has written letters of opposition due to future development and safety concerns.

Emergency Planning

County Office of Emergency Services (County OES): Regional emergency planning is the responsibility of the County OES, a Division of the San Bernardino County Fire Department. County OES is responsible for disaster planning and emergency management coordination throughout the San Bernardino County Operational Area (OA) by functioning as the Lead Agency for the OA. County OES serves a county population of over 1.8 million and over 20,100 square miles. While County OES does not directly manage field operations, as does an Incident Command Post (ICP), it ensures coordination of disaster response and recovery efforts through day-to-day program management and during a disaster/emergency. Other major areas of responsibility include:

- Initial staffing and coordination of the County Emergency Operations Center (EOC), which is the primary coordination point for disasters and major emergencies;
- Coordination of EOC Responders, who are pre-selected and trained individuals to perform specific functions in the EOC as designated under the Standardized Emergency Management System (SEMS);
- Development and coordination of annual exercises to test the readiness of various types of disasters and large-scale emergencies;

- Development and implementation of the OA Emergency Operations Plan (EOP). The EOP identifies hazards and response, roles and responsibilities, and other key activities of government during a disaster. County OES also maintains current copies of all San Bernardino County City/Town EOP's;
- Development and implementation of other Emergency Management documents to be used throughout the County by other agencies;
- Assistance in the development and coordination of the Mountain Area Safety Taskforce (MAST) and Flood Area Safety Taskforce (FAST) organizations;
- Coordination of many disaster-related Grant Programs for the County, such programs as Homeland Security Grant, Bark Beetle Emergency Grant, and OJP State Domestic Preparedness Equipment Program;
- Development and coordination of Emergency Alert System (EAS) notifications for countywide distribution, such as Evacuation Orders (both voluntary and mandatory), and
- Assistance to County unincorporated communities and residents with local region preparedness.

Wildland and Urban Fires

San Bernardino County Fire Department: The San Bernardino County Fire Department provides the administration and support for 32 fire districts, and serves over 18,000 square miles of unincorporated area and seven cities (i.e., Adelanto, Fontana, Grand Terrace, Hesperia Needles, Victorville and Yucca Valley). The San Bernardino County Fire Department has 64 fire stations, and provides services through four divisions: Mountain Division, North Desert Division, South Desert Division and Valley Division (the Victorville Planning Area is located in the 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.¹⁵

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.

Regional Fire Protection Authority: The Regional Fire Protection Authority (RFPA) in Victorville, utilizes computer aided dispatch, geographic information system, and WebCAD for dispatching for eight fire agencies in the area, in managing the Desert Communications (DesertCom) Dispatch Center.¹⁶

5.7.2.4 Local

¹⁵ County of San Bernardino 2007 General Plan Program FEIR. SCH #2005101038. February 2007.

¹⁶ http://www.iaff935.org/items/Denen_June_%202008.pdf

Hazardous Materials

Victorville Municipal Code: Recognizing the potential risks of hazardous materials, the City has adopted Chapter 6.49 of the Victorville Municipal Code, in compliance with Chapter 6.95 of the California Health and Safety Code, establishing a hazardous materials release response and inventory program. Additionally, the City of Victorville Fire Department has prepared a Hazardous Materials Incident Emergency Response Plan. This plan is subject to occasional amendment as new procedures develop or situations warrant.

The objectives of this plan are as follows:

- Save lives and protect the environment and property in case of emergency;
- Describe the overall emergency response organization within the City of Victorville and its relationship to those of County, State, and Federal organizations;
- Establish lines of authority and coordination for hazardous materials incidents; and,
- Identify and facilitate mutual aid to supplement needs.

Additionally Chapter 6.50 of the Victorville Municipal Code presents detailed procedures and specifications for the underground storage of hazardous materials, including permitting, inspections, tank requirements, monitoring, records and reporting, repairs, and abandonment. Through this chapter, the City assumes responsibility for the implementation of the provisions of Chapters 6.67 and 6.7 of the California Health and Safety Code and designates the Victorville Fire Department as the administering agency responsible for administering and enforcing the provisions of Chapters 6.67 and 6.7 within the boundaries of the City.

Victorville Hazards Planning: As discussed in Section 5.7.2.2, the State OES provides support with planning and responding to natural and man-made disasters. A majority of the OES mitigation measures can be applied to hazard prevention/mitigation prior to the occurrence of a local emergency or major catastrophic event. The City of Victorville has prepared an Emergency Plan to comply with OES guidelines and the City Municipal Code. It applies to large-scale disasters that pose major threats to life and property. Smaller scale, less urgent emergencies are handled by routine procedures and existing City resources. The Emergency Plan is in conformance with State OES Guidelines and is occasionally updated with new information and procedures.

State legislation specifically requires local agencies to formulate plans relating to the handling and release of hazardous materials. As the CUPA, the Victorville Fire Department is responsible for implementing a unified hazardous materials and hazardous waste management regulatory program, and provides the following services to assist citizens and businesses in the Planning Area:

- Consulting on how to safely store and use hazardous materials
- Responding to hazardous materials complaints and emergencies
- Conducting inspections of facilities that store chemicals or generate hazardous waste

- Reviewing construction/remediation plans involving hazardous materials or wastes

As part of its CUPA responsibilities, the Victorville Fire Department implements several programs to monitor the presence, storage, use and disposal of hazardous materials and wastes, to ensure compliance with a variety of state and federal regulations developed to prevent dangerous releases of hazardous materials and to act quickly to contain any such accidental releases. Local CUPA programs include:

- Hazardous Materials Management/Business Plans
- Monitoring Underground Storage Tanks
- Monitoring Above Ground Storage Tanks
- Permitting of Hazardous Waste Generators
- Participation in California Accidental Release Prevention Program (CalARP).

Hazardous materials sites generally are under the responsibility of the Victorville Fire Department, and RWQCB, unless they meet state requirements for contamination, wherein they would be the responsibility of the State DTSC. As described in Section 5.7.2.2, the CHP and Caltrans have primary responsibility for enforcing federal and state regulations and responding to hazardous materials transportation emergencies.

The County of San Bernardino operates the Aircraft Rescue Fire Fighting (ARFF) program at the SCLA, responding to about 90 - 100 calls per year. ARFF equipment and manpower are staged and maintained at the SCLA.

Hazardous Materials Release Response Plans and Inventory Law of 1985: Pursuant to the Hazardous Materials Release Response Plans and Inventory Law of 1985, local agencies are required to develop 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. (Business plans are mentioned above as part of the local CUPA program requirements.) A business plan includes information such as an inventory of hazardous materials handled, facility floor plans showing where hazardous materials are stored, an emergency response plan, and provisions for employee training in safety and emergency response procedures (California Health and Safety Code, Division 20, Chapter 6.95, Article I). 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. Statewide, the DTSC has primary regulatory responsibility for management of hazardous materials, with delegation of authority to local jurisdictions that enter into agreements with the state.

City of Victorville's Household Hazardous Waste Collection Center (HHWCC): Disposal of car tires, electronic waste, and household hazardous waste is accepted at the City of Victorville's HHWCC, located on Love's Lane, off of Desert Knolls Drive, behind the County Fairgrounds.¹⁷

¹⁷ http://ci.victorville.ca.us/uploadedFiles/CityServices/Trash_Recycling/household-hazardous-waste.pdf

Airports/Air Traffic

SCLA Comprehensive Land Use Plan (CLUP): As the SCLA develops into a commercial aviation center, the possibility of aircraft mishap increases. In response to potential aircraft mishap and in accordance with State law (Public Utilities Code, Section 21670 et seq.) SCLA has prepared a CLUP.¹⁸ This plan is necessary because airports present unique public health and safety issues that require special land use planning efforts to ensure protection of public welfare. The intent of this plan is to utilize land use control mechanisms (e.g., zoning and subdivision regulations) to reduce the potential for and effects of an accident.

The boundary for the CLUP was developed to encompass the 65 Community Noise Equivalent Level (CNEL) noise contour and general traffic patterns in the vicinity of the airport. It was squared off to align with physical features such as roadways or section lines. The study area is bounded on the north by the section line one mile north of Bryman Road, on the south by Mojave Drive, one mile east of Amargosa Road to the east, and Aster Road to the west.

The purpose of the CLUP prepared for the SCLA is to:

- Promote the development of compatible land uses in the area influenced by airport operations;
- Safeguard the general welfare of the inhabitants within the vicinity of the airport by minimizing exposure to excessive noise levels;
- Safeguard the general welfare of the inhabitants within the vicinity of the airport by minimizing exposure to crash hazards associated with aircraft operations; and
- Safeguard the general welfare of aviation activities within the vicinity of the airport by imposing appropriate height restrictions for the protection of aircraft operations.

Safety Zones

Aircraft accidents happen infrequently and the time, place, and consequences of their occurrence cannot be predicted. From the standpoint of airport land use planning, the potential for aircraft accidents weighs heavily into the types of land uses that are compatible with airport operations. To minimize the risk and reduce the severity of aviation accidents, the SCLA CLUP establishes a combination of six safety zones and associated policies. The CLUP and safety zones are modeled after the California Airport Land Use Planning Handbook recommended zones, and are intended to limit uses with higher-use intensity (people per acre) from being developed in high-risk areas. The six safety zones are established according

¹⁸Comprehensive Land Use Plan for Southern California Logistics Airport, Draft December 2007, Coffman Associates; A Specific Plan was also prepared, February 2004 for the SCLA.

to the type of aircraft using the runways; they are illustrated Figure 5.7-1 and summarized below.

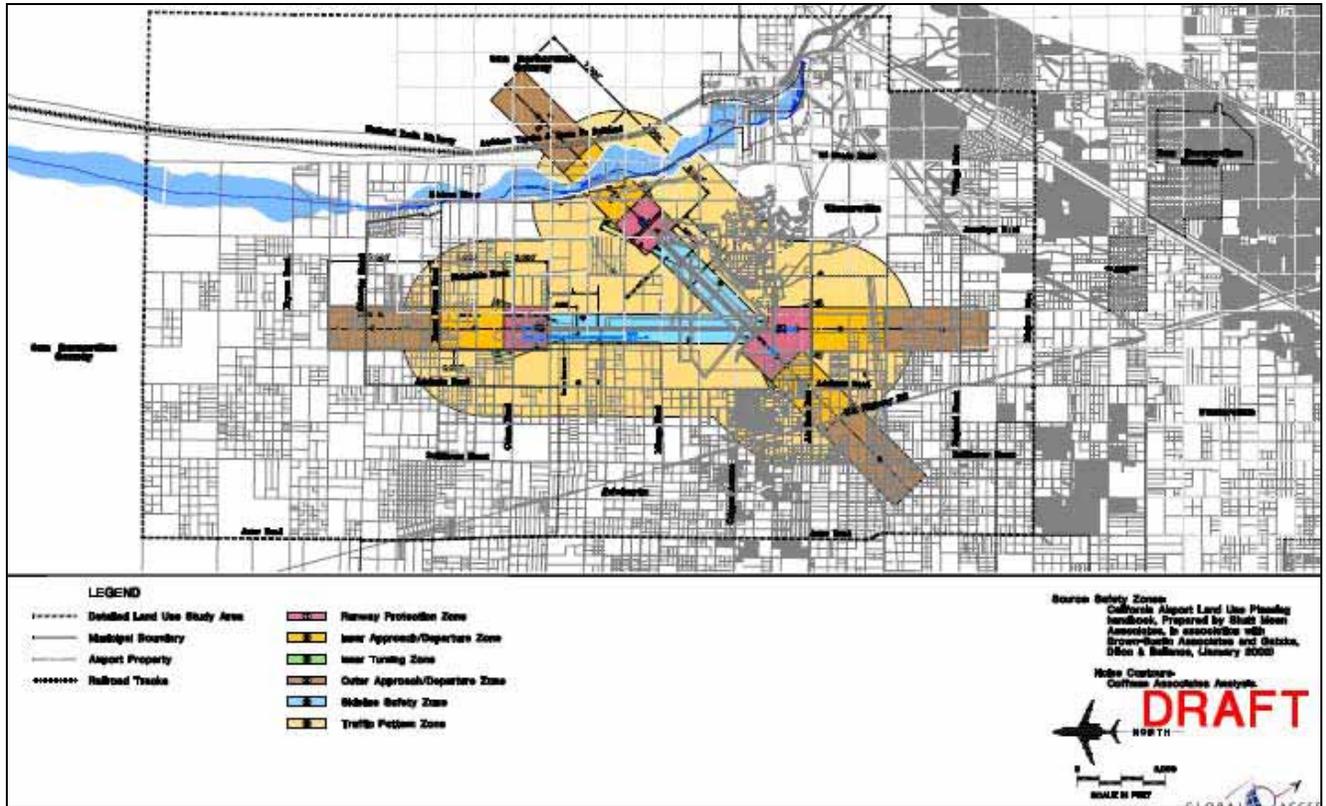


Figure 5.7-1. SCLA Safety Zones

- **Safety Zone 1:** This zone is the Runway Protection Zone (RPZ). For airports with no military operations, this zone is defined by FAA criteria. Because SCLA has military operations, this zone is established using the military’s Air Installations Compatible Use Zones (AICUZ) criteria. The resulting zone covers a portion of land at each runway end. This zone is owned and operated by the airport and allows no residential. Only low intensity non-residential uses may be permitted on the extreme edges of the zone.
- **Safety Zone 2:** This zone is the Inner Approach/Departure Zone. This zone includes land that is overflowed at low altitudes, typically on approach or departure. According to the AICUZ, the Inner Approach/ Departure Zone and the RPZ together encompass the location of 30-50 percent of near-airport aviation accidents. Residential use is appropriate only on large, agricultural parcels, and only low intensity nonresidential uses may be permitted. Because of the potential for aviation accidents in this zone, schools, daycare centers, hospitals, nursing homes and above ground fuel storage are not appropriate uses.

- **Safety Zone 3:** Safety Zone 3 is the Inner Turning Zone. This zone primarily applies to general aviation airports. For approaches, this zone covers lands where general aviation aircraft typically turn from the base to final approach legs of the standard traffic pattern, and continue their descent from the traffic pattern altitude. For departures, this safety zone includes the lands where aircraft are typically turning towards their enroute heading. Residential uses should be limited to very low density, unless they are not acceptable due to excessive noise. Nonresidential uses should be limited to low intensity uses. Children's schools, daycare centers, hospitals, and nursing homes are some land uses that should be avoided, as well as aboveground storage of bulk fuel.
- **Safety Zone 4:** This zone is the Outer Approach/Departure Zone. This zone is extended beyond Zone 3 along the centerline of the runway. It is generally used for runways with straight-in approaches, such as the one for Runway 17. Residential uses should be limited to very low density, unless they are not acceptable due to excessive noise. Nonresidential uses should be limited to low intensity uses. Children's schools, daycare centers, hospitals, and nursing homes are some land uses that should be avoided, as well as aboveground storage of bulk fuel.
- **Safety Zone 5:** This zone is the Sideline Zone. This safety zone is parallel to the runway and is established for general aviation aircraft in case directional control is lost on takeoff. Typically this area is part of the airport property. Aviation-related structures should be allowed provided they meet the height limit restrictions. Residential uses should be avoided unless they are related to aviation, such as pilots' quarters. Nonresidential uses should be low intensity and structures such as children's schools, daycare centers, hospitals, and nursing homes should be avoided.
- **Safety Zone 6:** This zone is the Traffic Pattern Zone. It includes all other parts of the regular traffic patterns and pattern entry routes. Generally, there is a low likelihood of an accident in this zone. Residential uses of all densities are allowed, as well as most nonresidential uses. Uses with very high intensity, such as outdoor stadiums or amphitheatres, should be avoided. Children's schools, daycare centers, hospitals, and nursing homes are among the uses that should also be avoided.

Airport Land Use Compatibility Matrix: The previous 1999 SCLA Comprehensive Airport Land Use Plan included Safety Review Areas to identify areas where aviation accidents are most likely to occur. These safety zones are based on information from studies of aircraft accidents by the National Transportation Safety Board using data from 1974-1981. The previous plan includes three separate Safety Review Areas that are organized according to a land use compatibility matrix (reference Table 5.7-2).

Safety Review Area 1 is meant to protect the area immediately surrounding the runways. Development in this area is limited to aviation-related structures or agricultural use. Safety Review Area 2 coincides with the 65 CNEL noise contour developed for the 1999 SCLA plan. Land uses permitted in this zone are primarily aviation-related, as well as low-density

residential, commercial, and industrial. Safety Review Area 3 permits land uses with use intensity of less than 100 people. The current draft SCLA CLUP anticipates incorporating the land use compatibility matrix and requiring fair disclosure requirements within the airport vicinity.

**Table 5.7-2
Land Use Compatibility – Airport Safety Review Areas**

Land Use Category	Safety Review Area 1	Safety Review Area 2	Safety Review Area 3
Residential – Single Family, Duplex, Mobile home ¹	CLU	NU	NA ²
Residential – Multi-Family ¹	CLU	NU	
Transient Lodging – Motels, Hotels	CLU	NU ⁴	NA ²
Schools, Libraries, Churches, Hospitals, Nursing Homes	CLU	NU ²	CA ²
Auditoriums, Concert Halls, Amphitheatres	CLU	CLU	NA ²
Sports Arenas, Outdoor Spectator Sports	CLU	CLU	NA ²
Playgrounds, Neighborhood Parks	CLU	CA ^{2 4}	NA ²
Golf Courses, Riding Stables, Water Recreation, Cemetery	CLU	CA ^{2 4}	CLA
Office Buildings, Business Commercial, Professional	CLU	CA ^{2 4}	NA ²
Manufacturing, Transportation Services, Contract Construction	CLU	CA ^{2 4}	NA ²
Wholesale/Warehouse Operations, Salvage Operations	CLU	CA ^{2 4}	NA ²
Utilities	CLU	NU	NA ²
Agriculture	NA ²	NA ²	CLA
Livestock, Animal Breeding	NU	NA ²	NA ²
Retail Trade/Commercial Services	CLU	CA ^{2 4}	NA ²
Density Criteria			
Maximum Gross Density (dwelling units/acre)	0	0.5	6
Maximum Assembly	10	100	No Limits
<p>Clearly Unacceptable (CLU): New construction/development should not occur. Existing uses should be relocated. Normally Unacceptable (NU): New construction/development should not occur. Conditionally Acceptable (CA): New construction/development may be permitted. Community character and/or unique development patterns may justify approval. Uses subject to restrictions and mitigation for purposes of public safety. Normally Acceptable (NA): New construction/development permitted. Uses subject to restrictions and mitigation for purposes of public safety. Clearly Acceptable (CLA): New construction/development permitted. No public safety restrictions envisioned.</p> <p>Notes: ¹ – Residential development underneath airport VFR traffic patterns including approach surfaces shall be discouraged. If development occurs, maximum density shall be one dwelling unit per 2 acres, and noise attenuation at or below 45 dB shall be required within habitable structures. ² – Land uses are considered acceptable provided no structures are proposed/developed or if structures are in locations outside approach surfaces, and are conditionally acceptable if located within transitional surfaces. The development of schools, libraries, churches, hospitals, and nursing homes below the transitional surfaces is normally unacceptable. ³ – Residential development outside approach surfaces shall not exceed 6 dwelling units per acre; residential development within approach surfaces shall not exceed 1 dwelling unit per 2 acres. ⁴ – Land uses satisfying density criteria may be acceptable. ⁵ – Non-residential land uses within approach surfaces shall not exceed 100 persons per acre.</p>			

Emergency Planning

The City of Victorville Emergency Plan identifies emergency responses and actions. These responses and actions will vary depending on the nature and scope of the disaster as discussed herein. In the event of a major disaster, shelter may be required for a large number of residents and possibly daytime workers. If an evacuation order is given, residents will be required to proceed to the nearest emergency shelter/facility, unless otherwise directed. Fire, police, or other public safety officials, will direct persons out of affected areas utilizing evacuation routes. Evacuation routes will be determined on a case by case basis.

According to the City Standardized Emergency Management System (SEMS) Multihazards Functional Plan (January 1999), when a disaster is inevitable, actions are precautionary and emphasize protection of life. Typical responses outlined in the plan include:

- Evacuation of threatened populations to safe areas.
- Advising threatened populations of the emergency and apprising them of safety measures to be implemented.
- Advising the San Bernardino County Operational Area of the emergency.
- Identifying the need for mutual aid and requesting such through the San Bernardino County Operational Area.
- Proclamation of a Local Emergency by local authorities.

During emergencies, the City will give priority to the following emergency management operations:

- Dissemination of accurate and timely emergency public information and warning to the public.
- Situation analysis.
- Resource allocation and control.
- Evacuation and rescue operations.
- Medical care operations.
- Coroner operations.
- Care and shelter operations.
- Access and perimeter control.
- Public health operations.
- Restoration of vital services and utilities.

The emergency shelters will offer emergency first aid, disseminate information, provide shelter for persons in need, and serve as a community information center where individuals can leave messages for friends and relatives. The primary emergency shelter is located at the

San Bernardino County Fairgrounds. As the primary emergency shelter reaches capacity, public safety officials will direct displaced persons to alternate shelters. The primary emergency shelter is located at the San Bernardino County Fairgrounds. As the primary emergency shelter reaches capacity, public safety officials will direct displaced persons to alternate shelters, including local schools. Table 5.7.3 lists the local schools that are available as emergency shelters and also includes the location of public schools. The public schools will be utilized on an as needed basis, depending on the severity of the disaster.

Table 5.7-3			
Shelter	Location	School District	
The Academy Elementary School	15907 South Mojave Drive		
Irwin Elementary School	15907 South Mojave Drive		
Brentwood Elementary School	13962 Hook Blvd.		
West Palms Conservatory	14375 Del Gado		
Del Rey Elementary	15332 Del Rey Drive		
Discovery School of the Arts	13247 Amethyst Road		
Mountain View Montessori Charter School	12900 Amethyst Road		
Sixth Street Prep Charter School	15478 Sixth Street		
Galileo Academy	17000 Silica Drive		
Green Tree East Elementary	17246 Gibraltar Drive		
Challenger School of Sports and Fitness	14777 Hopland Street		
Liberty Elementary	12900 Amethyst Road		
Lomas Elementary	12571 First Avenue		
Mojave Vista Elementary	16100 Burwood Avenue		
Park View School	13427 Cahuenga Road		
Puesta Del Sol Elementary	15887 Academy Street		
Endeavour School of Exploration	12403 Ridgecrest Road		
Village Elementary School	14711 Mojave Drive		
Vista Verde Elementary	13403 Vista Verde Street		Snowline Joint Unified School District
Matthews (Susie) Academy	16360 Stadium Way		Victor Valley Union High School District
University Preparatory	13382 Dos Palmas		
Cobalt Middle School	13801 Cobalt Road		
Excelsior Education Center	12217 Spring Valley Parkway		
Victor Valley Home Academy	16664 E Street		
Hook Junior High	15000 Hook Boulevard		
Victor Valley Junior High	16925 Forrest Avenue		

Table 5.7-3

Shelter	Location	School District
Maverick (Goodwill) High	15733 First Avenue	
Silverado High School	14048 Cobalt Road	
Victor Valley High	16500 Mojave Drive	
Eagle Ranch School	12545 Eagle Ranch Parkway	Adelanto School District
Harold George Visual & Performing Arts	17738 Nevada Street	
Mesa Linda Middle School	13001 Mesa Linda Avenue	
Morgan-Kincaid Preparatory	13257 Mesa Linda Avenue	
West Creek School	15763 Cobalt Road	
Hollyvale Elementary	11645 Hollyvale Avenue	Hesperia Unified School District
Victor Valley Community College	18422 Bear Valley Road	Victor Valley Community College

Source: City of Victorville, Planning Division, Chris Borchert, Assistant Director of Planning, February 2008

Emergency/public safety facilities include fire stations, police stations, hospitals, a Casualty Collection Point, Emergency Operations Center, and Emergency Command Center. Locations of these facilities are depicted in Figure 5.7-2 and on Table 5.7-4. Persons injured or ill following a major disaster should be taken to a Casualty Collection Point to obtain triage medical services. Victor Valley College is also designated as a Casualty Collection Point, while a portion of City Hall will be utilized as an Emergency Operations Center, and the Emergency Command Center is located within Fire Station 311. The City Department of Emergency Services operates a fully equipped mobile command and communications trailer for use at major emergencies. Additionally, the City maintains a mobile police station in a converted bus which would be dispatched in the vicinity of disaster sites.

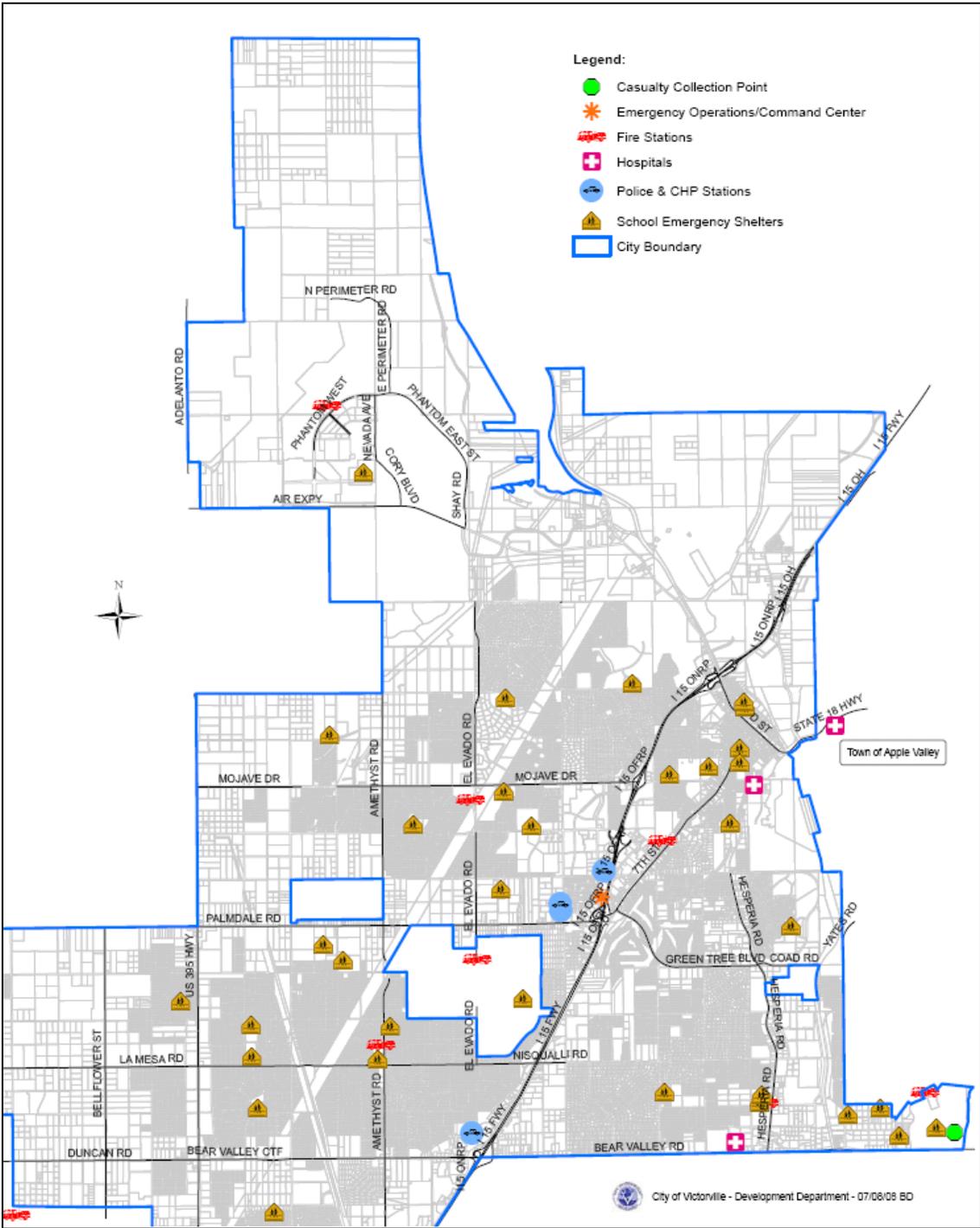


Figure 5.7-2. Emergency/Public Safety Facilities Location Map

**Table 5.7-4
Emergency/Public Safety Facilities**

Emergency/Public Safety Facilities	Location
City Fire Station 311 - Emergency Operations Center	16200 Desert Knoll Drive
City Fire Station 312	15182 El Evado Rd
City Fire Station 313	13086 Amethyst Road
City Fire Station 314	17008 Silica Drive
City Fire Station 319	18500 Readiness Street
County Fire Station 16	11855 Anaconda Avenue
County Fire Station 22	12550 Jacaranda Avenue
County Fire Station 37	13782 El Evado Road
Victorville Police	14177 McArt Road
Victorville Police - Mall Substation	14400 Bear Valley Road
Victorville Mobile Police Station Mobile County Sheriff	14455 Civic Drive
Desert Valley Hospital	16850 Bear Valley Road
Victor Valley Community Hospital	15248 Eleventh Street
St. Mary Regional Medical Center	18300 Highway 18, Apple Valley
Casualty Collection Point	18422 Bear Valley Road
Emergency Operations Center	14343 Civic Drive
California Highway Patrol	14210 Amargosa Road

Source: City of Victorville, Planning Division, Chris Borchert, Assistant Director of Planning, February 2008

The degree of response required will depend largely upon the nature and magnitude of the disaster. Some situations will call for emergency action within a limited area, while others may require city-wide response. In addition, facilities at Southern California Logistics Airport, such as the runway and adjacent aircraft hangers, may be available in the event of a disaster. This site has the potential to be designated as a Casualty Collection Point.

Wildland and Urban Fires

Victorville Municipal Code: The City of Victorville has adopted a Fire Hazard Abatement Ordinance (Chapter 8.09, Victorville Municipal Code) which requires the abatement of weeds in excess of three inches above the grade in the area of growth on such portion of the lot or premises within one hundred feet of any structure. Russian Thistle (tumbleweeds) are not permitted to grow in excess of three inches within City limits on any property, regardless of surrounding improvements. Adherence to this ordinance reduces the

likelihood of fires on undeveloped lands and on vacant lots in the developed portions of the Planning Area.

California Building Code: There are measures in the California Building Code which reduce fire hazards in structures. Some of these measures include use of materials, fire separation walls, building separation, and fire sprinklers. Fire sprinklers are currently required in all structures two (2) stories or more in height, 5,000 square feet or greater in size, and in facilities that are hazardous occupancies as defined in the California Fire and Building Codes. Developmental regulations include requirements for minimum road widths which provide adequate access for fire fighting equipment, evacuation of residents, and clearance around structures to prevent the rapid spread of fire.

Victorville Water District: Prior to approval of a development project or issuance of a building permit, the City of Victorville Water District verifies that the peak load water supply requirement is not negatively affected. “Peak load water supply” refers to the sum total of the City’s water supply required for fire flow, operational daily consumption, and emergency storage. The Victorville Water District is the single water purveyor in the Planning Area. , It currently has a water supply capacity of approximately 26,000 acre feet (or 8,472,126,000 gallons) per year. As development occurs, peak load water supply reserves will need to be increased. Since increasing demands on groundwater basins can create deficiencies in local water supplies, it will be necessary for the water purveyors to obtain additional water in the future from sources such as the State Water Project to ensure peak load water supply demands are met.

5.7.3 Thresholds of Significance

Significant impacts relative to hazards and hazardous materials are evaluated in this section based on Appendix G of the CEQA Guidelines. Implementation of the proposed project may have a significant adverse impact if it would do any of the following:

- 1) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?
- 2) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?
- 3) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?
- 4) 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, would create a significant hazard to the public or the environment?

- 5) 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 result in a safety hazard for people residing or working in the project area?
- 6) For a project located within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?
- 7) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?
- 8) 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.

5.7.4 Project Impacts

General Plan 2030 Provisions: The Safety Element is one of the General Plan elements mandated by State Government Code (Section 65302(g)). It is intended to identify and, whenever possible, reduce the impact of natural and man-made hazards which may threaten the health, safety, and property of the residents living and working in the Victorville Planning Area. It emphasizes hazard reduction and accident prevention and responses for man-made hazards. In addition, the element emphasizes the importance of reducing risk, disaster prevention, and preparedness.

Within the proposed General Plan 2030 Safety Element the following goals, objectives, policies, and implementation measures would apply to hazards and hazardous materials:

GOAL #1: Protection From Hazards - Protect The Community Against Natural And Man-Made Hazards.

Objective 1.1: Restrict land uses in areas identified as susceptible to natural and man-made hazards

Policy 1.1.1: Develop and maintain an accurate, up-to-date and complete database that identifies the locations, scope and potential severity of natural and man-made hazards affecting the Planning Area.

Implementation Measure 1.1.1.1: Establish and maintain a digital database to identify hazards throughout the Planning Area.

Implementation Measure 1.1.1.3: Work with federal, state and county agencies to develop, acquire and expand data and mapping of hazards within the Planning Area.

This shall occur as part of the annual general plan monitoring/reporting effort, or more frequently, as staffing and funding resources permit.

Objective 1.3: Prevent and promptly abate accidental and potentially dangerous releases of hazardous materials and wastes.

Policy 1.3.1: Restrict and/or prohibit the siting of land uses that store, use, transport, dispose of or generate significant quantities of hazardous materials and wastes, through land use element policies, zoning and subdivision regulations, and site plan review procedures.

Implementation Measure 1.3.1.1: Continue Fire Department operation as the local Certified Unified Program Agency with respect to hazardous materials hazards concerns, throughout the Planning Area. This shall include a responsibility to comment on all proposed industrial, medical, research and development or other types of land uses that involve the generation, storage, use, transportation, disposal or recycling of hazardous materials and/or hazardous wastes.

Implementation Measure 1.3.1.2: Continue to cooperate with state and federal agencies and the railroads, to ensure hazardous materials transported through the City do not present additional threats to life and property.

Objective 1.4: Prevent loss of life, serious injury and significant damage to structures critical facilities due to aircraft mishap at the Southern California Logistics Airport (SCLA).

Policy 1.4.1: Fully implement the land use policies and regulatory provisions of the SCLA Specific Plan.

Policy 1.4.2: Avoid conflicts with the Comprehensive Land Use Compatibility Plan (CLUP) for SCLA.

Implementation Measure 1.4.2.1: Incorporate all relevant land use policies of the SCLA Specific Plan and the CLUP into the Land Use Element of this General Plan, and incorporate all regulatory provisions of both documents into the City's Zoning Ordinance and subdivision regulations.

Implementation Measure 1.4.2.2: Continue to work with SCLA to ensure adequate emergency preparedness to protect the public health and safety from aircraft mishaps. Examples of measures to promote health and safety include, but are not limited to, ensuring aircraft operations comply with established flight patterns and procedures, improving on airport and near airport roadways to benefit public safety, and properly disposing of hazardous waste generated at the airport.

GOAL #2: Protection of Public Health and Safety - Integrate Public Health And Safety Issues into Planning and Development Policies.

Objective 2.1: Achieve Desired Fire Protection, Police and Emergency Medical Services Performance Standards

Policy 2.1.1: Ensure that new private or public development has sufficient fire protection, police and emergency medical services available. Such developments shall not strain capabilities to a level where service standards could not be met.

Implementation Measure 2.1.1.1: Define appropriate performance standards for fire protection, police protection and emergency medical services, and update the standards as conditions in the community change, resources are added or eliminated, technological improvements occur, or other information becomes available that indicates a need for revisions to the standards.

Implementation Measure 2.1.1.2: Provide appropriate performance standards for fire protection, police protection and emergency medical services to development applicants to assist in the review of new development plans and projects.

Implementation Measure 2.1.1.3: Require the review of development proposals to determine impacts on emergency services and ensure developments meet appropriate safety standards. Examples of these standards include fire hydrant spacing, sprinkler requirements in certain types of construction, safe vehicular access for evacuation or response, and ensuring the development does not negatively impact response times.

Implementation Measure 2.1.1.4: Ensure that new development is designed and constructed following the requirements of the California Fire Code and the fire safety measures of the Victorville Municipal Code, which includes safety measures such as smoke detector requirements and automatic fire extinguishing systems in certain types of construction.

Implementation Measure 2.1.1.5: Continue to implement the weed abatement program to reduce brush fire hazards.

Objective 2.2: Maintain Optimal Emergency Preparedness

Policy 2.2.1: Continue to maintain, implement, and update as necessary, emergency preparedness procedures.

Implementation Measure 2.2.1.1: Maintain and regularly update an emergency preparedness plan that sets forth the organizational framework, communications protocols, key facilities, shelters and evacuation routes, and response/action procedures to be taken in the event of a disaster.

Implementation Measure 2.2.1.2: Maintain, implement, and update as necessary, a hazardous waste emergency response plan.

Implementation Measure 2.2.1.3: Continue to encourage and support the neighborhood watch program.

Implementation Measure 2.2.1.4: Ensure designation of an adequate number of appropriately sized and located facilities as Casualty Collection Points.

Objective 2.3: Maintain Sufficient Peak Load Water Supplies

Policy 2.3.1: Ensure that new development proposals (private or public) do not over-consume the City's water supplies to the extent that the minimum volume of water storage required to meet the City's peak load water supply standard could not be met.

Implementation Measure 2.3.1.1: Require a water assessment of all new major developments to ensure that sufficient peak load water supplies are available.

Implementation Measure 2.3.1.2: Prior to approval of any major development project, require water supply assessments in compliance with state law.

Implementation Measure 2.3.1.3: : Require any project that will result in consumption of water in excess of available supplies to provide alternative water supply sources or to provide funding that will enable the City to secure adequate water supply prior to project development.

Objective 2.4: Foster Interagency Cooperation and Coordination

Policy 2.4.1: Continue to share public health and safety concerns with other public agencies, local, regional, state and federal.

Implementation Measure 2.4.1.2: Continue to maintain mutual aid agreements with neighboring jurisdictions, with respect to fire protection, law enforcement and emergency medical services.

Implementation Measure 2.4.1.3: Continue to participate in regional partnerships to provide emergency response services, such as the Regional Fire Protection Authority.

The Resource Element of the General Plan, mandated by State Government Code Section 65302(d), includes provisions related to natural hazards. Within the proposed General Plan 2030 Resource Element the following goal, objective, policy, and implementation measures would apply to hazardous materials:

GOAL #6: Good Air Quality – Promote Clear Air with Low Pollutant Concentrations that do not Adversely Affect Respiratory Health

Objective 6.2: Reduce health risks associated with air pollution

Policy 6.2.1: Encourage compliance with the California Air Resources Board (CARB) “Air Quality and Land Use Handbook: A Community Health Perspective”, which provides guidelines for siting new sensitive land uses in proximity to air pollutant emitting sources

Implementation Measure 6.2.1.1: 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.

Implementation Measure 6.2.1.2: 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).

Implementation Measure 6.2.1.3: Avoid siting new sensitive land uses within 1,000 feet of a major service and maintenance rail yard.

Implementation Measure 6.2.1.4: 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 Mojave Desert Air District prior to placement.

Implementation Measure 6.2.1.5: 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.

Scope of Impact Analysis: This analysis considers impacts to hazards resources that would occur with implementation of the proposed General Plan 2030. The proposed General Plan 2030 anticipates expansion of rail and truck cargo hauling, and continuation of and possible expansion of existing mining and industrial operations. Because of the substantial amount of growth anticipated in the Planning Area during the next 20 years, project impacts relative to hazardous materials, airport safety and emergency evacuation plans could occur. Also because of the large amount of vacant undeveloped land in the Planning Area and high winds that frequently occur in the Victor Valley, there is a potential for wildland fires to occur.

5.7.4.1 Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Impact Discussion:

The General Plan 2030 Land Use Element, Table LU-3, shows approximately 6,806 acres in the Victorville Planning Area as designated with an industrial land use. Additional industrial acreage is planned in the Southern California Logistic Airport Specific Plan and the Desert Gateway Specific Plans. Some of the most significant industrial land uses occurring within the City include the Southern California Logistic Airport., The airport is creating a niche in the aircraft painting and maintenance sector and also the distribution sector with the construction of a multi-modal rail facility. The City also provides space for the cement, glass manufacturing, paint manufacturing, and waste recycling industries.

The CHP and Caltrans have primary responsibility for enforcing federal and state hazardous materials waste regulations for materials in transit. The CHP enforces materials and hazardous waste labeling and packing regulations that prevent leakage and spills of material in transit. 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.

As the Certified Unified Program Agency (CUPA), the Victorville Fire Department is responsible for implementing a unified hazardous materials and hazardous waste management regulatory program for local industries and local roadways, not under CHP or Caltrans jurisdiction.

In planning for future growth within the General Plan 2030, the Safety Element provides Goal #1 to protect the community against natural land man-made hazards, Objective 1.1 to restrict land uses in areas identified as susceptible of natural and man-made hazards, and Objective 1.3 to prevent accidental and potentially dangerous releases of hazardous materials and wastes.

In the Planning Area over the next 20-year period, industrial uses will expand, as will the transport of hazardous materials and wastes within and through the City. The Goal and Objectives serve to protect the community from siting projects in known hazards areas, and to prevent the community from releases of hazardous materials and wastes. Policy 1.1.1 and its implementation measures will develop and maintain a database of the locations, scope and severity of natural and man-made hazards in the Planning Area. This will aid local planning in the siting of projects in known hazards areas. Further, Policy 1.3.1 serves to utilize the land use element policies, zoning, subdivision regulations and site plan review procedures to restrict uses of such materials in land use areas where residents reside, schools are located and other sensitive land uses exist or are proposed. As part of the site plan approval process, Implementation Measure 1.3.1.1 serves to continue to have the Fire Department, as the local

CUPA, comment on proposed developments especially with respect to the generation, storage, use, transportation, disposal or recycling of hazardous materials and/or hazardous wastes. While it is beyond the City's jurisdiction to regulate hazardous materials transportation, Implementation Measure 1.3.1.2 serves to have the City continue to cooperate with state and federal agencies and railroads to safeguard the community from the transport of hazardous materials.

In addition, it is the stipulation of many lenders to require the preparation of a Phase I environmental site assessment (Phase I ESA) when development of a "greenfield" site (a term used to refer to vacant land with no previous residential, commercial, or industrial use) is first proposed.¹⁹ Actions that also trigger the conduct of Phase I ESAs should also include application to the City for a change of use or other discretionary land use permit. Mitigation Measure HAZ-1 has, therefore, been formulated in order to ensure that grading activities do not encounter the presence of any environmental contaminants. Because emerging legislation is focusing on source reduction, Mitigation Measure HAZ-2 has been formulated to encourage and promote practices that will reduce the amount of hazardous waste generated in the City. Mitigation Measures HAZ-1 and HAZ-2 are presented in Section 5.7.6, below, and addresses the requirement for the conduct of a Phase I ESA, and source reduction, respectively.

Upon implementation of the General Plan 2030, with the above listed Goal, Objectives, Policies and Implementation Measures, and inclusion of Mitigation Measures HAZ-1 and HAZ-2, potential adverse impacts of hazardous materials and wastes associated with routine transport, use and disposal would be reduced to less than significant.

Impact Finding: Less than Significant with Mitigation.

5.7.4.2 Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Impact Discussion:

Accidents can occur in the production, use, transport and disposal of these hazardous materials. Hazardous chemicals releases may be in the form of solids, liquids or gases. The

¹⁹ A Phase I environmental site assessment (ESA) investigates the existence of hazardous waste or toxic substances contamination and the potential threat to human health and the environment at the site. In addition, the Phase I ESA seeks to identify potential violations under federal and/or applicable State and local environmental laws and provides recommendations for correcting deficiencies or problems. The Phase I ESA contains recommendations as to the need for more extensive/comprehensive environmental investigations, including detailed sampling and laboratory analyses, to be pursued as a Phase II ESA level and, if necessary, a Phase III ESA site remediation.

major truck transportation arteries which traverse the Victorville Planning Area are Interstate 15, US Highway 395, State Highway 18, as well as the Atchison, Topeka, and Santa Fe Railroad. In addition, local roadways are used for transport to the various businesses using or disposing of such materials. Accidents can also occur at businesses/industrial facilities handling, using, and/or disposing of such materials. Accidents have the potential to expose the public and the environment to hazardous materials releases which could result in consequences ranging from mild to catastrophic.

In the event of an upset or accident with release of hazardous materials on major transportation arterials, the CHP and Caltrans are the first line responders for enforcing federal and state regulations. The CHP provides detailed information to cleanup crews in the event of an incident, and Caltrans has emergency chemical spill identification teams at locations throughout the state.

As the CUPA, the Victorville Fire Department is responsible for as the primary responder to emergencies at local industries and local roadways, not under CHP or Caltrans jurisdiction. For unincorporated areas the County Fire Department's HazMat unit may also respond. For more extreme emergencies, the County Fire Department HazMat, California National Guard, CHP, Department of Forestry and Fire Protection, Conservation Corps, Department of Social Services, and Caltrans are the agencies most often asked to respond and assist in emergency response activities.

In planning for future growth within the General Plan 2030, the Safety Element provides Goal #1, Objective #1.3, Policy 1.3.1, and Implementation Measures 1.3.1.1 and 1.3.1.2 as presented above in Section 5.7.4.1 above, to protect against the reasonably foreseeable upset and accident conditions involving the release of hazardous materials:

In the Planning Area over the next 20-year period, new industrial uses will be approved, and such uses may involve use, handling and disposal of hazardous materials with the potential for accidental releases. Goal #1's intent is to protect the community against natural and man-made hazards. The purpose of Objective 1.3 is to "Prevent and Promptly Abate Accidental and Potentially Dangerous Releases of Hazardous Materials and Wastes." Policy 1.3.1 serves to utilize the land use element policies, zoning, subdivision regulations and site plan review procedures to restrict uses of such materials in land use areas where residents reside, schools are located and other sensitive land uses exist or are proposed. As part of the site plan approval process, Implementation Measure 1.3.1.1 serves to continue to have the Fire Department, as the local CUPA, comment on proposed developments especially with respect to the generation, storage, use, transportation, disposal or recycling of hazardous materials and/or hazardous wastes. While it is beyond the City's jurisdiction to regulate hazardous materials transportation, Implementation Measure 1.3.1.2 serves to have the City continue to cooperate with state and federal agencies and railroads to safeguard the community from the transport of hazardous materials.

As above, in Section 5.7.4.1, it is the stipulation of many lenders to require the preparation of a Phase I ESA for "greenfield" sites. Actions that also trigger the conduct of Phase I ESAs

include application to the City for a change of use or other discretionary land use permit. Mitigation Measure HAZ-1 has, therefore, been formulated in order to ensure that grading activities do not encounter the presence of any environmental contaminants. Because emerging legislation is focusing on source reduction, Mitigation Measure HAZ-2 has been formulated to encourage and promote practices that will reduce the amount of hazardous waste generated in the City. Mitigation Measures HAZ-1 and HAZ-2 are presented in Section 5.7.6, below, and addresses the requirement for the conduct of a Phase I ESA, and source reduction, respectively.

Upon implementation of the General Plan 2030, with the above listed Goal, Objective, Policy and Implementation Measures, and inclusion of Mitigation Measures HAZ-1 and HAZ-2, potential adverse impacts associated with reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment would be reduced to less than significant.

Impact Finding: Less than Significant with Mitigation.

5.7.4.3 Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Impact Discussion:

Schools are located throughout the City and, as growth occurs during the 20-year planning period, additional schools will be constructed. New industrial developments may potentially be sited near existing or new schools. There is a greater likelihood of an existing school being located within one-quarter mile of an existing hazardous waste site, or small quantity hazardous waste generator (such as an automobile service facility or dry cleaner) or storage facility, since planning for new developments considers and mitigates those situations. New developments are subject to planning, zoning and the procedures involved in site plan approvals and land use planning typically separates uses that would place a school near an industrial area where hazardous materials may be used. Still, schools and sites containing either active businesses handling hazardous or acutely hazardous materials, or closed businesses which may be subject to cleanup procedures, could potentially be located within one-quarter mile of each other.

Applicable to hazardous emissions and the handling of hazardous materials and acutely hazardous materials within one-quarter mile of schools, Goal #1 of the proposed Safety Element of the General Plan 2030 serves to protect the community against man-made hazards. Objective 1.1 will restrict land uses in areas identified as susceptible to hazards, while Policy 1.1.1 and its implementation measures will develop and maintain a database of the locations, scope and severity of natural and man-made hazards in the Planning Area. This will aid local planning in the siting of projects in known hazards areas. Objective 1.3 serves to

prevent and promptly abate accidental and potentially dangerous releases of hazardous wastes and materials. Policy 1.3.1 directly applies to the City; including land use element policies, zoning, subdivision regulations and site plan review procedures which will help to restrict uses of such materials in land use areas where residents reside, schools are located and other sensitive land uses exist or are proposed. Finally, Implementation Measure 1.3.1.1 will have the Fire Department continue as the local CUPA, including having the responsibility to comment on all proposed industrial, medical, research and development or other types of land uses that involve the generation, storage, use, transportation, disposal or recycling of hazardous materials and/or hazardous wastes.

As above, in Section 5.7.4.1, it is the stipulation of many lenders to require the preparation of a Phase I ESA for “greenfield” sites. Actions that also trigger the conduct of Phase I ESAs include application to the City for a change of use or other discretionary land use permit. Mitigation Measure HAZ-1 has, therefore, been formulated in order to ensure that grading activities do not encounter the presence of any environmental contaminants. Because emerging legislation is focusing on source reduction, Mitigation Measure HAZ-2 has been formulated to encourage and promote practices that will reduce the amount of hazardous waste generated in the City. Mitigation Measures HAZ-1 and HAZ-2 are presented in Section 5.7.6, below, and addresses the requirement for the conduct of a Phase I ESA, and source reduction, respectively.

In addition to contaminated soils, 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, as there is a strong connection between health risk and the proximity of the source of air pollution. The California Air Resources Board (CARB) developed an Air Quality and Land Use Handbook: A Community Health Perspective, which provides advisory recommendations for siting new sensitive land uses, including schools, in proximity to sources which may pose a potential health risk. Table 5.7-5 outlines these recommendations. Portions of these recommendations most applicable to Victorville are incorporated in proposed Resource Element Objective 6.2 and its applicable policy and implementation measures. These General Plan 2030 provisions would ensure that the sensitive land uses are not sited in close proximity to air pollutant emitting sources.

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.

Source Category	Advisory Recommendations
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, Table I-1, Page 4.

Upon implementation of the General Plan 2030, with the above listed Goal, Objectives, Policies and Implementation Measures, and inclusion of Mitigation Measures HAZ-1, and HAZ-2, potential adverse impacts associated with a project’s potential to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school would be reduced to less than significant.

Impact Finding: Less than Significant with Mitigation.

5.7.4.4 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, would create a significant hazard to the public or the environment?

Impact Discussion:

As above, in Section 5.7.4.1, it is the stipulation of many lenders to require the preparation of a Phase I ESA for “greenfield” sites. Actions that also trigger the conduct of database searches to determine whether a project site is included on hazardous wastes lists pursuant to Government Code Section 65962.5 include application to the City for a change of use or other discretionary land use permit. Such actions also trigger the conduct of Phase I ESAs, which include these database searches.

A Phase I ESA investigates the existence of hazardous waste or toxic substances contamination and the potential threat to human health and the environment at the site. In

addition, the Phase I ESA seeks to identify potential violations under federal and/or applicable State and local environmental laws and provides recommendations for correcting deficiencies or problems. The Phase I ESA contains recommendations as to the need for more extensive/comprehensive environmental investigations, including detailed sampling and laboratory analyses, to be pursued as a Phase II ESA level and, if necessary, a Phase III ESA site remediation.

Any project approvals for development on contaminated sites for which an ESA has not been properly conducted or completed could result in an adverse significant impact. Goal #1 of the proposed Safety Element of the General Plan 2030 serves to protect the community against natural and man-made hazards. Objective 1.1 will restrict land uses in areas identified as susceptible to hazards, while Policy 1.1.1 and its implementation measures will develop and maintain a database of the locations, scope and severity of natural and man-made hazards in the Planning Area. This will aid local planning in the siting of projects in known hazards areas. Implementation Measure 1.3.1.1 will have the Fire Department continue as the local CUPA, including having the responsibility to comment on all proposed industrial, medical, research and development or other types of land uses that involve the generation, storage, use, transportation, disposal or recycling of hazardous materials and/or hazardous wastes. As the local CUPA, the Fire Department also maintains lists of businesses that generate, store, use, transport, dispose or recycle hazardous materials and/or hazardous wastes.

Mitigation Measure HAZ-I has been formulated in order to ensure that grading activities do not encounter the presence of any environmental contaminants. Mitigation Measures HAZ-I is presented in Section 5.7.6, below, and addresses the requirement for the conduct of a Phase I ESA.

Upon implementation of the General Plan 2030, with the above listed Goal, Objectives, and Implementation Measures, and inclusion of Mitigation Measure HAZ-I, potential adverse impacts associated with a project which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment would be reduced to less than significant.

Impact Finding: Less than Significant with Mitigation.

5.7.4.5 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 result in a safety hazard for people residing or working in the project area?

Impact Discussion:

The only airport within the Planning Area is the SCLA. While aircraft accidents occur most often on airport property, the accident rate in the traffic pattern within a mile of the airport also accounts for a substantial portion of total incidents. This suggests people and property on the airport and within its environs are exposed to varying levels of aviation-related hazards.

As discussed in Section 5.7.2.4, as the SCLA develops into a commercial aviation center, the possibility of aircraft mishap increases. In response to potential aircraft mishap and in accordance with State law (Public Utilities Code, Section 21670 et seq.) the City of Victorville has prepared a Comprehensive Land Use Plan (CLUP). This plan is necessary because airports present unique public health and safety issues that require special land use planning efforts to ensure protection of public welfare. The intent of this plan is to utilize land use control mechanisms (e.g., zoning and subdivision regulations) to reduce the potential for and effects of an accident.

The purpose of the CLUP prepared for the SCLA is to:

- Promote the development of compatible land uses in the area influenced by airport operations;
- Safeguard the general welfare of the inhabitants within the vicinity of the airport by minimizing exposure to excessive noise levels;
- Safeguard the general welfare of the inhabitants within the vicinity of the airport by minimizing exposure to crash hazards associated with aircraft operations; and
- Safeguard the general welfare of aviation activities within the vicinity of the airport by imposing appropriate height restrictions for the protection of aircraft operations.

As part of the CLUP, both safety zones and safety review areas have been established.

To minimize the risk and reduce the severity of aviation accidents, six safety zones have been established for the SCLA based on the California Airport Land Use Planning Handbook guidelines. The Safety Zones are discussed in Section 5.7.2.4 and comply with Military AICUZ criteria which results in a larger portion of land at each runway end. For each of the six safety zones, the corresponding levels of allowable land uses are provided.

Further, to ensure that community land uses are located outside areas where aviation accidents are most likely to occur, three SCLA Safety Review Areas are identified with policies formulated to address the specific safety concerns of those areas. Section 5.7.2.4 describes each Safety Review Area safety area and defines the compatible land uses for each Safety Review Area.

Within Goal #1 of the proposed Safety Element of the General Plan 2030, Objective 1.4 is directly applicable to the SCLA, to prevent loss of life, serious injury and significant damage to structures critical facilities due to aircraft mishap at the SCLA. Policy 1.4.1 is set to fully implement the land use policies and regulatory provisions of the SCLA Specific Plan, and Policy 1.4.2 is set to avoid conflicts with the Comprehensive Land Use Compatibility Plan

(CLUP) for SCLA. In addition, Implementation Measure 1.4.2.1 serves to incorporate all relevant land use policies of the SCLA Specific Plan and the CLUP into the Land Use Element of the 2030 General Plan, and incorporate all regulatory provisions of both documents into the City's Zoning Ordinance and subdivision regulations. And finally, Implementation Measure 1.4.2.2 serves to assure that the City continues to work with SCLA to ensure adequate emergency preparedness to protect the public health and safety from aircraft mishaps. Examples of measures to promote health and safety include, but are not limited to, ensuring aircraft operations comply with established flight patterns and procedures, improving on airport and near airport roadways to benefit public safety, and properly disposing of hazardous waste generated at the airport.

Upon implementation of the General Plan 2030 and Safety Element, with the above listed Goal, Objective, Policies and Implementation Measures, potentially adverse airport safety hazards for people who would reside or work within two miles of the SCLA would be reduced to less than significant.

Impact Finding: Less than Significant

5.7.4.6 For a project located within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

Impact Discussion:

One non-conforming, and possibly illegal, runway exists in north of the existing City limits within the Planning Area. A non-conforming or illegal airstrip could facilitate non-regulated flight operations or air traffic. These conditions represent a significant safety hazard to persons and property in the vicinity or flight path of such non-regulated operations, as well as to regulated air traffic.

The proposed General Plan 2030 proposes new urban land uses in both the existing SOI and proposed Northern Expansion Area. Proposing new urban land uses in these northern SOI areas could result in a significant adverse impact by permitting new development in the vicinity of the non-conforming/illegal airstrip or its flight path. To mitigate this potential impact, HAZ-3 is recommended for inclusion to the project to ensure the private /or illegal airstrip is closed, and if necessary removed, prior to any new development occurring in the vicinity or flight path of the airstrip.

Impact Finding: Less than significant with mitigation.

5.7.4.7 Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Impact Discussion:

The General Plan 2030 Safety Element discusses risk assessment and emergency preparedness planning in the event of a major catastrophe, and serves as a mini-emergency preparedness plan in that appropriate actions and response by City staff and community residents are summarized.

Emergency preparedness planning, as considered in the Safety Element, consists of three main components: (1) hazard identification and risk assessment; (2) hazard prevention and abatement; and (3) emergency response and action. The Safety Element identifies hazards present in the Victorville Planning Area, and briefly focuses on assessing the scope of risk associated with the hazards and emergency preparedness procedures, and fire, police, and medical facilities and/or staffing (see Section 5.13 of this EIR for analysis of public services provider capabilities).

Natural and man-made disasters of greatest concern to Victorville Planning Area residents are localized risk factors including earthquake (specifically liquefaction, slope failure, dam failure, and landslide)²⁰, flooding²¹, fire (multiple sources – industrial, fuel mains, chemical, high-rise, wildland fire), chemical contamination (road spill, subsurface, radiological), accidents (industrial, major roadways, aircraft, and rail), and water shortages.

The City of Victorville Emergency Plan identifies emergency responses and actions. As discussed in Section 5.7.2.4, the nature and scope of the disaster will mandate the specific responses and actions. The Plan identifies the available emergency shelters in the event of an evacuation, including schools, fire stations, police stations, hospitals, Casualty Collection Points, Emergency Operations Center, and Emergency Command Center. The Plan directs that persons living or working in an area adversely affected by a disaster should report to the appropriate shelters, as directed by local public safety officials. It also explains that persons injured or ill be taken to a Casualty Collection Point (such as Victor Valley College) to obtain triage medical services. A portion of City Hall is to be utilized as an Emergency Operations Center, and the Emergency Command Center is located within Fire Station 311. The City Department of Emergency Services operates a fully equipped mobile command and communications trailer for use at major emergencies. Additionally, the City maintains a mobile police station in a converted bus which would be dispatched in the vicinity of disaster sites. Evacuation routes are shown in Section 5.7.2.4, however specific routes may be determined on a case by case basis, given the particular situation.

²⁰ Earthquake hazards are analyzed in detail in Section 5.6.

²¹ Flooding hazards are analyzed in detail in Section 5.8.

The degree of response required will depend largely upon the nature and magnitude of the disaster. Some situations will call for emergency action within a limited area, while others may require city-wide response. In addition, facilities at SCLA, such as the runway and adjacent aircraft hangars, may be available in the event of a disaster. This site has the potential to be designated as a Casualty Collection Point.

As discussed in Section 5.7.2.2, the State OES provides support with planning and responding to natural and man-made disasters. A majority of the OES mitigation measures can be applied to hazard prevention/mitigation prior to the occurrence of a local emergency or major catastrophic event. The City of Victorville has prepared an Emergency Plan to comply with OES guidelines and the City Municipal Code. Such hazard mitigation measures also apply to large-scale disasters that pose major threats to life and property. Smaller scale, less urgent emergencies are handled by routine procedures and existing City resources. The Emergency Plan is in conformance with State OES Guidelines and is occasionally updated with new information and procedures.

As discussed in Section 5.7.2 above, other regional, County of San Bernardino, state and federal agencies would be available to support the City of Victorville in the event of major disasters.

Specific to emergency response and emergency evacuation planning, the General Plan 2030 Safety Element is Goal #2 - Protection Of Public Health And Safety - Integrate Public Health And Safety Issues Into Planning And Development Policies. Objective 2.1 serves to achieve desired fire protection, police and emergency medical services performance standards, while Policy 2.1.1 is set to ensure that new private or public development has sufficient fire protection, police and emergency medical services available. Supporting Implementation Measures 2.1.1.1 through 2.1.1.5 define and update appropriate performance standards for emergency providers; require that police and fire departments review development proposals to determine impacts on emergency services and ensure developments meet appropriate safety standards (such as fire hydrant spacing, sprinkler requirements, vehicular access for evacuation, that such development does not impact response times); ensure that development meets Fire Code and Municipal Code requirements; and, continue to implement weed abatement programs.

Objective 2.2 serves to maintain optimal emergency preparedness. Policy 2.2.1 is set to continue to maintain, implement, and update as necessary, emergency preparedness procedures. Implementation Measures 2.2.1.1 through 2.2.1.4 serve to maintain and update the emergency preparedness plan; maintain, implement and update a hazardous waste emergency response plan; continue the neighborhood watch program; and, ensure designation of an adequate number of appropriately sized and located facilities as Casualty Collection Points.

Objective 2.4 serves to foster interagency cooperation and coordination. Policy 2.4.1 is set to continue to share public health and safety concerns with other public agencies, local, regional, state and federal. Implementation Measures 2.4.1.2 and 2.4.1.3 serve to continue to

maintain mutual aid agreements with neighboring jurisdictions, with respect to fire protection, law enforcement and emergency medical services; and continue to participate in regional partnerships to provide emergency response services, such as the Regional Fire Protection Authority.

In essence, all of the impact analyses sections of this Hazards Section of this EIR (with the exception of Section 5.7.4.6 which has no impact) all contribute and are part of emergency response. These sections include:

- Section 5.7.4.1 (potential adverse impacts of hazardous materials and wastes associated with routine transport, use and disposal),
- Section 5.7.4.2 (reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment),
- Section 5.7.4.3 (emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school),
- Section 5.7.4.4 (project which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment),
- Section 5.7.4.5 (airport safety hazards for people who would reside or work within two miles of the SCLA), and
- Section 5.7.4.8 (exposure of 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).

Impact Finding: Less than Significant

5.7.4.8 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?

Impact Discussion:

In development approvals, the City of Victorville abides by the California Building Code which contains measures which reduce fire hazards in structures. Some of these measures include use of materials, fire separation walls, building separation, and fire sprinklers. Fire sprinklers are currently required in all structures two (2) stories or more in height, 5,000 square feet or greater in size, and in facilities that are hazardous occupancies as defined in the California Fire and Building Codes. Developmental regulations include requirements for minimum road widths which provide adequate access for fire fighting equipment, evacuation of residents, and clearance around structures to prevent the rapid spread of fire.

The City of Victorville has adopted a Fire Hazard Abatement Ordinance (Chapter 8.09, Victorville Municipal Code) which requires the abatement of weeds in excess of three inches above the grade (including Russian Thistle) in the area of growth on such portion of the lot or premises within one hundred feet of any structure. Adherence to this ordinance reduces the likelihood of fires on undeveloped lands and on vacant lots in the developed portions of the Planning Area.

Prior to approval of a development project or issuance of a building permit, the City of Victorville Water District verifies that the peak load water supply requirement is not negatively affected. As development occurs, peak load water supply reserves will need to be increased. Since increasing demands on groundwater basins can create deficiencies in local water supplies, it will be necessary for the water purveyors to obtain additional water in the future from sources such as the State Water Project to ensure peak load water supply demands are met.

In the event of a wildland fire or other major urban fire in the Planning Area, the San Bernardino County Fire Department provides the administration and support for 32 fire districts, and serves over 18,000 square miles of unincorporated area. The San Bernardino County Fire Department has 64 fire stations, and provides services including its Valley Division (which includes the Victorville Planning Area). 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.

As noted above in Section 5.7.2.2, the California Department of Forestry and Fire Protection (CAL-FIRE) protects the people of California from fires, and partners with the U.S. Forest Service (USFS), Bureau of Land Management (BLM), county and local jurisdictions for prevention planning and response. The CAL-FIRE has a legal responsibility to provide fire protection on all State Responsibility Area (SRA) lands which include portions of those areas north of the San Bernardino Mountains and south of Hesperia. Other portions of the interface areas are within the Federal Responsibility Area (FRA).

Specific to fire response planning, the General Plan 2030 Safety Element is Goal #2 - Protection Of Public Health And Safety - Integrate Public Health And Safety Issues Into Planning And Development Policies. Objective 2.1 serves to achieve desired fire protection, (and police and emergency medical services) performance standards, while Policy 2.1.1 is set to ensure that new private or public development has sufficient fire protection, police and emergency medical services available. Supporting Implementation Measures 2.1.1.1 through 2.1.1.5 define and update appropriate performance standards for emergency providers; require that development proposals be reviewed to determine impacts on emergency

services and ensure developments meet appropriate safety standards (such as fire hydrant spacing, sprinkler requirements, vehicular access for evacuation, that such development does not impact response times); ensure that development meets Fire Code and Municipal Code requirements; and, continue to implement weed abatement programs.

Objective 2.3 services to maintain sufficient peak load water supplies. Policy 2.3.1 is set to ensure that new development proposals (private or public) do not over-consume the City's water supplies to the extent that the minimum volume of water storage required to meet the City's peak load water supply standard could not be met. Implementation Measures 2.3.1.1 and 2.3.1.2 serve to require a water assessment of all new major developments to ensure that sufficient peak load water supplies are available; and prior to approval of any major development project, require water supply assessments in compliance with state law. Implementation Measure 2.3.1.3 requires any project that will result in over-consumption of water to provide alternative water supply sources or to provide funding that will enable the City to secure adequate water supply prior to project development.

Objective 2.4 serves to foster interagency cooperation and coordination. Policy 2.4.1 is set to continue to share public health and safety concerns with other public agencies, local, regional, state and federal. Implementation Measures 2.4.1.2 and 2.4.1.3 serve to continue to maintain mutual aid agreements with neighboring jurisdictions, with respect to fire protection, law enforcement and emergency medical services; and continue to participate in regional partnerships to provide emergency response services, such as the Regional Fire Protection Authority.

Upon implementation of the General Plan 2030 and Safety Element, with the above listed Goal, Objectives Policies and Implementation Measures, potential adverse impacts of exposure of 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 would be less than significant.

Impact Finding: Less than Significant

5.7.5 Cumulative Impacts

Impact Discussion:

Compliance with and conformity to adopted plans and policies, including those within the General Plan 2030, is intended to ensure that future development occurs in a manner compatible with adjacent and surrounding planned land uses. General Plan 2030 Safety Element contains provisions intended to identify and reduce the impact of natural and man-made hazards which may threaten the health, safety, and property of the residents living and working in the Victorville Planning Area. It emphasizes hazard reduction and accident prevention, provides for emergency response planning and preparedness, and reducing risk

and increasing responsiveness to wildland fire. To further support these provisions, Mitigation Measures HAZ-1 and HAZ-2 are recommended for inclusion to the project to require the conduct of a Phase I ESA prior to grading to determine whether sites are contaminated, hazardous materials and waste reduction, and avoid siting of sensitive land uses near hazardous facilities, respectively. As a result, further intensification of the Planning Area and region is not expected to create a significant adverse cumulative impact on the region's existing hazards.

Impact Finding: Less than Significant.

5.7.6 Mitigation Measures

HAZ-1: Prior to the issuance of any grading permits, the applicant shall submit and, when acceptable, the City shall approve a Phase I environmental site assessment conducted in accordance with American Society of Testing and Materials' "ASTM Standards on Environmental Site Assessments for Commercial Real Estate" or such other standard as may be acceptable to the City Engineer. The applicant shall also provide an updated groundwater sampling program in compliance with City requirements. If further investigative or remedial actions are identified therein, all such actions and/or such alternative actions as may be approved by the City Engineer shall be implemented to the satisfaction of the City Engineer prior to the issuance of any grading permits.

HAZ-2: Because reducing the amount of waste generated in the City is an effective mechanism for reducing the potential impact of these wastes on the public health and safety and the environment, and because source reduction and "green" legislation encourages the reduction, to the extent feasible, of hazardous waste, the City shall encourage and promote practices that will, in order of priority: (1) reduce the use of hazardous materials and the generation of hazardous wastes at their source; (2) recycle the remaining hazardous wastes for reuse; and (3) treat those wastes that cannot be reduced at the source or recycled. Only residuals from waste recycling and treatment will be land disposed.

HAZ-3: The City shall ensure closure and/or removal of the non-regulated private airstrip prior to issuance of any grading or building permits in areas adjacent to or within the general flight path area of the private airstrip.

5.7.6 Level of Significance After Policies/Mitigation Measures – Less than Significant.

5.8 HYDROLOGY AND WATER QUALITY

This section addresses issues related to hydrology and water quality as growth occurs in the Planning Area. Issues include degradation of water quality and supplies, alteration of water courses, creation of runoff with potential for flooding, construction within flood zones and the consequential effects to people and structures. The threats of tsunami and seiche hazards do not occur in the Planning Area. Both natural and man-made hydrological and water hazards may threaten the health, safety, and property of the residents living and working in the Victorville Planning Area. It emphasizes water conservation and recycling, reduction of water quality pollutants and degradation and depletion of groundwaters, minimizing risks of flooding.

5.8.1 Existing Conditions

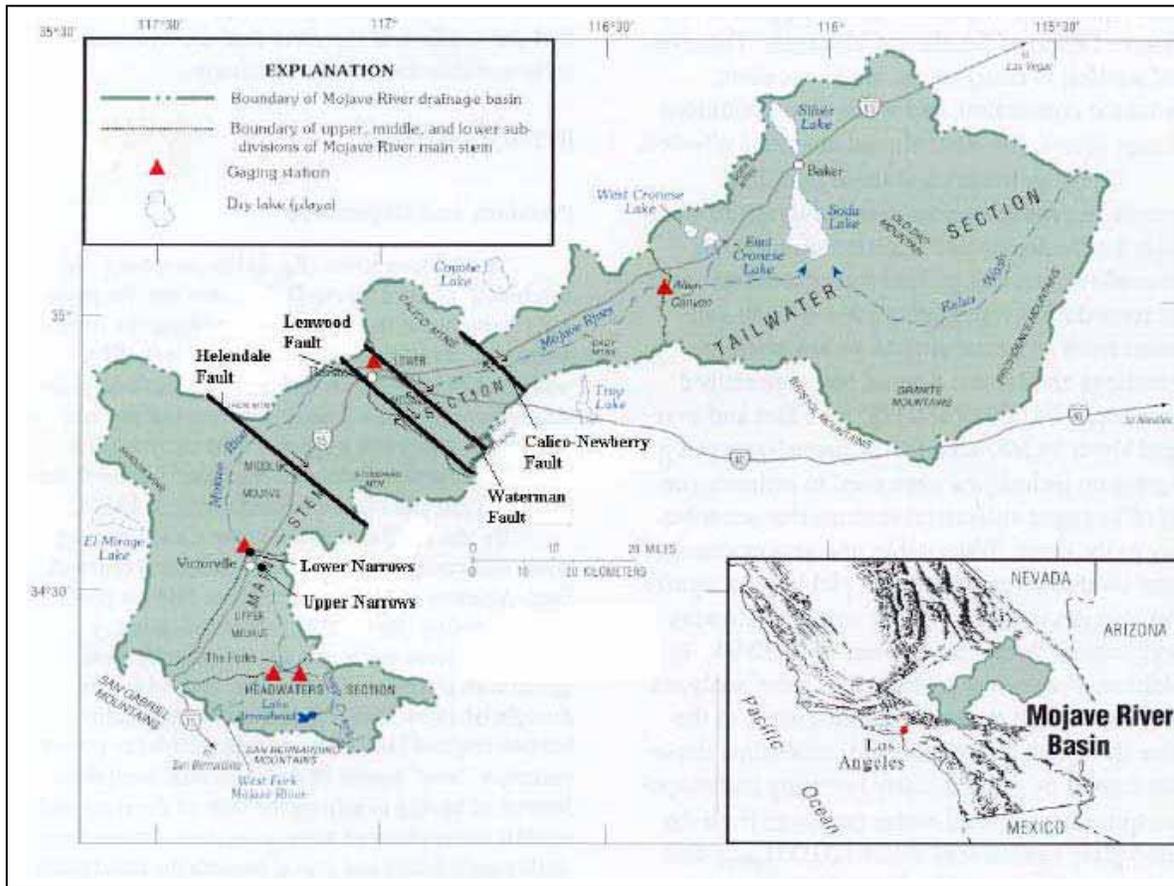
5.8.1.1 Hydrology and Flooding

The Mojave River Watershed encompasses approximately 4,700 square miles and is located entirely within San Bernardino County. The watershed is shown as Figure 5.8-1. The primary geographic and surface hydrologic feature of the watershed is the Mojave River. Elevations within the watershed range from 8,500 feet above sea level at Butler Peak in the San Bernardino Mountains to 1,400 feet above sea level at Afton Canyon near the terminus of the Mojave River. Average elevation in the Victor Valley is 2,900 feet above sea level.

The Planning Area exhibits typical California and Nevada high desert meteorological conditions. Typical of these conditions are annual rainfall of less than 8 inches. While summers may produce an occasional thunderstorm, the wettest season tends to be from January to March, in which high-intensity, short-duration storms produce an annual average rainfall of 5.72 inches. George Air Force Base records from 1942-1992 show precipitation ranges from 0.77 to 11.22 inches annually. A 100-year storm, however, could produce up to 3 inches of precipitation in a 24-hour period. Snowfall in the region may total a few inches per year, although its occurrence is infrequent. The average annual evapotranspiration potential rate (the rate at which water transpires from vegetation) is approximately 82.5 inches, which greatly exceeds annual precipitation.¹

A major portion of the Victorville Planning Area is located on top of a gently sloping large alluvial fan situated to the northeast of the San Bernardino Mountains and referred to as the Cajon Fan (or Victorville Fan). The Mojave River runs along the fan's eastern margin and is the City's most notable topographic feature. This river is very unusual in that it flows from south to north, conveying runoff out of the San Gabriel and San Bernardino Mountains for about 80 miles, until it empties at Soda Lake. Surface flows fluctuate seasonally, and are affected by discharges from Lake Arrowhead, Silverwood Lake and Mojave Forks Reservoir.

¹ Victorville 2 Hybrid Power Project. Application for Certification. February 2007. Section 6.17 Water Resources.



Source: Stormwater Management Program (SWMP) for the Mojave River Watershed. August 2005

Figure 5.8-1. Mojave River Watershed

The river’s natural floodplain is up to a mile wide, and its waters flow below the surface for most of its length, except following storms. At Mojave Narrows, however, the river encounters an impenetrable layer of bedrock that forces water to the surface, even during dry periods. Oro Grande Wash, the City’s second-largest drainage course, conveys surface flows only following intense storms. It originates in the San Gabriel Mountains near the Cajon Pass, where it parallels Interstate 15 before crossing to the east, just north of La Mesa and Nisqualli Roads.

The average annual discharge is 51,440 acre-feet and average monthly flow near the Planning Area is 71 cubic feet per second. However, the river has been subject to highly variable annual flood series, with some years having either base flow or zero discharge and other years having floods as high as 70,600 cubic feet per second. The largest flood in the gauging record occurred in 1938, which was not an El Niño year; other years with large floods include 1891, 1905, and 1916, all of which were El Niño years. In recent decades, the relation between flooding and El Niño has strengthened, with large floods in 1978, 1983, 1993, and 1998. The Mojave River only flows continuously from its source to its terminus in the Soda Lake.

The Mojave River and its tributaries have three dams that store water and provide some flood control for the reaches in the Mojave Desert. The Mojave River Forks Reservoir and Silverwood Lake reservoir, both completed in 1971, likely attenuate flood peaks, although they have no effect on annual runoff volume. The presence of these reservoirs may be the reason why the size of floods appears to have declined in the latter part of the 20th century, although this decline also could be the result of climatic fluctuations. Lake Arrowhead reservoir, built in 1922, provides only minimal flow regulation.

Through the National Flood Insurance Program, the Federal Emergency Management Agency (FEMA) has identified and mapped those areas of the Planning Area that are at risk of periodic flooding. Those areas that are subject to flooding, as determined by the FEMA on their Flood Insurance Rate Maps (FIRMs) are shown in Figure 5.8-2. The FIRMs are designed for flood insurance and flood plain management applications. They include flood zone designations for specific areas that may be subject to flooding based on engineering and hydrologic studies. The map identifies 100-year and 500-year flood plains, floodways, location of selected cross-sections used in the hydrologic studies, and the anticipated floodwater depths. The following flood zone designations are found on the FIRM produced for the Planning Area:

- Zone A - Areas subject to flooding in the event of a 100-year flood. No base flood elevations determined.
- Zone AE - Areas subject to flooding in the event of a 100-year flood. Base flood elevations determined.
- Zone X - Areas subject to flooding in the event of a 500-year flood, areas subject to a 100-year flood with average floodwater depths anticipated to be less than one foot or with drainage areas less than one square mile, and areas protected by levees from the 100-year flood.

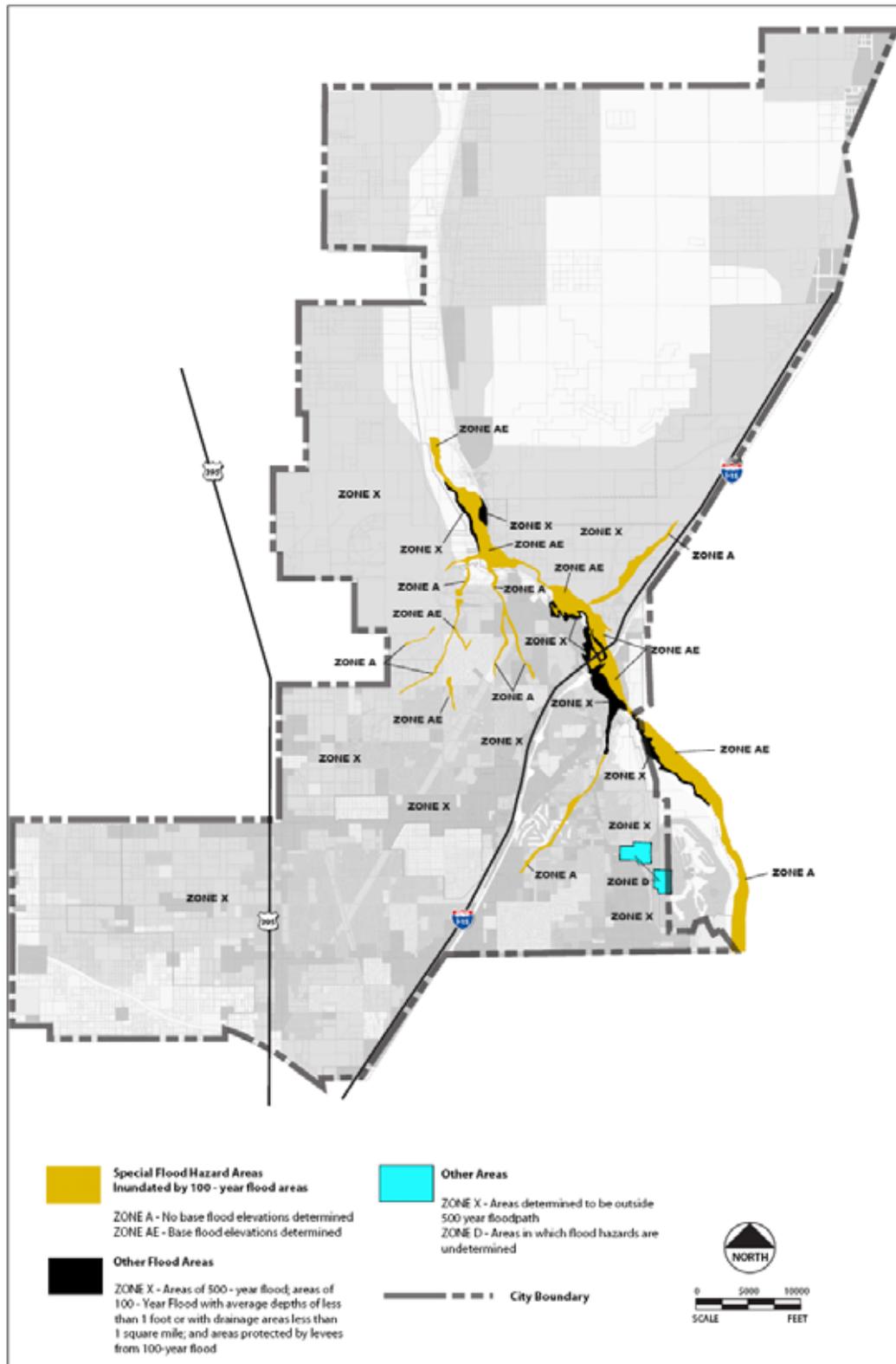


Figure 5.8-2. Flood Hazards Map

The principal flood hazard to the developed portions of the Victorville Planning Area is from the Mojave River. In the event of a 100-year flood, flood water will be confined to the river's flood plain. Some of these areas may be subject to flooding in the event of a 100-year flood, assuming base flood elevations on the FIRM are correct. Flood control improvements, including numerous levees and the West Fork Dam, reduce the potential for this flooding.

There are several intermittent streams that drain the Planning Area and empty into the Mojave River. Two intermittent streams, Ossom Wash and West Fork Ossom Wash, drain a large area of the City west of the I-15 Freeway. Three smaller unnamed intermittent streams drain the areas south of Southern California Logistics Airport. The Bell Mountain Wash is located north of the Mojave River and drains a portion of the North Mojave Planning Area. The Oro Grande Wash originates in the San Gabriel Mountains near the Cajon Pass, where it parallels Interstate 15 before crossing to the east, just north of La Mesa and Nisqualli Roads. There is a potential for flooding from all of these streams in the event of a 100-year flood.

Potential threats of dam inundation to the Victorville Planning Area could occur if the dams at Silverwood or Arrowhead Lakes failed and emptied into the Mojave River through Deep Creek. Considerable inundation might also occur from failure of the Mojave River Forks Dam. Due to the distance to the nearest developed areas, and precautions built into the holding basins below Lake Silverwood and in the Deep Creek area just before the water enters the Mojave River, the probability of extreme flood is unlikely.

5.8.1.2 Water Supply

The City of Victorville is located within and draws all of its water supply from the Alto (or "Upper Mojave") sub-basin of the Mojave River Ground Water Basin. The depth to groundwater ranges from fifty feet near the Mojave River to approximately five hundred and fifty feet in the western portion of the Planning Area. Infiltration from precipitation from watersheds in the San Bernardino and San Gabriel Mountains is the source of this regional ground water storage area. Overdrafting began during the late 1950's, resulting in an average annual decline in the water table of one to two feet.

The City of Victorville is within the service area of the Mojave Water Agency / Watermaster (MWA), which is one of twenty-nine (29) State Water Contractors in the State of California. The MWA was formed in 1959 through legislative action and a vote by the affected residents. The Agency was empowered to purchase, protect, conserve and reclaim water to ensure availability for present and future uses. In 1963, the MWA entered into a contract with the California Department of Water Resources (DWR) to purchase a maximum annual entitlement of 50,800 acre feet from the State Water Project (SWP) for all regions within MWA jurisdiction. On March 26, 1996, the MWA approved a water transfer of 25,000 acre feet/year of SWP entitlement from the Berrenda Mesa Water District in Kern County, thereby increasing the entitlement within the MWA jurisdiction to 75,800 acre feet/year. The MWA has several projects that are using SWP Water and have two additional projects under design that will bring additional water into the Victor Valley. MWA is also pursuing other opportunities to bring additional entitlement to their service area.

Victorville Water District

Water service is provided to the Victorville Planning Area by the Victorville Water District (VWD), which was recently formed (August 15, 2007) by the consolidation of the Baldy Mesa Water District and the Victor Valley Water District. Both of the previous Districts had current (2005) Urban Water Management Plans (UWMPs). As stated above, the sole source of water for the City is the groundwater aquifer located in the High Desert.

In May 2008, Carollo Engineers prepared a letter report to describe the City of Victorville's supply availability to meet water demands associated with planned land uses reflecting the City's Draft General Plan Update. This memorandum was subsequently expanded by Carollo Engineers and incorporated in Water Supply Assessment (WSA) for the General Plan 2030.²

Within the VWD, two improvement districts exist: Victorville Water District Improvement District #1 (VWD ID#1), formerly known as the Victor Valley Water District, and Victorville Water District Improvement District #2 (ID#2), formerly known as the Baldy Mesa Water District.³

The VWD ID#1 operates the larger of the two improvement districts within the city of Victorville and serves potable water to approximately 72,000 customers. The infrastructure system at the end of 2005 for the VWD ID#1 included nearly 400 miles of distribution and transmission mains, 23 active wells, 1 booster pumping station (3 booster pumps), 18 water storage reservoirs, and 8 pressure-regulating stations. The VWD ID#1 has four primary pressure zones, three sub-zones and one small, isolated pressure zone in an elevation range between 2700-feet and 3200-feet.

The Victorville Water District Improvement District #2 (VWD ID#2) serves a portion of the City of Victorville which encompasses 26.7 square miles. There are three pressure zones within the district from 3180-feet to 3680-feet, governed by level of water in reservoirs. The district is generally bounded by Palmdale Road to the north, Mesa Street to the south, Caughlin Road to the west and Interstate 15 to the east.⁴

Water supply is currently pumped from forty (40) well pumping plants with a combined capacity of 52 million gallons per day (MGD). The water system has twenty-seven (27) above ground storage reservoirs with a capacity of approximately seventy-five (75) million gallons. This extensive storage capacity allows the Water District to operate the well pumping plants during off peak times, which saves in power costs and meet fire flow requirements throughout the City. The water distribution system consists of over 500 miles of pipelines ranging in size from 4-inch (current minimum diameter is 8-inch) to 30-inch.

² Water Supply Availability in the City of Victorville, memorandum by Carollo Engineers, May 8, 2008; Draft General Plan Water Supply Assessment, prepared for the City of Victorville (Victorville Water District), Final, by Carollo Engineers July 2008.

³ PB. City of Victorville General Plan Infrastructure Summary. May 2008.

⁴ Ibid.

VWD currently has a Free Production Allowance from the MWA of 15,542 AF / year. VWD produced 30,515 AF of water for the 2006-2007 Water Year. VWD will pay MWA over \$4,000,000 for the 2006-2007 Water Year to compensate for the difference between Free Production Allowance and actual production. The MWA will use this money to purchase replacement water from the SWP and to construct additional water storage (percolation) facilities. This money may also be used to purchase additional entitlement from other State Water Contractors.

Water System Interconnections

To ensure that the water demands are met during short-term emergencies or planned shutdowns, interconnecting pipelines to share water supplies are available between neighboring water systems. VWD has interconnections with the City of Adelanto, Apple Valley Ranchos Water Company, and San Bernardino County Service District.

Water Consumption

Water demands are based on the City's historical water production and number of service connections from 1996 through 2006.⁵ Residential land uses consume the highest volume of water, followed by commercial and industrial uses respectively. Note that water production rates have generally continued to increase but vary annually based on fluctuations in precipitation and water conservation efforts. As shown in Table 5.8-1, production in FY 2005 was 27,600 acre-feet per year (afy) or 24.6 million gallons per day (mgd). Of this 24.6 mgd, 19.44 mgd was produced for ID1 and 5.17 mgd produced for ID2. Population in 2005 was approximately 100,900. Using production for 2005/06 from Table 5.8-1, the average annual per capita demand, including unaccounted-for water, was 244 gallons per capita per day (gpcd). Note that this data does not contain information on the SCLA or Desert Gateway Specific Plan areas.

Fiscal Year	Service Connections	Total Annual Water Production	
		(afy)	(mgd)
1995-96	19,452	19,126	17.07
1996-97	19,222	19,196	17.14
1997-98	19,209	17,190	15.25
1998-99	19,496	18,364	16.39
1999-2000	20,034	20,164	18.00
2000-01	20,962	20,000	17.85
2001-02	21,645	20,699	18.48
2002-03	23,388	21,622	19.30
2003-04	25,708	23,853	21.29
2004-05	29,416	24,216	21.62

⁵ Carollo Engineers. Final Water Supply Assessment. Draft General Plan. July 2008.

Table 5.8-1 Historical Annual Water Production and Service Connections			
Fiscal Year	Service Connections	Total Annual Water Production	
		(afy)	(mgd)
2005-06	30,685	27,567	24.61
Source: Table I. Final Water Supply Assessment. Draft General Plan. July 2008.			

Alternatives to Address Water Supply Deficiencies

Consumption of large water volumes increase costs to the consumer as well as the water supplier, which must increase both supply and water treatment operations to satisfy demand. Efficient water use can reduce costs through lower water use, lower sewage volumes with lower energy and chemical use requirements, and lower capacity charges and limits. Some water conservation strategies involve no additional cost or rapid paybacks. Other strategies such as biological wastewater treatment, rainwater harvesting and graywater plumbing systems often involve more substantial investment.

To reduce the demands on the local ground water basin and to ensure adequacy of water supplies to support the City's long-term community development objectives, several approaches are underway to conserve and expand water supply resources. These include: water conservation, water reuse, installation of additional wells, and importing water from the SWP, via the California Aqueduct. Six new well pumping plants were recently constructed and five more wells have been drilled and designs to equip the wells are under way.

VWD's Water Conservation Department currently provides the following services:

- Water Audits
- Residential plumbing retrofits
- Rate Structure which encourages conservation
- Public Information Programs
- Awareness Events With Alliance for Water Awareness and Conservation (AWAC)
- Community Outreach
- Education Programs
- Developer Incentives
- Water Conservation Specialists
- Water Waste Prohibition Ordinance
- Cash-for-Grass
- Water Smart Landscaping
- Low water use appliance rebates

VWD's conservation department has aggressive new programs that pay the existing customers to remove their turf and replace it with Water Smart landscaping. The City of Victorville has a recent ordinance which requires new homes to be constructed with Water Smart landscaping. The average usage for the new homes is approximately 0.65 AF/residential connection which is down from 0.90 A/F residential connection for customers with traditional

landscaping. The Conservation Department also has rebate programs for low flow toilets and low usage washing machines. Programs like these will allow the City of Victorville to grow without increasing their water usage.

Even with conservation, within the General Plan Infrastructure Summary, as reported by Carollo Engineers in “the report titled “*Alternatives for Water Supply for the California Aqueduct*” notes that the existing basin extraction rate has increased rapidly within the past few years and that a serious shortfall could occur in as little as 10 years”. With the future population and land use increasing over time, the constant supply of water within the aquifer may not be sufficient to keep up with the consumer demands. An additional 5 wells are scheduled to come online in the near future to help alleviate the need for water within the City of Victorville. Alternative water sources may have to be investigated, such as the California Aqueduct, to provide enough water to the Victorville Water District service areas.

Water Recycling

Recycled wastewater is a viable alternative water supply and sales of recycled water can be used to offset the costs of treating wastewater. (The terms “recycled water” and “water recycling” are now used in the California Water Code in place of the formerly used terms “reclaimed water” and “water reclamation”.) Residential graywater use decreases residential water demand. Recycled water has a wide variety of applications. The applications include agricultural irrigation, landscape irrigation (including highway landscape, parks and golf courses), impoundments for landscape, recreational and/or wildlife uses, wetland and wildlife enhancement, industrial processes (e.g., cooling water, process water, wash water, dust control), construction activities and ground water recharge.

Section 13.60 of the City Municipal Code, *Water Conservation*, establishes standards for water conservation and water recycling. Pursuant to the code, all new residential tracts in the City must install reclaimed water pipes (purple pipes) to facilitate future connects to reclaimed water when it becomes available. More detail on the City Code is presented in Section 5.8.2.4.

Wastewater collection and reclamation in the City is administered by the Victor Valley Wastewater Reclamation Authority (VWRA), which is a California Joint Powers Authority that owns and operates regional wastewater collection and treatment facilities that serve the Victor Valley. VWRA owns and maintains 40.5 miles of interceptor sewer, two pump stations and an 18 mgd (million gallons per day) Regional Wastewater Reclamation Plant. A portion of the interceptor system is constructed in the Mojave River streambed. The treatment system process consists of screening, grit removal, primary clarification, biological oxidation of wastes with complete nitrification, secondary clarification, coagulation, flocculation, filtration and disinfection. This process provides for nonpotable reclaimed water that is suitable for irrigation.

Currently, the Westwinds Golf Course is the only location in the City of Victorville that uses recycled water from the VWRA.

5.8.1.3 Water Quality

PB Engineers prepared the “City of Victorville General Plan Infrastructure Summary” dated May 2008, and contained in Appendix D. As state above, the Upper Mojave Groundwater Basin is the sole supply of water for the VWD. Wells pump water from the groundwater supply directly into the distribution system and storage tanks.

The quality of water in Victorville is of high importance to the VWD and meets the state and federal potable water standards. Groundwater within the Planning Area is generally of good quality, as evidenced by annual water quality reports produced by the water district. One problem area is the Southdown Portland Cement Plant located in the Central City Planning Area. Southdown’s Well Pumping Plants, which serve only the cement plant, have been polluted by unauthorized discharges of waste at one or more sites along "D" Street. The Lahontan Regional Water Quality Control Board (Lahontan RWQCB) is pursuing remediation of these sites involving contaminated soils and/or groundwater along "D" Street.

According to the PB report, water testing at the districts wells occurs on a monthly basis, with weekly pipeline testing at 26 sampling stations.⁶ In 1999, the VWD ID#1 started a chlorination program to ensure that the water is safe for consumers. According to the annual publication provided on VWDs website titled *The Water Resource, 2005 Consumer Confidence Report*, an average of 0.60 parts per million (ppm) of chlorine are added to the wells prior to distribution into the system. The Maximum Residual Disinfectant Level (MRDL) for chlorine is 4 ppm, set forth by federal and state regulatory agencies. In January 2006, the EPA allowable maximum contaminant requirements for arsenic were lowered from 50µg/L to 10µg/L. In 2005, the average arsenic levels were approximately 7.26 parts per billion (ppb), with levels as high as 17 ppb being detected at some wells. Arsenic is an inorganic contaminant caused from erosion of natural deposits, runoff from orchards, and is a byproduct of glass and electronics production wastes. With the decrease in allowable maximum contaminant requirements for arsenic, the VWD now provides four arsenic treatment plants to reduce the contaminants in the water.⁷ The location of the treatment plants include: (1) the intersection of El Evado Road and Dos Palmas Road (coagulation filtration), (2) Balsam & Nisqualli at Reservoir 20 (coagulation filtration), (3) Avenal St. near the Aqueduct (ion exchange), and (4) La Mesa Road east of Topaz Road (ion exchange).

To prevent potential groundwater contamination due to subsurface septic systems, the City requires all new developments to connect to a public sewer, except rural subdivisions not located within two hundred feet of a sewer line. Sewer trunk lines are available for use by new development throughout the majority of the incorporated area of the City, including some areas where rural subdivisions containing lots in excess of 18,000 square feet exist.

⁶ Personal Communication: Line Ruzicka, Assistant Engineer. Victorville Water District. August 2008.

⁷ Ibid.

To help avoid illegal dumping of hazardous materials, the City of Victorville Fire Department operates a household hazardous waste collection center next to the San Bernardino County Fairgrounds. Residents are encouraged to deposit household materials such as motor oil, paints, herbicides and fertilizers at the local hazardous waste collection center at Fire Station No. 311 (located at 16200 Desert Knolls Drive). Illegal dumping of hazardous materials could leach into the soil and potentially infiltrate and contaminate groundwater aquifers that support local potable water supplies. To combat illegal dumping, the City recently implemented a vehicle impounding ordinance for those caught illegally dumping.

5.8.2 Regulatory Framework

5.8.2.1 Federal

Clean Water Act. The Federal Water Pollution Control Act of 1972 (33 USC 1251 *et seq.*), more commonly known as the Clean Water Act (CWA), established a national policy designed to “restore and maintain the chemical, physical and biological integrity of the Nation’s waters.” The CWA requires states to develop water quality standards consisting of a detailed description of the hydrologic descriptions of the waterbodies, the beneficial uses which apply to each waterbody, and the water quality criteria (objectives) which will protect those uses. As specified, “[e]ach state must specify appropriate water uses to be achieved and protected. The classification of the waters of the state must take into consideration the use and value of water for public water supplies, protection and propagation of fish, shellfish, and wildlife, recreation in and on the water, agricultural, industrial, and other purposes including navigation (40 CFR 131.11[a]).

In 1972, the CWA was amended to require National Pollutant Discharge Elimination System (NPDES) permits for the discharge of pollutants to waters of the United States from any point source. A “point source” is defined as “any discernible, confined, and discrete conveyance” of pollutants to a water body.⁸

In 1987, the CWA was amended to establish a framework for regulating urban runoff. The 1987 amendment required that the USEPA establish regulations for permitting (under the NPDES permit program) of municipal and industrial storm water discharges. The USEPA published final regulations regarding storm water discharges on November 16, 1990 which require that discharge from the municipal separate storm sewer system (MS4) to surface waters be regulated by a NPDES permit. Storm water runoff pollution must be controlled to the maximum extent practicable. Section 402 of the CWA precludes discharge of pollutants from point sources to jurisdictional waters of the United States unless an NPDES permit is first obtained.

⁸ The definition of discrete conveyance includes, but is not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged.

The CWA requires states to adopt (and the USEPA to approve) water quality standards for water bodies.⁹ Water quality standards consist of designated beneficial uses for a particular water body, along with water quality criteria necessary to support those uses. Water quality criteria are prescribed concentrations or levels of constituents or narrative statements that represent the quality of water that supports a particular use. Because California has not established a complete list of acceptable water quality criteria, the USEPA established numeric water quality criteria for certain toxic constituents in the form of the California Toxics Rule (CTR) (40 CFR 131.38). Water bodies not meeting water quality standards are deemed “impaired” and, under Section 303(d) of the CWA, are placed on a list of impaired waters for which a Total Maximum Daily Load (TMDL) must be developed for the impairing pollutant(s). A TMDL is an estimate of the total load of pollutants from point, non-point, and natural sources that a water body may receive without exceeding applicable water quality standards (with a “factor of safety” included). Once established, the TMDL is allocated among current and future pollutant sources to the water body. TMDL is a number that represents the assimilative capacity of water for a particular pollutant or the amount of a particular pollutant that water can receive without impact to its beneficial uses.

Congress addressed the problem of nonpoint source (NPS) water pollution in the 1972 amendments under Sections 208 and 303(e).¹⁰ Section 208 of the CWA required each state to identify the boundaries of each area with water quality problems and to develop an areawide waste management plan for each identified area. In the 1987 amendment to the CWA, Congress added Section 319, specifically addresses the creation of NPS management programs. Section 319(a) requires each state to submit to the USEPA an assessment report that identifies the navigable waters within the state that will not meet state water quality standards without additional NPS pollution controls. The state must identify the categories, subcategories, and individual NPSs that contribute to water quality impairment and describe a program for the development of Best Management Practices (BMPs) to control identified nonpoint sources of pollution. Under Section 319(b), states are to develop state management programs and submit those programs to the USEPA for approval.

National Flood Insurance Reform Act. The Federal Emergency Management Agency (FEMA), a part of the Department of Homeland Security, has prepared flood insurance rate maps (FIRM) in order to identify those areas that are located within the 100-year floodplain boundary, termed “Special Flood Hazard Areas” (SFHAs). A 100-year flood does not refer to a flood that occurs once every 100 years but refers to a flood level with a one percent chance

⁹ In California, the USEPA has delegated responsibility for implementation of portions of the CWA to the State Water Resources Control Board and its nine regional water quality control boards. The Regional Water Quality Control Board, Lahontan Region is the local board with jurisdiction over the Planning Area.

¹⁰ As defined in the “General Construction Activity Storm Water Permit” (Order No. 99-08-DWQ: NPDES No. CAS000002), a nonpoint source pollutant “refers to diffuse, widespread sources of pollution. These sources may be large or small, but are generally numerous throughout a watershed. Nonpoint sources include but are not limited to urban, agricultural, or industrial areas, roads, highways, construction sites, communities served by septic systems, recreational boating activities, timber harvesting, mining, livestock grazing, as well as physical changes to stream channels, and habitat degradation. NPS pollution can occur year round any time rainfall, snowmelt, irrigation, or any other source of water runs over land or through the ground, picks up pollutants from these numerous, diffuse sources and deposits them into rivers, lakes, and coastal waters or introduces them into groundwater” (p. 54).

of being equaled or exceeded in any given year. The SFHAs are subdivided into insurance risk rate zones. Areas between the 100 and 500-year flood boundaries are termed "moderate flood hazard areas." Areas located outside the 500-year flood boundary, are termed "minimal flood hazard areas."

If a property is located within a SFHA, as shown on a flood map published by FEMA, the National Flood Insurance Reform Act of 1994 requires mortgage lenders and servicers to require flood insurance for any loan secured by property with a building located in a SFHA. The purpose of the National Flood Insurance Program (NFIP) designations is to encourage state and local governments to wisely use the lands under their jurisdictions by considering the hazard of flood when rendering decisions on the future use of such lands, thereby minimizing flood damage.

5.8.2.2 State

California Water Code. As declared in Section 100 of the California Water Code (CWC), it is policy of the State that "the water resources of the State be put to beneficial use to the fullest extent of which they are capable, and that the waste or unreasonable use or unreasonable method of use of water be prevented, and that the conservation of such water is to be exercised with a view to the reasonable and beneficial use thereof in the interest of the people and for the public welfare."

Under Section 13000, the State Legislature declared that the people of the State "have a primary interest in the conservation, control, and utilization of the water resources of the state, and that the quality of all the waters of the state shall be protected for use and enjoyment by the people of the State. The Legislature further finds and declares that activities and factors which may affect the quality of the waters of the State shall be regulated to attain the highest water quality which is reasonable, considering all demands being made and to be made on those waters and the total values involved, beneficial and detrimental, economic and social, tangible and intangible."

Under SB 221, city approval of residential subdivisions that would consume an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project require an affirmative written verification of sufficient water supply. Under SB 610, water supply assessments (WSAs) must be furnished to local governments for inclusion in any CEQA documentation for certain large projects. For those projects, the WSA must be requested from the local water provider by the city considering the project at the time the city determines that CEQA is required. The WSA must include specific information, as detailed in the legislation, including an identification of existing water supply entitlements and contracts. If groundwater is anticipated as a source of water, the assessment must contain additional information. A foundational document for compliance with both SB 610 and SB 221 is the urban water management plan (UWMP). Both statutes identify the UWMP as a planning document that, if properly prepared, can be used by a water supplier to meet the standards set forth therein.

Title 23, Division 3, Chapter 15 of the CCR contains regulatory requirements for hazardous waste. Title 27 contains regulatory requirements for wastes other than hazardous waste. Section 13260(a) of the CWC requires that any person discharging waste or proposing to discharge waste, other than to a community sewer system, that could affect the quality of the waters of the State, must file a report of waste discharge. This report must outline the types of wastes to be discharged in order to determine appropriate waste management unit design, operation, monitoring, closure and post-closure maintenance requirements.

California Government Code. Under California's Planning and Zoning Law, city and county general plans are required to include specified mandatory elements. Assembly Bill 162, as approved by the Governor on October 10, 2007 and adding (Section 65300.2 and 65302.7) and amending (Sections 65302, 65303.4, 65352, 65584.04, and 65584.06) of the CGC, species that the land-use element identify and annually review those areas covered by the general plan that are subject to flooding, as identified by floodplain mapping prepared by FEMA or the DWR. The bill also requires, upon the next revision of the housing element, on or after January 1, 2009, the conservation element of the general plan shall identify rivers, creeks, streams, flood corridors, riparian habitat, and land that may accommodate floodwater for purposes of groundwater recharge and stormwater management. AB 162 requires, upon the next revision of the housing element, on or after January 1, 2009, the safety element to identify information regarding flood hazards and to establish a set of comprehensive goals, policies, and objectives, based on specified information for the protection of the community from, among other things, the unreasonable risks of flooding. The bill provides that the determination of available land suitable for urban development may exclude lands where the flood management infrastructure designed to protect the jurisdiction is not adequate to avoid the risk of flooding, such that the development of housing would be impractical due to cost or other considerations.

California Fish and Game Code. The California Fish and Game Code (CFGC) contain several provisions that regulate nonpoint source discharges. As specified under Section 5650 of the CFGC, except as authorized by a State or federal permit, "it is unlawful to deposit in, permit to pass into, or place where it can pass into the waters of this State" any "petroleum or residuary product of petroleum, or carbonaceous material or substance," any "sawdust, shavings, slabs, edgings," and any "substance or material deleterious to fish, plant life, or bird life."

California Porter-Cologne Water Quality Control Act. As California's population grew and the adverse environmental impacts associated with that growth were recognized, the State Legislature enacted numerous laws to protect California's water resources. In 1961, the State Legislature enacted the Porter-Dolwig Groundwater Basin Protection Law, finding "that the greater portion of the water used in this State is stored, regulated, distributed and furnished by its groundwater basins, and that such basins are subject to critical

conditions of...degraded water quality causing great detriment to the peace, health, safety and welfare of the people of the State."¹¹

The law governing the production of water quality changed significantly in 1969 with the passage of the Porter-Cologne Water Quality Control Act (Division 1, Chapter 2, Article 3, Section 13000 *et seq.*, CWC) (Porter-Cologne). Porter-Cologne establishes the principal State program for water quality control. Under Porter-Cologne, the State Water Resources Control Board (SWRCB) is mandated to implement the provisions of the CWA. To implement and enforce the provisions of Porter-Cologne and the CWA, Porter-Cologne divides the State into nine regional boards that, under the guidance and review of the SWRCB, implement and enforce the provisions of both the State and federal statutes. Porter-Cologne provides for the development and periodic review of water quality control plans to regulate water quality, and is a comprehensive plan for protecting the quality and maximizing the beneficial use of the State's waters. Under Porter-Cologne, the State's water quality control boards were required to: (1) formulate and adopt water quality control plans for all areas within the region; (2) establish water quality objectives that "will ensure the reasonable protection of beneficial uses" of State's waters; and (3) prescribe waste discharge requirements governing discharges to land and waters within the regions.

California Toxic Rule. As required under Section 303(c)(2)(B) of the CWA, the USEPA promulgated the final California toxic rule (CTR) on May 18, 2000. As codified in 40 CFR 131, the CTR established numeric criteria for water quality standards for priority toxic pollutants for the State and provided water quality criteria for toxic constituents in waters with human health or aquatic life designated uses in California.

On March 22, 2000, the SWRCB (Resolution 2005-15) adopted a "Policy for Implementation of Toxic Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California" (CTR Implementation Policy). The CTR Implementation Policy established: (1) provisions for priority pollutant criteria promulgated by the USEPA through the National Toxic Rule (NTR) and the CTR and for priority pollutant objectives established in the Basin Plan; (2) monitoring requirements for 2,3,7,8-TCDD (tetrachlorodibenzo-p-dioxin) equivalents; and (3) chronic toxicity control provisions.

Nonpoint Source Pollution Control Program. As required under Section 319 of the CWA, California's "Plan for California's Nonpoint Source Pollution Control Program" (NPS Program Plan) was approved by the USEPA on July 17, 2000. As indicated therein, NPS pollution (polluted runoff) is the leading cause of water quality impairments in California. NPS, including natural sources, are the major contributors of pollution to impacted streams, lakes, wetlands, estuaries, marine waters, and groundwater basins and are important contributors of pollution to harbors and bays.

The major sources of NPS pollution in California are related to land-use activities that occur throughout watersheds and include agriculture, forestry (silviculture), urban runoff,

¹¹ Section 12922.1, CWC.

(e.g., construction sites, roads, highways, septic systems), marinas and boats, hydromodification activities, and resource extraction. Atmospheric deposition is also a source of NPS pollution.

Examples of pollutants associated with specific land-use activities include: (1) excess pesticides and fertilizers from agricultural lands, urban lawns, and parks; (2) oil, grease, heavy metals, and chemicals from urban streets, parking lots, and industrial sites; (3) sediment from improperly managed construction sites, forest lands, abandoned roads, and eroding streambanks; (4) bacteria and nutrients from livestock, pet wastes, and faulty septic systems; and (5) other pollutants.

Among other features, the NPS Program Plan: (1) adopts 61 management measures (MMs) as goals for six NPS categories (i.e., agriculture, forestry, urban areas, marinas and recreational boating, hydromodification, and wetlands/riparian areas/vegetated treatment systems); (2) provides a 15-year strategy for implementing the MMs; and (3) relies on the use of existing authorities and regulatory processes to achieve implementation, allowing for the adoption of the MMs as regulation after each five-year cycle if adequate progress in NPS pollution control has not been demonstrated. MMs serve as general goals for the control and prevention of polluted runoff. Site-specific BMPs are then used to achieve the goals of each MM.

5.8.2.3 Regional

Lahontan Regional Water Quality Control Board. As per the California Porter-Cologne Water Quality Control Act, discussed above in Section 5.8.2.2, the Planning Area is under the jurisdiction of the Lahontan Region. Water quality standards and control measures for surface and ground waters of the Lahontan Region are contained in the Water Quality Control Plan for the Lahontan Region (Basin Plan). The plan designates beneficial uses for water bodies and establishes water quality objectives, waste discharge prohibitions, and other implementation measures to protect those beneficial uses. State water quality standards also include a Nondegradation Policy. Water quality control measures include Total Maximum Daily Loads (TMDLs), which are often, but not always, adopted as Basin Plan amendments.

The Nondegradation Objective (State Board Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality of Waters in California" is described in Chapter 3 of the Basin Plan and applies to ground waters. Ground waters shall not contain concentrations of bacteria, chemical constituents, radioactivity, or substances producing taste and odor in excess of the ground water objectives. These objectives define the upper concentration or other limit that the Regional Board considers protective of beneficial uses. These objectives apply to all ground waters, rather than only at a wellhead, at a point of consumption, or at point of application of discharge. Basin Plan water quality objectives pertinent to the Planning Area include the West Fork of the Mojave River (at Lower Narrows) located just north of

Victorville. The Basin Plan identifies the Objective for TDS at 312 mg/L (Maximum), and for NO₃ at 5mg/L (Maximum).¹²

The Lahontan Region issues and approves NPDES permits per the federal CWA for the regulation of point source discharges. Construction activities that disturb more than one acre are required to obtain coverage under California's General Permit for Discharges of Storm Water Associated with Construction Activity, Water Quality Order 99-08-DWQ (Construction General Permit). Activities subject to permitting include clearing, grading, stockpiling, and excavation. The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP) which specifies Best Management Practices (BMPs) that will reduce or prevent construction pollutants from leaving the site in storm water runoff and will also minimize erosion associated with the construction project. The SWPPP must contain site map(s) that show the construction site perimeter; existing and proposed structures and roadways; storm water collection and discharge points, general topography both before and after construction; and drainage patterns across the site. Additionally, the SWPPP must describe the monitoring program to be implemented.

Industrial activities with the potential to impact storm water discharges are required to obtain a NPDES permit for those discharges. In California, an Industrial Storm Water General Permit, Order 97-03-DWQ (Industrial General permit) may be issued to regulate discharges associated with ten broad categories of industrial activities. The General Industrial Permit requires the implementation of management measures that will protect water quality. In addition, the discharger must develop and implement a SWPPP and a monitoring plan. Through the SWPPP, sources of pollutants are to be identified and the means to manage the sources to reduce storm water pollution described. The monitoring plan requires sampling of storm water discharges during the wet season and visual inspections during the dry season. A report must be submitted each year by July 1 documenting the status of the program and monitoring results.

NPDES also requires local governments to obtain an NPDES Permit for stormwater induced water pollutants in their jurisdiction. The SWRCB Order No. 2003-2005-DWQ, NPDES General Permit and Waste Discharge Requirements for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (MS4s) was adopted in 2003 to provide NPDES permit coverage to small MS4s required to comply with federal storm water permitting requirements. The Mojave Watershed Group of Small Communities enrolled under statewide Phase II Municipal Storm Water NPDES General Permit No. CAS000004 include the cities of Victorville, Apple Valley, Hesperia and portions of San Bernardino County. These co-permittees comply with General Permit provisions.^{13,14}

¹² Lahontan RWQCB Basin Plan, Chapter 3, Water Quality Objectives, Table 3-20.

http://www.swrcb.ca.gov/rwqcb6/water_issues/programs/basin_plan/docs/ch3_wqobjectives.pdf

¹³ Lahontan Regional Water Quality Control Board. Executive Officer's Report. March 2005.

¹⁴ Mojave River Watershed Group. National Pollutant Discharge Elimination System for Stormwater Discharges from the Mojave Watershed. Stormwater Management Plan. FY06-07 Annual Report. General Permit No. CAS000004.

As part of the process, the Mojave Watershed Group submitted a Storm Water Management Plan (SWMP) which is a plan for development and phased implementation of six minimum control measures (MCM) over the first term of the permit (5 years). These six MCMs are:

1. Public Education and Outreach on Storm Water Impacts
2. Public Involvement/Participation
3. Illicit Discharge Detection and Elimination
4. Construction Site Storm Water Runoff Control
5. Post-Construction Storm Water Management in New Development and Redevelopment
6. Pollution Prevention/Good Housekeeping for Municipal Operations

The SWMP sets measurable goals for each MCM in a staged fashion so that by the fifth year the co-permittees have in place a fully developed and implemented program. The measurable goals in each MCM program need to be integrated over time and across the programs to create a coherent and effective overall SWMP. The SWMP is a work-in-progress especially for the period of the first permit term. It will be revised to reflect emerging or changing priorities based on the experience of the co-permittees including the results of additional studies such as watershed mapping and characterization. While the entire document need not be revised each year as the annual report is prepared, modifications and adjustments to the selected BMPs and measurable goals can be identified. This approach is recommended in both the federal guidance for the Phase II program and the General Permit.¹⁵

San Bernardino County Flood Control District. (SBCFCD) The San Bernardino County Flood Control District (SBCFCD) was created by the California Legislature under the San Bernardino County Flood Control District Act, Chapter 73, Statutes of 1939, adopted and effective April 20, 1939. The 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.¹⁶

The District exercises 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. The District is subdivided into six zones with interest 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.

¹⁵ Stormwater Management Program (SWMP) for the Mojave River Watershed. August 2005. http://www.co.san-bernardino.ca.us/mojave_river/pdf/SWMP_August2005.pdf

¹⁶ County of San Bernardino. General Plan. Safety Background Report. June 2005.

The Planning Area is located within Zone 4 which includes 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 other communities.

5.8.2.4 Local

City of Victorville Municipal Code: Portions of several chapters of the Municipal Code apply to hydrology and water quality. These are presented below.

- Title 6, Health and Sanitation, Chapter 6.30 of the Municipal Code, *Storm Drainage Fees*, contains methods of collecting funds for improving drainage infrastructure.
- Title 13, Public Peace, Safety, and Morals, Chapter 13.60 of the City Municipal Code, *Water Conservation*, establishes numerous standards for water conservation and water recycling.

5.8.3 Thresholds of Significance

Significant impacts relative to hydrology and water quality are evaluated in this section based on Appendix G of the CEQA Guidelines. Implementation of the proposed project may have a significant adverse impact if it would do any of the following:

- 1) Violate any water quality standards or waste discharge requirements?
- 2) 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 which would not support existing land uses or planned uses for which permits have been granted?
- 3) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?
- 4) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?
- 5) 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?

- 6) 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?
- 7) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?
- 8) 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?
- 9) Inundation by seiche or mudflow?

5.8.4 Project Impacts

General Plan 2030 Provisions: Of the proposed General Plan 2030, portions of the Resources, Safety, and Land Use Elements apply to potential impacts associated with hydrology and water quality. These are three of the General Plan elements mandated by State Government Code (Section 65302(g)). They are intended to identify and, whenever possible, reduce impacts of hydrology and water quality which may threaten the health, safety, and property of the residents living and working in the Victorville Planning Area. The applicable goals focus on safe and adequate water supplies, protection of the community from flooding and geologic hazards, and encouraging an economic base that supports required infrastructure.

Within the proposed General Plan 2030 Resources Element the following goals, objectives, policies, and implementation measures apply to hydrology and water quality:

GOAL #1: Sufficient, Safe Water Supply - Maintain Adequate Water Supply Resources And Water Delivery System To Support The Implementation Of The City's Land Use Policies And Fire Protection Standards, And To Meet Essential Needs During Emergencies And Severe Drought Conditions.

Objective 1.1: Reduce Rate of Groundwater Extraction for Municipal Water Supply to no more than 80% of 2006 levels, by the year 2012, and maintain or reduce that lower level over the long term.

Policy 1.1.1: Require water conservation measures in the design of new development and major redevelopment, for both public and private projects, such as low-water consuming indoor plumbing devices and use of xerophitic landscape materials that require minimal irrigation.

Implementation 1.1.1.1: Offer incentives for projects that demonstrate significant water conservation through use of innovative water consumption technologies. For example, offer discounted water rates for projects that achieve U.S. Green Building Council LEED standards for certification relative to water efficiency.

Implementation 1.1.1.2: The City will periodically revise development standards in its zoning and subdivision regulations, and in its building and plumbing codes, to include a range of water conservation measures to be incorporated into site design, building construction, landscaping and irrigation systems.

Implementation 1.1.1.3: The City will continue to maintain a list of xerophytic plant materials and publications providing guidelines and methods for establishing and maintaining xerophytic landscapes and irrigation systems. This information shall be readily available to the public.

Policy 1.1.2: Penalize high volume water consumers that operate with wasteful water consumption practices.

Policy 1.1.3: Support conversions of wasteful water practices to water conserving practices, including public and private water consumers.

Implementation 1.1.3.1: Convert City-owned landscaping in streets, parkways and parks to xerophytic palettes and replace older, inefficient irrigation systems with efficient, water conserving irrigation systems.

Objective 1.2: Expand sources of water supply and delivery systems through alternatives to ground water extractions.

Policy 1.2.1: Support VVWA's development and expansion of recycled wastewater treatment and delivery capacity for appropriate water uses such as irrigation of outdoor landscapes.

Implementation 1.2.1.1: Conduct master planning study to develop program specifications for incorporating recycled wastewater infrastructure into City's existing and future street network, and to develop performance standards to be met by new development projects, to enable ready connection to recycled water infrastructure, when available.

Policy 1.2.2: Participate in regional efforts to acquire imported water from the State Water Project, along with 'water wheeling' from fallowed agricultural areas and other lands with significant ground water resources.

Implementation 1.2.2.1: Conduct a preliminary engineering study to identify optimal location(s) for a turnout from the California Aqueduct to deliver imported State Water Project water that may be purchased in the future.

Objective 1.3: Protect ground water quality.

Policy 1.3.1: Require new development and major redevelopment projects public and private, to prepare and implement water quality management plans that incorporate a variety of structural and non-structural best management practices to minimize, control and filter construction site runoff and various forms of developed site urban runoff, prior to discharge to receiving waters.

Implementation 1.3.1.1: Assign properly qualified professionals to conduct plan checks and inspections to ensure proper design and implementation of water quality management plans for new development and major redevelopment projects.

Implementation 1.3.1.2: Assess and mitigate impacts on surface and groundwater quality as a routine aspect of the City's CEQA implementation procedures.

GOAL #3: Protection From Natural Hazards - Protect The Community From Flooding And Geologic Hazards.

Objective 3.1: Development is outside of areas exposed to flood hazards

Policy 3.1.1: Prohibit development within flood hazard areas adjacent to the Mojave River.

Implementation 3.1.1.2: City will maintain accurate and up-to-date maps of areas exposed to 100-year and 500-year flood hazards, based on National Flood Insurance Program criteria.

Implementation 3.1.1.3: Areas located within 100-year and 500-year flood hazards shall be designated for Open Space on the Land Use Policy Map and on the Conservation/Open Space Map. Such lands shall be zoned to correspond to these general plan policy designations, including strong restrictions on land development projects.

Objective 3.2: New development is located and designed to avoid or mitigate seismic and geologic hazards

Policy 3.2.1: Results of preliminary geotechnical investigations shall be considered by the City's decision-makers, prior to approval of all discretionary actions to allow for public or private development projects.

Implementation 3.2.1.1: Preliminary geotechnical investigations and reports shall be conducted for all new development and major redevelopment projects, public and private, to identify seismic and other geologic hazards, and to define measures to eliminate or reduce such hazards to an acceptable level.

Within the proposed General Plan 2030 Safety Element the following goals, objectives, policies, and implementation measures apply to hydrology and water quality:

GOAL #1: Protection From Hazards - Protect The Community Against Natural And Man-Made Hazards.

Objective 1.1: Restrict land uses in areas identified as susceptible to natural and man-made hazards

Policy 1.1.1: Develop and maintain an accurate, up-to-date and complete database that identifies the locations, scope and potential severity of natural and man-made hazards affecting the Planning Area.

Implementation Measure 1.1.1.2: Delineate the flood designations of the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) on the General Plan Land Use Map as Open Space and on the Zoning Map as Flood Plain 1 (100-year flood) or Flood Plain 2 (500-year flood).

Policy 1.1.2: Develop and maintain strategies to restrict development in areas susceptible to flooding hazards.

Implementation Measure 1.1.2.1: Apply zoning regulations in those areas designated as Flood Plain which contain use restrictions such as prohibition of residential development and other improvements, or structures or developments which would obstruct the natural flow of floodwaters or endanger life or property.

Implementation Measure 1.1.2.2: Prohibit improvements, structures, or developments within the 100-year flood plain which would obstruct the natural flow of floodwaters or which would endanger life or property.

Within the proposed General Plan 2030 Land Use Element the following goals, objectives, policies, and implementation measures apply to hydrology and water quality, specifically infrastructure:

GOAL #3: Ample City Services – Ensure Provision of Adequate City Services and Infrastructure.

Objective 3.1: Permit development in areas where such uses are appropriate and provide for adequate roadways, infrastructure, and public services.

Policy 3.1.1: Provide mechanisms through which development can pay the cost of its infrastructure and services needs.

Implementation Measures 3.1.1.1: Collect and apply development impact fees to pay for infrastructure improvements as identified in the capital improvement plan.

Implementation Measures 3.1.1.2: Continue to review and add projects to the capital improvement plan as deemed necessary to ensure the orderly growth of the City.

Implementation Measures 3.1.1.4: Continue to require new development to pay the capital costs of public facilities and services needed to serve those developments.

Implementation Measures 3.1.1.5: Continue to contact utility companies, school districts, and special districts as necessary when new projects are submitted to ensure their capability to serve the new projects.

Scope of Impact Analysis: Both natural and man-made hydrological and water hazards may threaten the health, safety, and property of the residents living and working in the Victorville Planning Area. This analysis considers impacts of hydrology and water quality hazards that would occur with implementation of the proposed General Plan 2030 which anticipates substantial growth in the Planning Area during the next 20 years. During this time period there is the potential of degradation to water quality and supplies, alteration of water courses, creation of runoff with potential for flooding, potential for construction within flood zone areas with consequential effects to people and structures. The threats of tsunami and seiche hazards do not occur in the Planning Area.

5.8.4.1 Would the Project violate any water quality standards or waste discharge requirements?

Impact Discussion:

As growth occurs over the General Plan 2030 time frame, there is the potential for water quality degradation due to numerous pollutant sources. As noted in Section 5.8.1.2, due to a regulatory decrease in allowable maximum contaminant requirements for arsenic the City has several ion exchange arsenic treatment plants. Arsenic is an inorganic contaminant caused from erosion of natural deposits, runoff from orchards, and is a byproduct of glass and electronics production wastes. Also, older industrial areas are subject to having contaminated wells and soils due to waste discharges which may have occurred prior to the current regulations.

As discussed in Section 5.8.2, Section 402 of the Clean Water Act (CWA) established the National Pollutant Discharge Elimination System (NPDES). This act requires all construction activity resulting in land disturbance of one (1) or more acres to obtain a Construction Activities Storm Water General Permit (NPDES General Permit). In the Planning Area, the Lahontan Region issues and approves NPDES permits per the federal CWA. General Permits require projects to develop and implement a Storm Water Pollution Prevention Plan (SWPPP). As described above, the SWPPP must list the Best Management Practices (BMPs)

the Applicant will employ to “prevent all construction pollutants from contacting storm water”, and BMPs must be developed “with the intent of keeping all products of erosion from moving off site into receiving waters channels.” The SWPPP must also include a visual monitoring program and a chemical monitoring program for non-visible pollutants.

NPDES also requires local governments to obtain an NPDES Permit for stormwater induced water pollutants in their jurisdiction. Victorville is a co-permitted of the Mojave Watershed Group of Small Communities enrolled under statewide Phase II Municipal Storm Water NPDES General Permit No. CAS000004, for Municipal Separate Storm Sewer Systems (MS4s), effective 2005. The permit establishes a region-wide Stormwater Management Plan (SWMP) to control discharges of sanitary wastewater, septic tank effluent, car wash wastewaters, improper oil disposal, radiator flushing, laundry wastewater, spills from roadway accidents, and improper disposal of toxic materials. Pollutant control measures in the SWMP include specific focus on failing septic tanks, industrial/business connections, recreational sewage and illegal dumping. Developers are required to implement appropriate BMPs on construction sites to control erosion and sediment.

The City’s Municipal Ordinance also contains extensive requirements for water conservation and recycling measures in Chapter 13, Code 13.60 – *Water Conservation*. Included are Chapters 13.60.040 *Prohibited water uses and water waste*, 13.60.050 *Limitation on water intensive landscape and turf areas within new nonresidential facilities*, and 13.60.060 *Limitations on model home and new residential development landscaping*. Water conservation reduces runoff and the potential for such runoff to contain or obtain pollutants which may enter receiving waters.

The General Plan 2030, Resources Element Goal #1, Objective 1.3 is proposed to protect ground water quality. Policy 1.3.1 requires new development and major redevelopment projects to prepare and implement water quality management plans that incorporate BMPs to minimize, control and filter construction site runoff and various forms of developed site urban runoff, prior to discharge to receiving waters. Its implementation measures support the policy by assigning qualified professionals to conduct plan checks (Implementation Measure 1.3.1.1), and to assess and mitigate impacts on surface and groundwater quality as a routine aspect of the City’s CEQA process (Implementation Measure 1.3.1.2).

Project developments within the Planning Area are required to obtain a NPDES General Construction Permit, develop and implement a SWPPP, and implement project-specific BMPs. Under the supervision of the City staff, any applicant must comply with these requirements and the Municipal Code to ensure that their project would not violate any water quality standards or waste discharge requirements. Because these are City requirements prior to construction, any impacts would be considered less than significant. Also, the Municipal Code contains provisions for reducing water waste, thus reducing potential runoff which may contain pollutants. In addition, the proposed General Plan 2030, Resources Element Policy 1.3.1 requires development projects to prepare and implement water quality management plans that incorporate BMPs. This reinforces the NPDES regulatory requirements. Therefore, violations of water quality standards and waste discharge requirements associated

with development within the Planning Area under the General Plan 2030 are expected to be less than significant.

Impact Finding: Less than Significant.

5.8.4.2 Would the Project 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 which would not support existing land uses or planned uses for which permits have been granted?)

Impact Discussion:

In May 2008, Carollo Engineers prepared a letter report to describe the City of Victorville's supply availability to meet water demands associated with planned land uses reflecting the City's Draft General Plan Update (December 2007). Available information to support this analysis is limited to documents that projected water demands and supplies through year 2030, a reasonable duration for water system planning. Full buildout of the General Plan land uses is anticipated to occur much later than 2030.

Demands within the District are projected to increase from 24,005 acre feet per year (afy) in 2005 to 69,740 afy in 2030. These demand projections were presented for the following four areas within the City's Sphere of influence (as designated by the Local Agency Formation Commission): (1) Improvement District 1 (IDI), the former Victor Valley Water District (WVWD or District); (2) Improvement District 2 (ID2), the former Baldy Mesa Water District (BMWD); (3) Southern California Logistics Airport (SCLA); and (4) Desert Gateway Specific Plan. As such, it is noted that not all areas of the General Plan 2030 Planning Area were included within this demands analysis.

Aside from recycled water, it is assumed that State Water Project (SWP) water would be reduced during drought conditions (both single and multiple dry years), while groundwater would not be affected in the short term. The reductions of imported water are based on historical drought conditions that occurred in the period 1986 to 1992. However, more severe drought conditions may occur in the future due to climate change, resulting in greater reductions in imported supplies than assumed based on empirical data. In addition, a recent court decision that has yet to be finalized regarding water supplies pumped from the Sacramento-San Joaquin River Delta have greatly reduced the reliability of State Water Project (SWP) imported water supplies since the completion of the last Urban Water Management Plans (UWMPs) in 2005.

The City is currently pumping beyond the safe yield of the aquifer to meet its water demand, requiring replenishment fees or purchase of water rights from other agencies in the sub-basin. The District is planning projects to mitigate the additional pumping, however, pumping beyond the safe yield will be necessary until the acquisition of additional water entitlements occurs along with storage (e.g., groundwater storage) to increase the reliability of this new supply. It should also be noted that the additional groundwater pumping is expected to increase the basin overdraft and could reduce groundwater levels such that the basin capacity is reduced.

The Carollo letter report indicates that the City has planned sufficient water supply projects to meet demands through 2030 under normal, single dry year, multiple dry years, based on the following assumptions:

- Demand estimates for year 2030 are accurate.
- Target demand reductions during single and multiple dry years can be met;
- A water treatment plant is planned to treat state water project water is anticipated to come online in 2020.¹⁷
- Anticipated production will occur from ID1 and ID2 groundwater wells in excess of safe yield. This additional water will require in-basin transfers or replenishment fees.
- State water project sources are anticipated to be reduced by approximately 26% for single dry years and by approximately 61% for multiple dry years. Reduction factors were based on information in the Mojave Water Agency 2004 Regional Water Management Plan. It is assumed that the Regional Recharge and Recovery Project will not be affected due to buffering in the aquifer.
- The Regional Recharge and Recovery project (R³) will be online by 2015 and provide 12,098 afy; and
- Sufficient imported entitlements for SWP water can be secured to construct a new Water Treatment Plant (WTP) by 2020 that would deliver up to 44,806 afy (or 40 mgd) of treated water during normal years, 33,156 afy during single dry years, and 17,519 afy during multiple dry years.

The Municipal Ordinance contains provisions for water conservation and recycling in Chapter 13.60 of the City Municipal Code, *Water Conservation*. Such code provisions include chapters 13.60.030 *Drought tolerant plants*, 13.60.040 *Prohibited water uses and water waste*, 13.60.050 *Limitation on water intensive landscape and turf areas within new nonresidential facilities*, 13.60.060 *Limitations on model home and new residential development landscaping*, and 13.60.080 *Drought management plan implementation*. Water conservation reduces water use and waste, and aids in maintaining groundwater resources. Also, the potential for runoff to contain or obtain pollutants which may enter the groundwater system is reduced.

Without proper planning and conservation to meet the Planning Area's future population and land use demand, the supply of water within the aquifer may not be sufficient to keep up with

¹⁷ Victorville Water District 2005 Water Master Plan.

the consumer demands. Proposed General Plan 2030 Resources Element Goal #1 serves to provide for a sufficient and safe water supply. Objective 1.1 will reduce the rate of groundwater extraction for municipal water supply to no more than 80% of 2006 levels by 2012, and maintain that level over the long term. To support this Policy 1.1.1 will require water conservation measures for new development and major redevelopment. This policy's implementation measures offer incentives for projects that demonstrate significant conservation or innovative techniques (Implementation Measure 1.1.1.1); revise development standards in city regulations and codes to include conservations measures to be incorporated into development (Implementation Measure 1.1.1.2); and maintain xerophytic plant information available to the public (Implementation Measure 1.1.1.3). Policy 1.1.2 will penalize high volume wasteful water practices. Policy 1.1.3 will support conversions of wasteful water practices to water conserving practices, and Implementation Measure 1.1.3.1 will convert City-owned landscaping to xerophytic palettes and replace inefficient irrigation systems. Objective 1.2 will expand sources of water supply and delivery systems through alternatives to groundwater extractions. Policy 1.2.1 will support VVWA's development and expansion of recycled wastewater treatment and delivery for appropriate uses, and Implementation Measure 1.2.1.1 will conduct planning to for incorporating recycled wastewater infrastructure into the City's existing and future street network. Policy 1.2.2 will participate in regional efforts to acquire imported water from the SWP along with "water wheeling" from appropriate sources. Implementation Measure 1.2.2.1 will conduct engineering to identify turnout locations from the California Aqueduct to deliver future SWP waters. Objective 1.3 is proposed to protect ground water quality. Policy 1.3.1 requires new development and major redevelopment projects to prepare and implement water quality management plans that incorporate BMPs to minimize, control and filter construction site runoff and various forms of developed site urban runoff, prior to discharge to receiving waters. Its implementation measures support the policy by assigning qualified professionals to conduct plan checks (Implementation Measure 1.3.1.1), and to assess and mitigate impacts on surface and groundwater quality as a routine aspect of the City's CEQA process (Implementation Measure 1.3.1.2).

Other State regulations also apply to assure that sufficient water is available for new large developments. As discussed in Section 5.8.2.2 above, per SB 221, city approval of residential subdivisions that would consume an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project require an affirmative written verification of sufficient water supply. Under SB 610, water supply assessments (WSAs) must be furnished to local governments for inclusion in any CEQA documentation for certain large projects. For those projects, the WSA must be requested from the local water provider by the city considering the project at the time the city determines that CEQA is required. The WSA must include specific information, as detailed in the legislation, including an identification of existing water supply entitlements and contracts. If groundwater is anticipated as a source of water, the assessment must contain additional information.

The proposed expansion of the Victorville Water District boundaries to expand available water service to the Northern Expansion Area is expected to facilitate the control of groundwater use in the proposed northern SOI area.

While the City has planned for sufficient water supply projects to meet demands through 2030 under normal, single dry year, multiple dry years, it must be able to meet its assumptions for proper planning and conservation, including that demand estimates and target demand reductions are met; planned water treatment plants and wells are constructed, that the Regional Recharge and Recovery project (R³) will be online by 2015 and that sufficient imported entitlements for SWP water can be secured. In addition to the water conservation and recycling measures provided in the Municipal Code, with implementation of the General Plan 2030 policies and objectives for water planning, conservation and groundwater protection, potential adverse impacts of the depletion of groundwater supplies or interference with groundwater recharge would be less than significant.

Impact Finding: Less than Significant.

5.8.4.3 Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?

Impact Discussion:

A major portion of the Victorville Planning Area is located on top of a gently sloping large alluvial fan situated to the northeast of the San Bernardino Mountains and referred to as the Cajon Fan (or Victorville Fan) with the Mojave River running along the fan's eastern margin. The majority of the Planning Area is characterized by gently sloping topography of less than 9% grade. In areas dissected by an intermittent stream channel the terrain can vary with nearly vertical slopes adjacent to the Mojave River. A Slope Hazard Map, Figure 5.6-2 in the Geology and Soils Chapter, shows the topography of the Planning Area.

In compliance with NPDES permitting, construction activity is subject to the Construction General Permit which requires the development and implementation of a SWPPP which specifies BMPs that will reduce or prevent construction pollutants from leaving the site in storm water runoff and will also minimize erosion associated with the construction project. The SWPPP must contain site map(s) that show the construction site perimeter; existing and proposed structures and roadways; storm water collection and discharge points, general topography both before and after construction; and drainage patterns across the site. Additionally, the SWPPP must describe the monitoring program to be implemented.

Municipal Code Chapter 15, subpart 15.20.040 *Methods of reducing flood losses*, includes methods and provisions to: Restrict or prohibit uses which are dangerous to health, safety and property due to water or erosion hazards, or which result in damaging increases in erosion or flood heights or velocities. Code 15.20.150 *Flood-related erosion-prone areas*, subsection (e) requires that the floodplain administrator shall require permits for proposed

construction and other development and that permit applications shall be reviewed to determine whether the proposed site alterations and improvements will be reasonably safe from flood-related erosion and will not cause flood-related erosion hazards or otherwise aggravate the existing hazard. Other provisions restrict development in the floodway (15.20.130), in mudslide (i.e. mudflow) prone areas (15.20.140), flood-related erosion-prone areas (15.20.150). In addition, Chapter 17.60 of the Municipal Code – *Drainage* contains requirements for drainage and flood hazard prevention during subdivision design.

Proposed General Plan 2030 Resources Element Goal #1 serves to provide for a sufficient and safe water supply. Policy 1.3.1 requires new development and major redevelopment projects to prepare and implement water quality management plans that incorporate BMPs to minimize, control and filter construction site runoff and various forms of developed site urban runoff, prior to discharge to receiving waters. Its implementation measures support the policy by assigning qualified professionals to conduct plan checks (Implementation Measure 1.3.1.1), and to assess and mitigate impacts on surface and groundwater quality (inferring also alteration of drainage patterns and stream courses) as a routine aspect of the City's CEQA process (Implementation Measure 1.3.1.2).

It is also noted that per the Resources Element, Goal #4, Conservation of Important Habitat, Objective 4.2: Permanent Conservation of Mojave River Corridor Ecological Values, Policy 4.2.1, proposed to generally prohibit private or public development projects or major infrastructure facilities on land within the Mojave River Corridor. While this policy focuses on minimizing habitat that supports rare, threatened and/or endangered plants or wildlife, a secondary result is that the drainage pattern and alteration of the course of the Mojave River will not be altered. Refer to Section 4.4 Biological Resources for more information on this goal, objective and policy.

Project developments within the Planning Area are required to obtain a NPDES General Construction Permit, develop and implement a SWPPP, and implement a project-specific BMPs. Under the supervision of the City staff, any applicant must comply with these requirements and with the applicable provisions of the Municipal Code to ensure that their project would not result in substantial erosion or siltation on- or off-site. Because these are City requirements prior to construction, any impacts would be considered less than significant. In addition, the proposed General Plan 2030, Resources Element Policy 1.3.1 requires development projects to prepare and implement water quality management plans that incorporate BMPs. This reinforces the NPDES regulatory requirements. Therefore, alteration of existing site drainage patterns and/or alteration of stream or river courses that may result in substantial erosion or siltation impacts from development within the Planning Area under the General Plan 2030 are expected to be less than significant.

Impact Finding: Less than Significant

5.8.4.4 Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration

of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

Impact Discussion:

As discussed above in Section 5.8.4.3, the majority of the Planning Area is characterized by gently sloping topography of less than 9% grade. Steep terrain typically occurs in areas dissected by an intermittent stream channel, and nearly vertical slopes occur adjacent to the Mojave River.

Construction activity is subject to the NPDES Construction General Permit which requires the development and implementation of a SWPPP which specifies BMPs that will reduce or prevent construction pollutants from leaving the site in storm water runoff and will also minimize erosion associated with the construction project. The SWPPP must contain site map(s) that show the construction site perimeter; existing and proposed structures and roadways; storm water collection and discharge points, general topography both before and after construction; and drainage patterns across the site. Additionally, the SWPPP must describe the monitoring program to be implemented.

Chapter 15.20 of the Municipal Code, *Flood Damage Prevention*, contains methods of preventing and reducing flood hazards, and Title 18, Zoning, Chapter 18.46 of the Municipal Code – *FP Conservancy and Flood Plain District*, provides zoning to assure safety in FP zoned areas. In Code chapter 15.20.040, *Methods of reducing flood losses*, subpart (a) restricts or prohibits uses which are dangerous to health, safety and property due to water or erosion hazards, or which result in damaging increases in erosion or flood heights or velocities; (b) requires that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction; and (c) control the alteration of natural floodplains, stream channels, and natural protective barriers, which help accommodate or channel flood waters. Chapter 17.60 of the Municipal Code – *Drainage* contains requirements for drainage and flood hazard prevention during subdivision design. Requirements for Design Flood Flows, Drainage Channel and Conduits, Danger of Inundation, Hydraulic Design, Catchbasin Inlet, and Carrying of Water across Streets are addressed in Chapters 17.60.020 through 17.60.070.

Proposed General Plan 2030 Resources Element Goal #1, Policy 1.3.1 requires new development and major redevelopment projects to prepare and implement water quality management plans that incorporate BMPs to minimize, control and filter construction site runoff and various forms of developed site urban runoff. Its implementation measures support the policy by assigning qualified professionals to conduct plan checks (Implementation Measure 1.3.1.1), and to assess and mitigate impacts on surface and groundwater quality as a routine aspect of the City's CEQA process (Implementation Measure 1.3.1.2). This infers that

alteration of drainage patterns and stream courses with any potential for increased runoff and potential flooding would also be addressed.

Proposed General Plan 2030 Safety Element Goal #1, protection from hazards – protect the community from natural and man-made hazards. Policy 1.1.1 serves to develop a database of potential hazard areas, including their location, scope and potential severity. Implementation Measure 1.1.1.2 will delineate FEMA flood designations on the General Plan Land Use Map. Because there is a greater potential for flooding in certain areas, identification of flood prone areas prior to planning, and in conjunction with plan check will help identify areas that may be subject to increased runoff and flooding from any alteration of drainage pattern.

Project developments within the Planning Area are required to obtain a NPDES General Construction Permit, develop and implement a SWPPP, and implement a project-specific BMPs. Under the supervision of the City staff, any applicant must comply with these requirements to ensure that their project would not result in a substantial increase in surface runoff that would result in flooding on- or off-site. In addition the Municipal Code contains several measures to control against flooding including increased runoff. Because these are City requirements prior to construction, any impacts would be considered less than significant.

In addition, the proposed General Plan 2030, Resources Element Policy 1.3.1 requires development projects to prepare and implement water quality management plans that incorporate BMPs. This reinforces the NPDES regulatory requirements. Also, Safety Element Policy 1.1.1 serves to develop a database of potential hazard areas, and Implementation Measure 1.1.1.2 will delineate FEMA flood designations. These will identify areas that may be subject to increased runoff and flooding from any alteration of drainage pattern. Therefore, alteration of existing site drainage patterns and/or alteration of stream or river courses that may result in a substantial increase in surface runoff and flooding impacts from development within the Planning Area under the General Plan 2030 are expected to be less than significant.

Impact Finding: Less than Significant.

5.8.4.5 Would the Project create or contribute runoff water which would exceed the capacity of existing or planning stormwater drainage systems or provide substantial additional sources of polluted runoff?

Impact Discussion:

PB Engineers prepared the “City of Victorville General Plan Infrastructure Summary” dated May 2008. The report provides an overview of existing drainage infrastructure and where possible deficiencies occur. The evaluation is based on a 2007 site visit of existing drainage

facilities and evaluation of the status of existing need, future need and proposed improvements. Hydrology calculations were conducted to determine the runoff for each local basin within the Victorville city limits.

PB determined that only a few regional facilities have been constructed since the 1992 Master Plan of Drainage was published, and the City of Victorville is deficient in meeting regional drainage facility demand. There are several storm drain projects that are still proposed, but have not yet been constructed. During their site visit they found that several of the existing facilities were not connected to any downstream facilities and discharge to open-unlined channels. Also, several facilities that were constructed appeared to be incomplete, such as missing liners in the bottom of the channel, or channels running through a golf path on a golf course. In these cases, the facilities may erode and not be adequate in years to come. For the local facilities that have been constructed, the calculations provided by PB were used as a guideline to compare what should have been in the ground as of 2005 against future needs. PB concludes that given the new development being constructed throughout Victorville, it is inevitable that an increase in flow will occur and larger pipe sizes will have to be constructed.

The existing and proposed drainage infrastructure is insufficient to accommodate growth projected by the General Plan 2030. Future growth will exceed the capacity of planned drainage systems resulting in uncontained runoff including sources of polluted runoff. The impact is significant.

Municipal Code Chapter 6.30.010, *Establishment of a storm drainage fund*, creates procedures for storm drainage fund collection. The moneys received into the storm drainage collection account shall be used for storm drainage acquisition, construction, reconstruction, maintenance, operation, administration and management, the payment of debt service and the maintenance of an adequate working reserve for such storm drainage facilities.

Municipal Code Chapter 13.60.040 *Prohibited water uses and water waste*, subpart (h) states that: It shall be unlawful for any water user to willfully or negligently permit or cause the escape or flow of irrigation water in such quantity as to cause flooding, impede vehicular or pedestrian traffic, create a hazardous condition to such traffic or cause damage to public or private rights of way through failure or neglect to properly operate or maintain any irrigation structure, delivery ditch or waste ditch.

Proposed General Plan 2030 Land Use Element Goal #2 encourages a diversified economic base, including goals, objectives, policies, and implementation measures that apply to infrastructure. Objective 2.1, Policy 2.1.3 support Victorville as a major business and commerce center and encourage revitalization. The implementation measure serves to pursue grant monies and other funding sources for public infrastructure improvements (Implementation Measure 2.1.3.2). Policy 2.1.4 serves to consider annexations to improve the City's economic base and contribute to quality development. Within this policy implementation measures will evaluate all proposed annexations to determine the urban services necessary and whether or not the revenues from the annexation area will pay for those services (Implementation Measure 2.1.4.1), and evaluate existing infrastructure in

prospective annexation areas to determine the costs necessary to bring such infrastructure up to City standards (Implementation Measure 2.1.4.2). Goal #3 provides for ample City services including infrastructure. Objective 3.1 serves to permit development in appropriate land use areas and provide for infrastructure. Policy 3.1.1 provides mechanisms through which development can pay the cost of its infrastructure and services needs. The policy's implementation measures serve to collect and apply development fees to pay for infrastructure as identified in the capital improvement program (Implementation Measure 3.1.1.1), review and add projects to the capital improvement plan as necessary (Implementation Measure 3.1.1.2), require new development to pay the capital costs of facilities to serve the developments (Implementation Measure 3.1.1.4), and continue to contact special districts as necessary when new projects are proposed to ensure service capability to serve the new projects (Implementation Measure 3.1.1.5).

In addition to the General Plan 2030 Land Use Element goals, objectives, policies and implementation measures, and Municipal Code sections, Mitigation Measures HWQ-1 through HWQ-3 are recommended for inclusion to the Project to ensure that drainage facilities for new projects through the General Plan 2030 period are evaluated. The mitigation measures are presented in Section 5.8.6, below, and address the requirements for the evaluation of drainage requirements for individual projects with developer payment responsibility, regional public projects, and updating of the 1992 Master Plan of Drainage.

Future growth projected by the proposed General Plan 2030 will exceed the capacity of planned drainage systems resulting in uncontained runoff including sources of polluted runoff. The existing 1992 Master Plan of Drainage is outdated. The proposed General Plan 2030 Land Use Element contains goals, objectives, policies and implementation measures which evaluate the need for project specific infrastructure improvements (including new development, redevelopment, and annexation), methods of assuring and acquiring adequate sources of development fees are collected, that improvements are planned for in capital improvement programs, and that contacts with special districts continues as necessary for new developments. The Municipal Code provides means for procedures for storm drainage fund collection, and identifies failure or neglect to properly operate or maintain any irrigation structure as unlawful. In addition, Mitigation Measures HWQ-1 through HWQ-3 address the requirements for the evaluation of drainage requirements for individual/local and regional projects with determination of payment responsibility, and proposed updating of the 1992 Master Plan of Drainage. With implementation of the General Plan 2030 goals for assuring infrastructure combined with the Municipal Ordinance codes and mitigation measures, impacts of runoff water which would exceed the capacity of existing and planned stormwater drainage systems or add additional sources of polluted runoff to the Planning Area under the General Plan 2030 are expected to be less than significant.

Impact Finding: Less than significant with mitigation.

5.8.4.6 Would the Project 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?

Impact Discussion:

As discussed in Section 5.8.1.1, the principal flood hazard to the developed portions of the Victorville Planning Area is from the Mojave River. In the event of a 100-year flood, floodwater will be confined to the river's flood plain. Some floodplain areas may be subject to flooding in the event of a 100-year flood, assuming base flood elevations on the Flood Insurance Rate Maps (FIRMs) (see Figure 5.8-1) are correct. Flood control improvements, including numerous levees and the West Fork Dam, reduce the potential for this flooding.

There are several intermittent streams that drain the Planning Area and empty into the Mojave River. Two intermittent streams, Ossom Wash and West Fork Ossom Wash, drain a large area of the City west of the I-15 Freeway. Three smaller unnamed intermittent streams drain the areas south of Southern California Logistics Airport. The Bell Mountain Wash is located north of the Mojave River and drains a portion of the North Mojave Planning Area. The Oro Grande Wash originates in the San Gabriel Mountains near the Cajon Pass, where it parallels Interstate 15 before crossing to the east, just north of La Mesa and Nisqualli Roads. There is a potential for flooding from all of these streams in the event of a 100-year flood.

The Municipal Code contains provisions to safeguard the public and structures from flood hazards. Chapter 15.20 of the Municipal Code, *Flood Damage Prevention*, contains methods of preventing and reducing flood hazards, including: Chapter 15.20.040 *Methods of reducing flood losses*. This chapter includes methods and provisions to: (a) Restrict or prohibit uses which are dangerous to health, safety and property due to water or erosion hazards, or which result in damaging increases in erosion or flood heights or velocities; (b) Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction; (c) Control the alteration of natural floodplains, stream channels, and natural protective barriers, which help accommodate or channel flood waters; (d) Control filling, grading, dredging and other development which may increase flood damage; and (e) Prevent or regulate the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards in other areas. Other chapters of Title 15 also apply including Chapter 15.060 which establishes City compliance with FEMA's flood insurance mapping. Title 18, Zoning, Chapter 18.46 of the Municipal Code – *FP Conservancy and Flood Plain District*, provides zoning to assure safety in FP zoned areas including: (1) To prohibit occupancy or the encroachment of any structure, improvement or development that would obstruct the natural flow of flood waters within a designated floodway on the flood plain; (2) To keep developments in the remainder of the flood plain above the design flood flow elevation; and (3) To prevent economic loss caused by excessive flooding and to prevent loss of life or property.

Within the proposed General Plan 2030 Resources Element Goal #3, serves to protect the community from flooding and geology hazards. Objective 3.1 provides that development be

located outside of areas exposed to flood hazards, and Policy 3.1.1 prohibits development within flood hazard areas adjacent to the Mojave River. Implementation measures require that (1) the City maintain accurate and up-to-date maps of areas exposed to 100-year and 500-year flood hazards, (Implementation 3.1.1.2) and (2) that areas located within 100-year and 500-year flood hazards shall be designated for Open Space-Natural Hazards on the Land Use Policy Map and on the Conservation/Open Space Map. Such lands shall be zoned to correspond to these general plan policy designations, including strong restrictions on land development projects (Implementation Measure 3.1.1.3).

Within the proposed General Plan 2030 Safety Element Goal #1 serves to protect the community against natural and man-made hazards, and Objective 1.1 will restrict land uses in areas susceptible to such hazards. Policy 1.1.1 provides that an accurate and complete database that identifies the locations, scope and potential severity of natural and man-made hazards be maintained. Implementation Measure 1.1.1.2 serves to delineate the 100-year and 500-year flood designations of the FEMA FIRM on the General Plan Land Use Map as Open Space and on the Zoning Map as Flood Plain. Policy 1.1.2 will develop and maintain strategies to restrict development in areas susceptible to flooding hazards. Its implementation measures (1) apply zoning regulations in Flood Plain areas including use restrictions such as prohibition of residential development and other improvements, or structures or developments which would obstruct the natural flow of floodwaters or endanger life or property (Implementation Measure 1.1.2.1), and prohibit improvements, structures, or developments within the 100-year flood plain which would obstruct the natural flow of floodwaters or which would endanger life or property (Implementation Measure 1.1.2.2).

Project developments within the Planning Area would be subject to flooding, damage and public safety issues if located in the 100-year flood zone. The Municipal Code contains provisions to safeguard the public and structures from flood hazards including restrictions on uses which are dangerous to health, safety and property, controls on alterations of natural floodplains, stream channels, and natural flood barriers, and prohibiting development in 100-year flood zone areas as identified by FEMA FIRM and on City Land Use and Zoning maps. Within the proposed General Plan 2030 Resources and Safety Elements, goals are provided to protect the community from flooding and geology hazards. The objectives and policies reinforce the Municipal Code by providing that development be located outside of flood hazard areas, that maps be updated to reflect the 100-year flood hazards, and that those areas be designated for Open Space-Natural Hazards on the Land Use Policy Map and on the Conservation/Open Space Map. The proposed General Plan 2030 also requires delineation of the 100-year flood designations of the FEMA FIRM on the General Plan Land Use Map as Open Space and on the Zoning Map as Flood Plain, and to maintain strategies to restrict development in flood hazard areas.

Figure 5.8-2, Flood Hazards, provides information for the incorporated and existing SOI within the Planning Area. Because the proposed Northern Expansion Area is largely undeveloped, flood hazard information for this proposed SOI is not currently available. The proposed General Plan 2030 Resource Element provides measures to ensure that flood hazard information is updated and development in potential flood hazard areas is restricted

(reference Policies 1.1.1 and 1.1.2 and their related Implementation Measures. These measures are expected to ensure that flood hazard conditions in the proposed Northern Expansion Area are properly identified and addressed prior to development. Therefore, impacts associated with the placement of 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 under the General Plan 2030 are expected to be less than significant.

Impact Finding: Less than Significant.

5.8.4.7 Would the Project place within a 100-year flood hazard area structures which would impede or redirect flood flows?

Impact Discussion:

As discussed in Section 5.8.4.6, the Mojave River is the principal flood hazard to the developed portions of the Victorville Planning Area is from. Even though during a 100-year flood, floodwaters will be confined to the river's flood plain, some developed areas may be threatened. Flood control improvements, including numerous levees and the West Fork Dam, reduce the potential for this flooding.

The Municipal Code contains provisions to safeguard the public and structures from flood hazards. Chapter 15.20 of the Municipal Code, *Flood Damage Prevention*, contains methods to avoid placing structures in the 100- year flood hazard area which would impede or redirect flood flows, including: section 15.20.040 *Methods of reducing flood losses*. This chapter includes: subpart (e) Prevent or regulate the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards in other areas. Also section 15.20.130 *Floodways* includes that compliance with FEMA (Section 15.20.060(b)) are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of flood waters which carry debris, potential projectiles and erosion potential, which can result in the impedance or redirection of flows, this code chapter applies provisions including: (a) Prohibit encroachments, including fill, new construction, substantial improvement and other development unless certification by a registered professional engineer or architect is provided demonstrating that encroachments shall not result in any increase in the base flood elevations during the occurrence of the base flood discharge. (b) If subsection (a) of this section is satisfied, all new construction and substantial improvement and other proposed new development shall comply with all other applicable flood hazard reduction provisions of Sections 15.20.080 through 15.20.150. Title 18, Zoning, Chapter 18.46 of the Municipal Code – *FP Conservancy and Flood Plain District*, provides zoning to assure safety in FP zoned areas including: (1) To prohibit occupancy or the encroachment of any structure, improvement or

development that would obstruct the natural flow or flood waters within a designated floodway on the flood plain.

As discussed above in Section 5.8.4.6, within the proposed General Plan 2030 Resources Element Goal #3 and Safety Element Goal #1 are set to protect the community from flooding and geology hazards, and natural and man-made hazards. These goals and their supporting objectives, policies and implementation measures focus on placing development outside of areas exposed to flood hazards, maintain maps of areas exposed to 100-year and 500-year flood hazards, designate areas located within flood hazard areas as Open Space-Natural Hazards on the Land Use Policy Map and on the Conservation/Open Space Map with corresponding zoning and general plan policy designations. Safety Element, Policy 1.1.2 will develop and maintain strategies to restrict development in areas susceptible to flooding hazards. Its implementation measures (1) apply zoning regulations in Flood Plain areas including use restrictions such as prohibition of residential development and other improvements, or structures or developments which would obstruct the natural flow of floodwaters or endanger life or property (Implementation Measure 1.1.2.1), and prohibit improvements, structures, or developments within the 100-year flood plain which would obstruct the natural flow of floodwaters or which would endanger life or property (Implementation Measure 1.1.2.2).

Impedance or redirection of flood flows have the potential to flood areas outside the delineated flood zones, and result in property damage and public safety concerns. The Municipal Code contains provisions to safeguard the public and structures from flood hazards caused by redirected flows, including restrictions on uses which are dangerous to health, safety and property, controls on alterations of natural floodplains, stream channels, and natural flood barriers, and prohibiting development in 100-year flood zone areas as identified by FEMA FIRM and on City Land Use and Zoning maps. Within the proposed General Plan 2030 Resources and Safety Elements, goals are provided to protect the community from flooding hazards caused by redirected flood flows. Therefore, impacts associated with the placement of structures within a 100-year flood hazard area which would impede or redirect flood flows under the General Plan 2030 are expected to be less than significant.

Impact Finding: Less than Significant.

5.8.4.8 Would the Project 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?

Impact Discussion:

The Mojave River and its tributaries have three dams that store water and provide some flood control for the reaches in the Mojave Desert. Potential threats of dam inundation to the Victorville Planning Area could occur if the dams at Silverwood or Arrowhead Lakes failed and emptied into the Mojave River through Deep Creek. Considerable inundation might also occur from failure of the Mojave River Forks Dam. Due to the distance to the nearest developed areas, and precautions built into the holding basins below Lake Silverwood and in the Deep Creek area just before the water enters the Mojave River, the probability of extreme flood is unlikely. Flood control improvements, including numerous levees and the West Fork Dam, reduce the potential for flooding.

As discussed in Section 5.8.4.6, the Municipal Code contains provisions to safeguard structures from placement within the 100-year flood hazard area. These same code provisions also safeguard the public and structures from significant risk from flooding as a result of failure of a levee or dam. Chapter 15.20 of the Municipal Code, *Flood Damage Prevention*, contains methods of preventing and reducing flood hazards, including: section 15.20.040 *Methods of reducing flood losses*. Provisions include to restrict or prohibit uses dangerous to health, safety and property due to flood hazards; require flood vulnerable uses be protected against flood damage at initial construction; control the alteration of natural floodplains, stream channels, and natural protective barriers; control filling, grading, dredging and other development; and, prevent or regulate the construction of flood barriers. Other chapters of Title 15 also apply including Chapter 15.060 which establishes City compliance with FEMA's flood insurance mapping. Chapter 18.46 of the Municipal Code – *FP Conservancy and Flood Plain District*, provides zoning to assure safety in FP zoned areas, including to prohibit occupancy or placement of any structure, improvement or development that would obstruct the natural flood flow within a designated floodway and to prevent loss of life or property.

Within the proposed General Plan 2030 Resources Element Goal #3 serves to protect the community from flooding and geology hazards. Objective 3.1 provides that development be located outside of areas exposed to flood hazards, and Policy 3.1.1 and its implementation measures prohibit development within flood hazard areas adjacent to the Mojave River, and require that flood hazard mapping be kept up to date with those areas designated for Open Space-Natural Hazards on the Land Use Policy and the Conservation/Open Space Maps.

Within the proposed General Plan 2030 Safety Element Goal #1 serves to protect the community against natural and man-made hazards, and Objective 1.1 will restrict land uses in areas susceptible to such hazards. Policy 1.1.1 and its implementation measure provides that an accurate and complete database identify locations, scope and potential severity of natural and man-made hazards, that FEMA FIRM flood designations be reflected on the General Plan Land Use Map as Open Space and on the Zoning Map as Flood Plain. Policy 1.1.2 and its implementation measures serve to develop and maintain strategies to restrict development in areas susceptible to flooding hazards by applying zoning regulations in Flood Plain, and by prohibiting improvements, structures, or developments within the 100-year flood plain which would obstruct the natural flood flow or endanger life or property. Objective 1.2 and its Policy 1.2.1 requires that the planning process identify and mitigate geologic hazards prior to granting discretionary land use plan or project approvals. Implementation Measures 1.2.1.1

requires geologic investigations and CEQA compliance, in areas where the City's Building Official determines there is a possible threat of geologic issues. Implementation Measures 1.2.1.2 and 1.2.1.3 require compliance with California Building Code and slope protection combining district zoning regulations to development projects proposed on areas with slopes in excess of 15 percent, to protect against erosion on slopes greater than five feet in height.

Project developments within the Planning Area would be subject to flooding, damage and public safety issues from flooding including the loss of a dam or levees. The Municipal Code contains provisions to safeguard the public and structures from flood hazards including restrictions on uses which are dangerous to health, safety and property, controls on alterations of natural floodplains, stream channels, and natural flood barriers, and prohibiting development in 100-year flood zone areas as identified by FEMA FIRM and on City Land Use and Zoning maps. Within the proposed General Plan 2030 Resources and Safety Elements, goals are provided to protect the community from flooding and geology hazards. The proposed General Plan 2030 also requires delineation of the 100-year flood designations of the FEMA FIRM on the General Plan Land Use Map as Open Space and on the Zoning Map as Flood Plain, and to maintain strategies to restrict development in flood hazard areas. Therefore, impacts associated with the potential to expose people or structure to a risk of loss, injury, or death involving flood, including flooding as a result of the failure of a levee or dam under the General Plan 2030 are expected to be less than significant.

Impact Finding: Less than Significant.

5.8.4.9 Would the Project create hazards due to inundation by seiche or mudflow?

Impact Discussion:

The Planning Area is not subject to inundation by seiche. The majority of the Planning Area is characterized by gently sloping topography of less than 9% grade. In areas dissected by an intermittent stream channel the terrain can vary with nearly vertical slopes adjacent to the Mojave River. A Slope Hazard Map, Figure 5.6-2 in the Geology and Soils Chapter, shows the topography of the Planning Area. These areas would be potentially vulnerable to mudflow during floods, or during heavy storms. Areas denuded by wildfire are particularly susceptible to mudflow during storms.

The Municipal Code contains provisions to protect against mudflow in Chapter 15.20 of the Municipal Code, *Flood Damage Prevention*. Chapter 15.20.140 *Mudslide (i.e. mudflow) prone areas*. Chapter parts include: (a) The floodplain administrator shall review permits for proposed construction of other development to determine if it is proposed within a mudslide area. (b) Permits shall be reviewed to determine that the proposed site and improvement will be reasonably safe from mudslide hazards. Factors to be considered in making this

determination include but are not limited to the: (1) Type and quality of soils; (2) Evidence of ground water or surface water problems; (3) Depth and quality of any fill; (4) Overall slope of the site; and (5) Weight that any proposed development will impose on the slope. (c) Within areas which may have mudslide hazards, the floodplain administrator shall require that: (1) site investigation and further review be made by persons qualified in geology and soils engineering; (2) The proposed grading, excavation, new construction and substantial improvement be adequately designed and protected against mudslide damages; (3) The proposed grading, excavations, new construction and substantial improvement not aggravate the existing hazard by creating either on-site or off-site disturbances; and (4) Drainage, planting, watering and maintenance not endanger slope stability.

As discussed above in Section 5.8.4.6, within the proposed General Plan 2030 Resources Element Goal #3 and Safety Element Goal #1 are set to protect the community from flooding and geology hazards, and natural and man-made hazards. These goals and their supporting objectives, policies and implementation measures focus on placing development outside of areas exposed to flood hazards, maintain maps of areas exposed to 100-year and 500-year flood hazards, designate areas located within flood hazard areas as Open Space-Natural Hazards on the Land Use Policy Map and on the Conservation/Open Space Map with corresponding zoning and general plan policy designations. Objective 1.2 and its Policy 1.2.1 requires that the planning process identify and mitigate geologic hazards prior to granting discretionary land use plan or project approvals. The implementation measures requires geologic investigations and CEQA compliance, in areas where the City's Building Official determines there is a possible threat of geologic issues including mudslides (Implementation Measure 1.2.1.1). Compliance is required with California Building Code and slope protection combining district zoning regulations to development projects proposed on areas with slopes in excess of 15 percent, to protect against erosion on slopes greater than five feet in height (Implementation Measures 1.2.1.2 and 1.2.1.3).

Resource Element Goal #3, Objective 3.2 serves to assure that new development is located and designed to avoid or mitigate seismic and geologic hazards (including slopes). Policy 3.2.1 provides that the results of preliminary geotechnical investigations shall be considered by the City's decision-makers, prior to approval of all discretionary actions to allow for public or private development projects. Its Implementation Measure 3.2.1.1 serves to assure that preliminary geotechnical investigations and reports are conducted for all new development and major redevelopment projects, to identify seismic and other geologic hazards, and to define measures to eliminate or reduce such hazards to an acceptable level.

In summary, mudflows have the potential to result in property damage and public safety concerns. The Municipal Code contains provisions to safeguard the public and structures from mudflows, including permit and engineering reviews to assure that siting development and construction in a mudslide prone area is safe. Within the proposed General Plan 2030, Resource Element, Goal #3 and Safety Element Goal #1, assure that new development is located and designed to avoid or mitigate hydrology and geologic hazards that could result in mudslides, including requiring geotechnical investigations, mitigation for potential hazards, and

regulatory compliance prior to project approvals. Therefore, impacts associated mudflows under the General Plan 2030 are expected to be less than significant.

Impact Finding: Less than Significant.

5.8.5 Cumulative Impacts

Impact Discussion:

Compliance with and conformity to adopted plans and policies, including those within the General Plan 2030, is intended to ensure that future development occurs in a manner compatible with adjacent and surrounding planned land uses. The Resources Element, Safety Element and the Land Use Element of proposed General Plan 2030 contain provisions intended to identify and reduce impacts of polluted runoff, groundwater availability and recharge, and flood hazards which may threaten the health, safety, and property of the residents living and working in the Victorville Planning Area. It emphasizes water conservation and recycling, development of alternative sources of water, protection of groundwater quality, restricting development in flood-prone areas, and providing sufficient storm drainage infrastructure. Provisions of the Municipal Code also serve to reinforce most of the proposed General Plan 2030 provisions. To further support these provisions, Mitigation Measures HWQ-1 through HWQ-3 have been formulated in order to ensure that drainage facilities for new projects through the General Plan 2030 period are evaluated, payment methods are assured and that the Master Plan of Drainage is updated. As a result, further intensification of the Planning Area and region is not expected to create a significant adverse cumulative impact on the region's existing hydrology and water quality.

Impact Finding: Less than Significant.

5.8.6 Mitigation Measures

HWQ-1: All local or private project drainage facilities to be constructed shall be evaluated on an individual basis by the City Engineering Department. The Department shall also determine the amount of responsibility for costs of improvements by the developers for local or private project facilities on private property.

HWQ-2: All regional or public drainage facilities to be constructed shall be evaluated on an individual basis by the City Engineering Department. The Department shall also determine the amount of responsibility for costs of improvements to be borne by project proponents, whether public and/or private entities.

HWQ-3: The City Engineering Department shall update the 1992 Master Plan of Drainage to incorporate the grow projections and land use patterns per General Plan 2030.

5.8.7 Level of Significance After Policies/Mitigation Measures – Less than Significant.

5.9 LAND USE AND PLANNING

This section addresses issues related to plans and policies governing existing and future land use and development conditions within the Planning Area. Land use impacts can be either direct or indirect. Direct impacts are those that result in land use incompatibilities, division of neighborhoods or communities, or interference with other land use plans, including habitat or wildlife conservation plans. This section focuses on direct land use impacts. Indirect impacts are secondary effects resulting from land use policy implementation, such as an increase in demand for public utilities or services, or increased traffic on roadways. Indirect impacts are addressed in other sections of this EIR.

This analysis focuses on land use and planning impacts associated with the adoption and implementation of the proposed General Plan 2030. The land use and planning impacts of the other Project components, including extension of the City Sphere of Influence to include the Northern Expansion Area, rezoning of the County islands and City's existing northern SOI, and deletion of Midtown and Southdown Specific Plans are also considered. When required appropriate mitigation measures are recommended.

5.9.1 Existing Conditions

5.9.1.1 Existing General Plan

As discussed in Section 4.1, physical development in the City of Victorville is currently governed by the City's existing General Plan. The existing General Plan disaggregates the City and its sphere of influence according to the land use designations listed in Table 5.9-1 (also presented as Table 4-1 in Section 4.1), which summarizes the current distribution of Victorville area by existing General Plan land use designation and by percent of City total acreage. Within the City boundaries, there are three unincorporated County islands; these and the existing sphere of influence are also summarized in the Table.

Residential is the predominant land use, comprising 22,532 acres (48%) of General Plan designated land plus an estimated 73.0% of the Specific Plan designated land. Residential also comprises over 57% of the County island land located within the City boundaries.

Specific Plan is the next prevalent land use, comprising 12,245 (26%) of the existing General Plan area.

Commercial, the third most prominent land use, comprises 5,603 acres (12%) of General Plan land within the City boundaries, plus 39 acres within the County islands.

**Table 5.9-1
Existing General Plan Land Use by Designation, Acreage and % of Total Acreage
For City and County Islands**

Land Use Category	Existing General Plan Acres	% of Existing General Plan Land Use to Total Existing General Plan	Existing SOI + County Islands	% of Existing SOI + Co. Islands Land Use to Total Existing SOI + Co. Islands
Rural Residential	357	1%	0	0%
Very Low Density	5,260	11%	7,636	50%
Low Density	14,239	30%	991	6%
Medium Density	874	2%	0	0%
High Density	1,724	4%	12	0%
Mixed Density	78	0%	0	0%
Subtotal Residential	22,532	48%	8,639	57%
Office Professional	433	1%	0	0%
Commercial	5,603	12%	39	0%
Subtotal Commercial	6,036	13%	39	0%
Light Industrial	2,194	5%	98	1%
Heavy Industrial	1,671	4%	0	0%
Subtotal Industrial	3,865	8%	98	1%
Mixed Use-High Density	-	0%	0	0%
Public/Institutional	708	2%	176	1%
Open Space	1,405	3%	1,903	12%
Subtotal Public Institutional & Open Space	2,113	5%	2079	14%
Specific Plan	12,245	26%	0	0%
Urban Conservation	0	0	4,405	29%
TOTAL ACREAGES	46,791	100%	15,260	100%

5.9.1.2 Existing Land Uses

Approximately 48% of the incorporated City area is currently developed. Table 5.9-2 (also presented as Table 4-2 in Section 4.1) summarizes the currently developed Victorville land by existing General Plan land use designation, acreage and by percent of total area currently developed.

Residential is the predominant existing land use, comprising 9,281 acres (41%) of the existing City boundaries, plus the three unincorporated County islands. Specific Plan is the next prevalent land use, comprising 9,281 acres (41%) of the existing area. Most of the Specific Plan area is developed with residential land uses. Commercial, the third most prominent land use, comprises 1,403 acres (6%) of the existing area. The balance of the existing land uses are a mix of industrial, open space and office.

Table 5.9-2
Existing General Plan Land Use by Designation by Existing Developed Acreage and % of Total Current Developed Acreage

Existing General Plan Land Use Designation	Existing Developed Acreage	% of Total Current Developed Acreage
Rural Residential	97	0%
Very Low Density Residential	4068	18%
Low Density Residential	4276	19%
Medium Density Residential	250	1%
High Density Residential	590	3%
Mixed Density Residential	53	0%
Subtotal	9281	41%
Office Professional	51	0%
Commercial	1404	6%
Light Industrial	130	1%
Heavy Industrial	394	2%
Public/Institutional	701	3%
Open Space	1282	6%
Specific Plan (SP)	9281	41%
Urban Conservation	0	0%
Totals	22577	100%

5.9.2 Regulatory Framework

5.9.2.1 Zoning Code

Zoning for Victorville is provided by Chapter 18 of its Municipal Code. The zoning ordinance is based upon the City General Plan with respect to the general pattern of present and future land uses and the principles for future land development expressed in that plan. The zoning ordinance is intended to give moderate guidance to the location of such development without unduly restricting its location or extent.

5.9.2.2 Specific Plans

Specific Plans typically serve as both General Plan and zoning document for a particular area, providing more focused guidance and regulation. They generally include a land use plan, circulation plan, infrastructure plan, development standards, design guidelines, phasing plan, financing plan, and implementation plan.

Victorville currently has 14 Specific Plans, governing land use development in designated areas throughout the City. These include the following: Rancho Tierra, Talon Ranch, Old Town, Brentwood, Midtown, Mesa Verde, Fox Fire Ranch, West Creek, Southdown Industrial, Vista Verde, Southern California Logistic Airport, The Crossings, Mojave Vistas, and Parkview.

5.9.2.3 Subdivision Ordinance

The City of Victorville Subdivision Ordinance ensures that all subdivisions within the City are designed with the infrastructure necessary to support the proposed development, including road access, drainage, parks, school sites, utilities and related easements, and lot size and configuration.

5.9.2.4 Redevelopment Plans

Redevelopment Plans are tools for implementing the provisions of the General Plan. Through redevelopment, cities are empowered to participate in various programs and activities aimed at turning blighted, deteriorating areas into revitalized, productive community assets. Pursuant to State of California Community Redevelopment Law, Redevelopment Plans also are required to be consistent with General Plan land use policies.

Victorville currently manages three Redevelopment Plans. These include the following: Bear Valley Road Redevelopment Project Area; Old Town/Midtown Redevelopment Project Area and Victor Valley Redevelopment Project Area

5.9.2.5 Southern California Association of Governments (SCAG) Regional Plans and Policies

SCAG Regional Comprehensive Plan and Guide: The Regional Comprehensive Plan and Guide (RCPG) serves as a policy document that sets broad goals for the southern California region and identifies strategies for agencies at all levels of government to use in guiding their decision-making with respect to significant issues and changes, including growth management. The RCPG contains policies on Strategy, the Economy, Growth Management, Mobility (transportation), Air Quality, Housing, Human Resources and Services, Finance,

Open Space and Conservation, Water Resources, Water Quality, Energy, Hazardous Waste Management, Integrated Solid Waste Management and Plan Implementation.

Specific RCPG policies applicable to the proposed project (as identified by SCAG) are listed in the project impacts discussion of this section, along with a comparison of the project with each of the policies.

SCAG Southern California Compass Growth Visioning Program: In an effort to maintain the region's prosperity, continue to expand its economy, house its residents affordably, and protect its environmental setting as a whole, SCAG has brought together the goals and ideas of interdependent sub-regions, counties, cities, communities, and neighborhoods. This process is called Southern California Compass (Compass), and the result is a shared "Growth Vision" for Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura Counties. SCAG began Compass in 2002, spearheaded by the Growth Visioning Subcommittee, which consists of civic leaders from throughout the region. Creating a shared regional vision is an effective way to begin addressing issues, such as congestion and housing availability, which may threaten the region's livability.

5.9.3 Thresholds of Significance

Significant impacts relative to aesthetic resources are evaluated in this section based on Appendix G of the CEQA Guidelines. Implementation of the proposed project may have a significant adverse impact if it would do any of the following:

- 1) Physically divide an established community.
- 2) 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?
- 3) Conflict with any applicable habitat conservation plan or natural community conservation plan?

5.9.4 Project Impacts

General Plan 2030 Provisions: Pursuant to Section 65302(a) of the Government Code, the Land Use Element of the proposed General Plan 2030 lays the foundation for the type, amount and location of future development in the Victorville Planning Area. This foundation is described graphically in the proposed Land Use Plan (reference Figure 3.3, Section 3.5.1) and further described in Table 3-1. General Plan Land Use Map Land Use Designations by Definition and Development Standards (Section 3.5.1).

Within the proposed General Plan 2030 Land Use Element all of the following goals, objectives, policies and implementation measures would apply to land use and planning:

GOAL #1: BALANCED LAND USES – Provide for a Balanced Community with Residential, Commercial and Industrial Development

Objective 1.1: Plan new development that complements surrounding land uses and minimizes environmental impacts.

Policy 1.1.1: Encourage development that does not conflict with or adversely affect other existing or potential developments.

Implementation Measures 1.1.1.1: Continue to require the review of new industrial development by the zoning administrator and/or the Planning Commission and when necessary, apply appropriate conditions to the project so that it does not adversely affect other existing or potential developments.

Implementation Measures 1.1.1.2: Continue to review, and amend as necessary, the zoning ordinance to ensure that a wide-range of industrial uses is available.

Implementation Measures 1.1.1.3: Offer incentives through the City Redevelopment Agency to developers to develop in the Redevelopment Project Area.

Implementation Measure 1.1.1.4: Continue to develop design guidelines for all categories of development to ensure compatibility and quality projects within the city.

Policy 1.1.2: Maintain Victorville as the commercial center for the Victor Valley.

Implementation Measures 1.1.2.1: Ensure that sufficient commercial lands are available by monitoring local and regional needs.

Implementation Measures 1.1.2.2: Encourage the development of major commercial centers along arterial roadways, major arterial intersections and in the vicinity of freeway interchanges by providing appropriate zoning.

Implementation Measures 1.1.2.4: Periodically review and update the zoning ordinance to ensure it allows a wide array of commercial uses.

Implementation Measures 1.1.2.5: Work with land owners and developers to maximize the development of the northeast quadrant, including development of commercial and mixed uses.

Implementation Measures 1.1.2.6: Work with local merchants and business groups to retain and expand retail uses that provide desired community services and products.

Policy 1.1.3: Encourage continued development of tourist related activities.

Implementation Measures 1.1.3.1: Encourage and allow, in appropriate locations through the zoning ordinance, uses such as museums and regional recreational activities that make Victorville a destination.

Implementation Measures 1.1.3.2: Develop zoning policies that direct hotel type uses to the North Mojave Planning Area and Civic Center Commercial districts, or other areas suitably planned through a Specific Plan.

Implementation Measures 1.1.3.3: Seek development of a hotel node in the Victorville area, particularly in connection with a rail connection to and from Las Vegas.

Policy 1.1.4: Encourage continued development of a variety of residential uses and residential densities meeting the needs of those desiring to live in Victorville.

Implementation Measures 1.1.4.1: Assist in the development or rehabilitation of low and very low income housing by using redevelopment agency set-aside monies as required by State law.

Implementation Measures 1.1.4.2: Actively participate in discussions with the San Bernardino County Housing Authority to determine the best methods for providing housing for all segments of the City's population. (Reference Housing Element)

Implementation Measures 1.1.4.3: Continue to maintain minimum densities in some residential areas to ensure development of multiple-family residential units. (Reference Housing Element)

Implementation Measures 1.1.4.4: Continue to provide for a wide range of residential densities through zoning which allows flexibility in meeting the housing needs of all economic segments of the population.

Objective 1.2: Protect existing development from intrusion by new incompatible land uses.

Policy 1.2.1: Manage development in a manner that does not conflict with the operations of Southern California Logistics Airport (SCLA).

Implementation Measures 1.2.1.1: Reserve the space around SCLA for airport compatible uses and specifically bar residential development within the flight pattern and noise cones of the airport.

Implementation Measures 1.2.1.2: Coordinate with the County of San Bernardino and the City of Adelanto to ensure land uses surrounding Southern California Logistics Airport are compatible.

Implementation Measures 1.2.1.3: Continue to implement the Southern California Logistics Airport Specific Plan.

Implementation Measures 1.2.1.4: Require aviation easements from all new residential development to ensure overflights do not become a development hindrance to SCLA.

Policy 1.2.2: Ensure that the integrity of each land use district is maintained.

Implementation Measures 1.2.2.1: Carefully consider requests for amendments to the General Plan Land Use Map so that they do not vary from the intent of the goal for balanced and well integrated land uses.

Implementation Measures 1.2.2.2: Carefully consider requests for determination so that they do not vary from the intent of zone districts.

Implementation Measures 1.2.2.3: Evaluate the feasibility and potential benefits to the community of relocating the Victorville landfill.

Implementation Measures 1.2.2.4: Evaluate the feasibility and potential benefits to the community of relocating the County Fairgrounds.

Implementation Measures 1.2.2.5: Augment Code Enforcement Department efforts by monitoring code compliance of rental properties, including the identification of single family homes converting to rentals through a subscription with DataQuick Information Services and reporting of code compliance violations to the local Department of Housing & Urban Development (HUD) office responsible for Section 8 housing.

Implementation Measures 1.2.2.6: Install a landlord paid annual rental inspection program for all rented dwellings in the city, including single family detached rentals.

Policy 1.2.3: Ensure that new development is compatible with existing developments and public infrastructure.

Implementation Measures 1.2.3.1: Continue to require the use of walls and other buffers to ensure compatibility of new developments with existing developments. The buffers shall be installed by the new development.

Implementation Measure 1.2.3.2: For new residential developments, provide adequate buffers between residential uses and traffic intensive commercial, industrial and institutional uses. Buffers shall be achieved through a combination of setbacks, fence/walls and landscaping.

Implementation Measure 1.2.3.3: Require new residential development to mitigate traffic noise by the use of space, walls and berms as buffers when necessary.

Implementation Measures 1.2.3.4: Establish policies to promote drought resistant landscaping and water conservation irrigation systems to help preserve water supplies.

GOAL #2: ECONOMIC DEVELOPMENT – Encourage a Diversified Economic Base

Objective 2.1: Support Victorville as a major regional center for business and commerce.

Policy 2.1.1: Encourage development of land uses and infrastructure to support growth of businesses and commerce.

Implementation Measure 2.1.1.1: Ensure adequate zoning for retail, office and industrial uses by periodically reviewing land uses.

Implementation Measure 2.1.1.2: Work with the Southern California Air Quality Management District to obtain their support on BNSF's third rail through Cajon Pass since it will be beneficial to lowering the level of congestion and vehicle pollution on the I-15 freeway through the pass.

Implementation Measure 2.1.1.3: Continue to offer incentives through the Redevelopment Agency to attract employers to develop within the Redevelopment Project Area.

Implementation Measure 2.1.1.4: Work with local and regional organizations to undertake a long term public relations campaign to attract businesses to Victorville.

Policy 2.1.2: Promote development and expansion of logistic operations at SCLA

Implementation Measure 2.1.2.1: Coordinate with the Victor Valley Community College to facilitate and expand their use of the SCLA as an aircraft service industry training facility in order to increase the community's supply of a trained workforce.

Implementation Measure 2.1.2.2: Work towards the completion of the rail spurs to SCLA.

Implementation Measure 2.1.2.3: Work with Burlington Northern Santa Fe (BNSF) to finalize an agreement for building an intermodal rail yard next to SCLA.

Implementation Measure 2.1.2.4: Offer technical assistance to SCLA to promote a reputation for quality and to create a series of performance measures to ensure that quality service occurs.

Implementation Measure 2.1.2.5: Work with southern California port cities to explore opportunities to cooperate on the goods movement issue.

Implementation Measure 2.1.2.6: Work with U.S. Armed Services logistics commands toward becoming the agile port center for the West Coast.

Implementation Measure 2.1.2.7: Work with San Bernardino County's Asian trade missions to engage Chinese air cargo carriers in discussions about creating a hub at SCLA.

Policy 2.1.3: Encourage the revitalization of existing commercial areas.

Implementation Measure 2.1.3.1: Involve the community through formation of citizen and business advisory groups in select target areas to provide an impetus for revitalization.

Implementation Measure 2.1.3.2: Pursue grant monies as well as other funding sources for road and public infrastructure improvements to revitalize areas in need.

Implementation Measure 2.1.3.4: Consider conversion of existing under-performing commercial properties to mixed-use projects that include multifamily housing components.

Policy 2.1.4: Consider annexations which will improve the City's economic base and contribute to quality development.

Implementation Measure 2.1.4.1: Evaluate all prospective annexations to determine the level of urban services necessary and whether or not the revenues from the annexation area will pay for those services.

Implementation Measure 2.1.4.2: Evaluate existing infrastructure in prospective annexation areas to determine the costs necessary to bring such infrastructure up to City standards.

Objective 2.2: Seek a balance jobs to housing.

Policy 2.2.1: Encourage development of land uses which provide jobs for those who choose to both live and work within the Planning Area.

Implementation Measure 2.2.2.1: Work with Victor Valley College, local regional occupational programs, local adult schools, and the California Employment Development Department to establish systems that will increase the flow of information on job needs from employers to the agencies that can help fill them, as well as accelerate the pace at which public or private schools and institutions can respond to training needs.

Implementation Measure 2.2.2.2: Encourage Victor Valley College to adopt an On-Line College program.

Implementation Measure 2.2.2.3: Through the City Economic Development Department, join and participate in CORENET, the national organization in which networking takes place between location executives and consultants.

Implementation Measure 2.2.2.4: Through the City Economic Development Department, work with other economic development agencies (EDA) plus San Bernardino County's WIB, representatives of Victor Valley College, local ROPs and adult schools, San Bernardino County's TAD, and the CA Employment Development Department on a long term effort to establish a Labor Force Coordination Council of mid-level staff to facilitate the monthly flow of job information and training between them.

GOAL #3: AMPLE CITY SERVICES – Ensure Provision of Adequate City Services and Infrastructure

Objective 3.1: Permit development in areas where such uses are appropriate and provide for adequate roadways, infrastructure, and public services.

Policy 3.1.1: Provide mechanisms through which development can pay the cost of its infrastructure and services needs.

Implementation Measures 3.1.1.1: Collect and apply development impact fees to pay for infrastructure improvements as identified in the capital improvement plan.

Implementation Measures 3.1.1.2: Continue to review and add projects to the capital improvement plan as deemed necessary to ensure the orderly growth of the City.

Implementation Measures 3.1.1.4: Continue to require new development to pay the capital costs of public facilities and services needed to serve those developments.

Implementation Measures 3.1.1.5: Continue to contact utility companies, school districts, and special districts as necessary when new projects are submitted to ensure their capability to serve the new projects.

Policy 3.1.2: Discourage speculation in the undeveloped portions of the City.

Implementation Measures 3.1.2.1: Constantly monitor the potential for land speculation and react with specific zoning proposals to help ensure that it is minimized.

GOAL #4: BEAUTIFY VICTORVILLE – Provide for an Aesthetically Pleasing Community

Objective 4.1: Enhance the appearance of the Victorville community to increase its desirability as an attractive place to live, work and play.

Policy 4.1.1: Promote high quality development.

Implementation Measures 4.1.1.1: Utilize Specific Plans and/or redevelopment project areas in areas deemed appropriate for design themes.

Implementation Measures 4.1.1.2: Continually monitor and upgrade the design guidelines for all types of development.

Implementation Measures 4.1.1.3: Consider a policy to promote or require public art in major developments.

Policy 4.1.2: Promote high quality public spaces.

Implementation Measures 4.1.2.1: Develop and install streetscape design themes for major corridors into and through key City commercial districts.

Implementation Measures 4.1.2.1: Enhance entries to the City with integrated signage and design.

Scope of Impact Analysis: This analysis considers whether changes in the type, location and intensity of land uses proposed by the General Plan 2030 Land Use Element would impact the existing community or conflict with applicable land use plans or habitat conservation plans.

This analysis is intended to encompass land use and planning impacts associated with each of the project five primary components. This includes the proposed General Plan 2030 which would comprehensively update and supersede the City's current General Plan, including deletion of the existing Old Town and SCLA Elements; the proposed rezoning of the County islands and the City's existing northern sphere area; the proposed extension of the City SOI into the Northern Expansion Area, inclusive of the proposed land use designations for that SOI area; and the replacement of Midtown and Southdown Industrial Specific Plans with new land uses.

As discussed in Section 3.5.1 of this EIR, the General Plan 2030 Land Use Plan would update and supersede the City's current General Plan Land Use Plan. Primary changes between the existing and proposed 2030 Land Use Plan are as follows:

- **Baldy Mesa**

The General Plan 2030 Land Use Map incorporates the City's annexation proposal for the Baldy Mesa Planning Area from Baldy Mesa Road west to Caughlin Road and north from

Lindero Road to Palmdale Road. The majority of the previously un-incorporated area of Baldy Mesa is designated for residential use, and would be unchanged by the General Plan 2030 Land Use Plan. Environmental review and processing of the incorporation of the Baldy Mesa SOI will be processed through a separate environmental document with the Local Agency Formation Commission (LAFCO) as lead agency.

■ Commercial Nodes

According to the *Strategic Market Analysis of Victorville's Commercial Zoning*, prepared by The Concord Group, January 20, 2005, in support of the General Plan, Victorville's existing General Plan has a surplus of commercially designated land¹ relative to population. To remedy this imbalance, commercial development would be focused into strategic nodes located along arterial roadways, and specifically intersections of arterial roadways. Existing commercially zoned properties located away from arterials and mid-block should be redesignated for residential use or downzoned to neighborhood commercial use.

In response to this recommendation, the General Plan 2030 Land Use Plan concentrates commercially designated area along the I-15, U.S. 395, Bear Valley Road, Palmdale Road and at key intersections.

■ Mixed-Use High Density

To support the proposed commercial nodes, the General Plan 2030 Land Use Plan creates a new Mixed -Use High Density Residential designation. This land use category is intended to facilitate well integrated multi-family and commercial developments, located adjacent to retail development. Permitted mix of uses includes multi-family residential up to a density of 60 du/ac; retail, office, civic, open space and other similar uses as defined through the City Planned Unit Development (PUD) process. Development standards for this land use category specify a maximum lot coverage of 50%, a maximum building height of 150 feet, and a residential component that occupies 50% of the site area, open space elements and pedestrian linkages.

These Mixed Use-High Density areas are located in the Baldy Mesa planning area, in the western portion of the City, at Palmdale Road and Caughlin Road, and at Baldy Mesa Road and Bear Valley Road. In addition, a Mixed-Use Overlay is being proposed on two developed areas within the City to allow the redevelopment of these areas into mixed use projects. The areas are located at the intersection of Bear Valley Road and Cottonwood, and on Seventh and Victor Streets.

¹ Correspondence from John R. Shumway, THE CONCORD GROUP, LLC, and David Tausig, David Tausig & Associates, Inc., to Bill Webb, City of Victorville, dated January 20, 2005; available at Development Department offices.

■ **Urban Conservation and Rural Residential to Open Space**

Under the existing General Plan, approximately 357 acres are designated as Rural Residential. This designation allows for development of one dwelling unit per five acres, and is mostly located along the Mojave River corridor. No development standards are specified for the designation. To date, only about 4% of these Rural Residential acres have developed. Approximately 4,405 acres of the existing northern sphere of influence are designated Urban Conservation. This designation permits open space and flood plain uses.

To help protect the Mojave River corridor, the General Plan 2030 Land Use Plan removes the Rural Residential and Urban Conservation designations and replaces both with an Open Space designation. The Open Space land use designation refers to:

Land that is to remain undeveloped due to severe development constraints, lake or river bodies and floodplains; and reserved public open space in parks and golf courses. The purpose of this district is to provide for the protection of the public health, safety and general welfare in those areas of the City which, under present conditions, are subject to periodic flooding and accompanying hazards and to conserve natural resources of benefit to the general public interest.

Residential is permitted in certain areas when the underlying zone district is AE (Exclusive Agriculture). Under the AE zone, residential development may occur at a density of one dwelling unit per five acres, similar to the existing Rural Residential designation.

■ **North Mojave Specific Plan Area**

The North Mojave Planning Area, located in the northeast quadrant of the City, is the last expanse of undeveloped land in the City, comprising over 10,000 acres. It is traversed by the I-15, offering potential for regional commercial development. It is also bordered by the Mojave River on the west, offering potential for open space uses. To ensure that future development of this northeast area maximizes its commercial and open space potential and coordinates installation of infrastructure, the General Plan 2030 Land Use Plan designates the majority of the North Mojave Planning Area as Specific Plan. This designation will require that prior to development, a unique set of land use and development standards are proposed and subsequently adopted by the City.

The North Mojave Specific Plan would be required to conform to the General Plan. It would include a land use plan, circulation plan, infrastructure plan, development standards, design guidelines, phasing plan, financing plan, and implementation plan.

■ **Deletion of Midtown Specific Plan and Southdown Industrial Specific Plan**

The proposed General Plan 2030 would delete the Midtown Specific Plan; however, the development plan component of the Specific Plan would remain in place. The land would

be designated in a similar commercial manner as the Specific Plan. This Specific Plan was misguided from the beginning when it was discovered that half of the area proposed in the plan had been previously zoned by initiative.² In addition, previous deletions from the plan have resulted in only 40 acres remaining in the plan.

The proposed General Plan 2030 also would delete the Southdown Industrial Specific Plan boundaries and incorporate it into North Mojave Specific Plan Area, which would allow for a mix of industrial, commercial and residential land uses. The majority of the deleted Specific Plan would be included within the new Mojave Specific Plan; however, several parcels on the west side of the Mojave River will be designated Industrial and Commercial consistent with their designations under the Southdown Industrial Specific Plan.

■ Northern Expansion Planning Area

The General Plan 2030 Land Use Plan includes the Northern Expansion Planning Area, located north of the City's existing boundaries, east of the Mojave River and west of Interstate 15. This expansion area would expand the City SOI and the influence of the Victorville General Plan over 37,000± acres, approximately 57.8 square miles. This represents a 59% increase over the existing 98.5 square miles of City influenced territory (existing City boundaries plus existing SOI).

As discussed in Section 3.3.2, this Northern Expansion SOI is recommended to promote logical and orderly development, to establish community service priorities, and to promote cohesive master planning of infrastructure extension. One of the major concerns is the land use planning to occur north of SCLA, and to protect the airport from future conflicts. Planned land uses in this planning area are 54% Open Space, 30% low density residential, 12% light industrial and 4% commercial.

Upon completion of the General Plan update, an application will be submitted to the Local Agency Formation Commission (LAFCO) in San Bernardino County for consideration.

■ Changes in General Plan Acreages

Table 5.9-3 compares acreages by land use of the General Plan 2030 Land Use Plan with that permitted under the existing General Plan, inclusive of the existing and proposed northern SOI expansion. At expected buildout, General Plan 2030 would result in substantially more development than would occur under the existing General Plan. General Plan 2030 would increase the amount of development by 112% (99,253 acres of the proposed General Plan 2030 Planning Area to 46,791 acres of the existing General Plan area, resulting in an increase in 52,462 acres). This increase is due largely to the

² In 1985, voters approved initiative zoning of R-1, Single Family Residential over approximately 1,500 acres which would later include the northern portion of land from the Midtown Specific Plan. Then, in 1986, voters approved Measure R with more specific zoning for the northern portion of what would be applied for with the Midtown Specific Plan.

proposed inclusion of the Northern Expansion Area in the Victorville Planning Area, the City existing SOI and County islands into the Planning Area.

Of the 36,847 acres in the Northern Expansion Area, 18,935 acres (51%) would be designated Open Space. Due largely to the addition of this Northern Expansion Area Open Space, the General Plan 2030 Land Use Plan would result in a decrease of percentage of urban uses to total area, when compared to the existing General Plan. Under the proposed General Plan 2030, the percentage of residential to total Planning Area would decrease by 10%, commercial would decrease by 6% and industrial would decrease by 1%.

**Table 5.9-3
COMPARISON OF GENERAL PLAN 2030 LAND USES
TO EXISTING GENERAL PLAN LAND USES BY AMOUNT OF ACREAGE
AND % OF TOTAL ACREAGE**

Land Use Category	General Plan 2030	Existing General Plan	Difference (General Plan 2030 – Existing General Plan)
Rural Residential	-	357	(357)
Very Low Density	8,152	5,260	2,892
Low Density	27,523	14,239	13,284
Medium Density	525	874	(349)
High Density	2,256	1,724	532
Mixed Density	78	78	0
Subtotal Residential	38,534	22,532	16,002
Office Professional	352	433	(81)
Commercial	7,014	5,603	1,411
Subtotal Commercial	7,366	6,036	1,330
Light Industrial	5,234	2,194	3,040
Heavy Industrial	1,572	1,671	(99)
Subtotal Industrial	6,806	3,865	2,941
Mixed Use-High Density	609	-	609
Public/Institutional	1,230	708	522
Open Space			

Land Use Category	General Plan 2030	Existing General Plan	Difference (General Plan 2030 – Existing General Plan)
	22,536	1,405	21,131
Subtotal Public Institutional & Open Space	23,766	2,113	21,653
Specific Plan	22,172	12,245	9,927
TOTAL ACREAGES	99,253	46,791	52,462 (1.12% increase over existing General Plan boundaries)
Percent of Residential to Total Acres	39%	48%	-10%
Percent of Commercial to Total Acres	7%	13%	-6%
Percent of Industrial to Total Acres	7%	8%	-1%
Percent of Public Institutional & Open Space to Total Acres	24%	5%	19%
Percent of Specific Plan to Total Acres	22%	26%	-3%

5.9.4.1 Would the Project physically divide an established community?

Impact Discussion:

Physical Impacts: Most of the proposed land use changes that would occur under the General Plan 2030 would occur on currently undeveloped land. Within the already built areas of the City, proposed changes focus on reducing the amount of community and neighborhood serving commercial land relative to residential, and concentrating commercial and high density mixed-use development along major transportation corridors and intersections. These changes would occur gradually as market forces cause infill parcels to develop and existing non-productive land uses to transition to General Plan 2030 permitted land uses. These changes are not expected to physically divide an established residential community.

However because General Plan 2030 implementation is expected to occur over the course of twenty to thirty years, future development plans would need to be monitored to ensure the integrity of existing communities is maintained. Objective 1.2 and its supporting policies and implementation measures, as listed above, are included in the General Plan 2030 Land Use

Element to protect existing development from intrusion by new incompatible land uses. These General Plan 2030 provisions seek to limit land use changes that are not consistent with existing land uses. They also require use of walls, landscaping and setbacks to ensure new development is compatible with existing development, and residential areas are buffered from highway traffic and from new intensive traffic generating commercial, industrial and institutional land uses. This General Plan 2030 objective and supporting policies and measures are expected to reduce potential impacts relative to the physical division of an established community to less than significant levels.

Economic and Social Impacts: Comments received in response to the Project NOP requested that an urban decay analysis be prepared to address possible economic or social impacts from land use changes proposed by General Plan 2030.³ Section 15131[A] of the CEQA Guidelines state that economic and social effects of a project are not treated as significant effects on the environment unless there exists a chain of cause and effect between a proposed project and the occurrence of significant physical changes in the environment.

Recent case law provides guidance as to what type of physical change could occur as a result of economic or social effects. Pursuant to *Bakersfield Citizens for Local Control v. the City of Bakersfield* (2004) 124 Cal. App. 4th 1184, a project may result in a significant “urban decay” impact if the project results in a diversion of sales from existing competitive retailers at such a magnitude that the project either independently, or in conjunction with other past, present, and reasonably foreseeable future projects, could foreseeable contribute to the downward spiral of retail closures and long-term vacancies. The term “urban decay” refers to unsightly conditions and physical deterioration caused by the closure of retail businesses and resultant long-term vacancies.

According to the *Strategic Market Analysis of Victorville's Commercial Zoning*, prepared by The Concord Group, January 20, 2005, in support of the General Plan, Victorville's existing General Plan has a surplus of commercially designated land that serves community and neighborhood retail needs relative to population.⁴ To remedy this imbalance, the General Plan 2030 Land Use Element proposes to focus community and neighborhood commercial development at strategic nodes located along arterial roadways, and specifically intersections of arterial roadways. Regional commercial is expected to occur along highways and freeway interchanges.

Within the already built areas of the City, these proposed changes would reduce the amount of commercial land relative to residential, and concentrating commercial and high density mixed-use development along major transportation corridors and intersections. These changes would occur gradually as market forces cause infill parcels to develop and existing

³ Correspondence from Marie Mack, The Mack Law Offices, dated March 14 2008 (contained in Appendix B).

⁴ Correspondence from John R. Shumway, THE CONCORD GROUP, LLC, and David Taussig, David Taussig & Associates, Inc., to Bill Webb, City of Victorville, dated January 20, 2005; available at Development Department offices.

non-productive land uses to transition to General Plan 2030 permitted land uses. These changes are intended to create a more competitive commercial market, and to correct current conditions in which an over-supply of commercial land could cause retail closures and long-term vacancies.

As stated above, it is a goal of the proposed Land Use Element to provide for a balanced community with residential, commercial and industrial development. This goal is supported by objectives, policies and implementation measures. Therefore, General Plan 2030 is not expected to result in adverse physical changes or impacts due to the Project's economic or social effects.

Impact Finding: Less than significant.

5.9.4.2 Would the project 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?

Impact Discussion:

Local Plans: The General Plan is the prevailing policy document directing land use and planning within a municipality. If adopted, General Plan 2030 would be the prevailing document to which all other City plans, including zoning and Specific Plans, must conform. Implementation Measure 1.2.21 of the proposed Land Use Element requires that within two years of General Plan 2030 adoption, the City will complete the review and update of the zoning ordinance to ensure its consistency with the adopted General Plan.

As part of the General Plan 2030 Project, the majority of the Southdown Industrial Specific Plan would be superseded by a new Specific Plan for the North Mojave Specific Plan Area. Designated land uses in the Southdown Industrial Specific Plan area are mostly industrial, some commercial. This area remains largely undeveloped. The North Mojave Specific Plan Area would allow for a mix of industrial, commercial and residential land uses. Implementation Measure 1.2.2.2 requires that within two years of General Plan 2030 adoption, the City will complete the North Mojave Specific Plan in conformance to the General Plan 2030.

The deletion of the Midtown Specific Plan would remove an ineffective planning mechanism, but land use would not be changed. The deletion of the existing Old Town and SCLA Elements would enable the City to more effectively manage these areas through respective Specific Plan rather than through separate General Plan elements.

The Project also includes the rezoning of several unincorporated islands which are currently under the jurisdiction of San Bernardino County. The island referred to as Mountain View Acres North is all designated Very Low Density Residential and will be rezoned to R-IB1/2. Mountain View Acres South has designations of Very Low Density Residential and Public/Institutional and will be rezoned to a combination of R-IB1/2, R-IB1 and P-C (Public/Civic). The island east of Hesperia Road referred to as “Coad Road” has designations of Commercial, Light Industrial and Heavy Industrial and will be rezoned to C-2, General Commercial, M-1, Light Industrial, and M-2, Heavy Industrial. These proposed rezoning are consistent with existing land use designations for the islands. It has been the direction of the LAFCO that islands such as these be annexed into the neighboring city to promote logical and orderly service boundaries and eliminate wasteful services.

The Project also includes the rezoning of the City's existing northern sphere area, which encompasses 2,049 acres of land adjacent to the City's existing sphere. The City has been working on a Specific Plan for the area, and proposes to rezone the area “Specific Plan. It is the intent of the City to begin an application to the LAFCO shortly after completion of the General Plan Update for the proposed annexation. This proposed rezoning is proposed in accordance with the City's understanding of LAFCO policies for annexation.

General Plan 2030 provides for consistency between its provisions and local plans.

Regional Plans: The consistency of the proposed Project land use and planning provisions with relevant and applicable policies of SCAG's RCPG is provided in Table 5.9-4, Proposed Project Land Use Element Consistency with SCAG Policies. The Table compares SCAG policies to proposed goals, objectives, policies and implementation measures of the proposed General Plan 2030 Land Use Element. As detailed in the Table, the proposed Project is considered consistent with relevant and applicable policies of the RCPG regarding land use and planning issues.

SCAG RCPG Policies Applicable to Land Use and Planning		General Plan 2030 Land Use Element Consistency Provisions
3.01	The population, housing, and jobs forecasts, which are adopted by SCAG's Regional Council and that reflect local plans and policies shall be used by SCAG in all phases of implementation and review.	<p><u>Consistent.</u> GOAL #1: BALANCED LAND USES – Provide for a Balanced Community With Residential, Commercial and Industrial Development</p> <ul style="list-style-type: none"> ■ Objective 2.2: Seek a balance jobs to housing. ■ Policy 2.2.1: Encourage development of land uses which provide jobs for those who choose to both live and work within the Planning Area. <p>For discussion regarding consistency with regional population and housing projections, refer to Section 5.12,</p>
3.03	The timing, financing, and location of public facilities, utility systems, and transportation systems shall be used by SCAG to implement the region's growth policies.	<p><u>Consistent.</u></p> <ul style="list-style-type: none"> ■ GOAL #3: AMPLE CITY SERVICES – Ensure Provision of Adequate City Services and Infrastructure. <p>General Plan 2030 is the culmination of City effort to plan land use and infrastructure together.</p>

Table 5.9-4

General Plan 2030 Consistency with SCAG Policies

SCAG RCPG Policies Applicable to Land Use and Planning		General Plan 2030 Land Use Element Consistency Provisions
3.05	Encourage patterns of urban development and land use, which reduce costs on infrastructure construction and make better use of existing facilities.	<p><u>Consistent.</u></p> <ul style="list-style-type: none"> ■ GOAL #1: BALANCED LAND USES – Provide For A Balanced Community With Residential, Commercial And Industrial Development ■ GOAL #3: AMPLE CITY SERVICES – Ensure Provision Of Adequate City Services And Infrastructure. <p>General Plan 2030 is the culmination of City effort to plan land use and infrastructure together.</p>
3.09	Support local jurisdictions’ actions to minimize the cost of infrastructure and public service delivery, and efforts to seek new sources of funding for development and the provision of services.	<p><u>Consistent.</u></p> <ul style="list-style-type: none"> ■ GOAL #1: BALANCED LAND USES – Provide For A Balanced Community With Residential, Commercial And Industrial Development ■ GOAL #3: AMPLE CITY SERVICES – Ensure Provision Of Adequate City Services And Infrastructure <p>General Plan 2030 is the culmination of City effort to plan land use and infrastructure together.</p>
3.10	Support local jurisdictions’ actions to minimize red tape and expedite the permitting process to maintain economic vitality and competitiveness.	<p><u>Consistent.</u></p> <ul style="list-style-type: none"> ■ GOAL #2: ECONOMIC DEVELOPMENT – Encourage A Diversified Economic Base <p>Measures of this Goal focus on jobs-housing balance by encouraging both industrial and commercial development.</p>
3.12	Encourage existing or proposed local jurisdictions’ programs aimed at designing land uses which encourage the use of transit and thus reduce the need for roadway expansion, reduce the number of auto trips and vehicle miles traveled, and create opportunities for residents to walk and bike.	<p><u>Consistent.</u></p> <ul style="list-style-type: none"> ■ GOAL #1: BALANCED LAND USES – Provide For A Balanced Community With Residential, Commercial And Industrial Development ■ GOAL #2: ECONOMIC Development – Encourage A Diversified Economic Base ■ GOAL #3: AMPLE CITY SERVICES – Ensure Provision Of Adequate City Services And Infrastructure <p>For discussion regarding consistency with alternative transportation systems, refer to Section 5.15.</p>
3.13	Encourage local jurisdictions’ plans that maximize the use of existing urbanized areas accessible to transit through infill and redevelopment.	<p><u>Consistent.</u></p> <ul style="list-style-type: none"> ■ GOAL #1: BALANCED LAND USES – Provide For A Balanced Community With Residential, Commercial And Industrial Development <p>The Land Use Plan includes a new Mixed-Use designation to bring housing and commercial activities together. For discussion regarding consistency with alternative transportation systems, refer to Section 5.15.</p>
3.16	Encourage developments in and around activity centers, transportation corridors, underutilized infrastructure systems, and areas needing recycling and redevelopment.	<p><u>Consistent.</u></p> <ul style="list-style-type: none"> ■ GOAL #1: BALANCED LAND USES – Provide For A Balanced Community With Residential, Commercial And Industrial Development <p>The Land Use Plan includes a new Mixed-Use designation to bring housing and commercial activities together. It also locates commercial and industrial areas near major transportation corridors.</p>

Table 5.9-4

General Plan 2030 Consistency with SCAG Policies

SCAG RCPG Policies Applicable to Land Use and Planning		General Plan 2030 Land Use Element Consistency Provisions
3.18	Encourage planned development in locations least likely to cause environmental impact.	<u>Consistent.</u> <ul style="list-style-type: none"> ■ GOAL #1: BALANCED LAND USES – Provide For A Balanced Community With Residential, Commercial And Industrial Development The Land Use Plan protects the Mojave River Corridor and focuses commercial and industrial areas near major transportation corridors.
3.20	Support the protection of vital resources such as wetlands, groundwater recharge areas, woodlands, production lands, and land containing unique and endangered plants and animals.	<u>Consistent.</u> <ul style="list-style-type: none"> ■ GOAL #1: BALANCED LAND USES – Provide For A Balanced Community With Residential, Commercial And Industrial Development The General Plan 2030 supports the West Mojave Plan. Reference Section 5.4.
3.21	Encourage the implementation of measures aimed at the preservation and protection of recorded and unrecorded cultural resources and archaeological sites.	<u>Consistent.</u> <ul style="list-style-type: none"> ■ GOAL #1: BALANCED LAND USES – Provide For A Balanced Community With Residential, Commercial And Industrial Development The General Plan 2030 proposes a Resource Element that protects cultural resources consistent with the Land Use Element. Reference Section 5.5.
3.22	Discourage development, or encourage the use of special design requirements, in areas with steep slopes, high fire, flood, and seismic hazards.	<u>Consistent.</u> <ul style="list-style-type: none"> ■ GOAL #1: BALANCED LAND USES – Provide For A Balanced Community With Residential, Commercial And Industrial Development The General Plan 2030 proposes a Safety Element that restricts development in areas of potential hazard areas, consistent with the Land Use Element. Reference Section 5.7.
3.23	Encourage mitigation measures that reduce noise in certain locations, measures aimed at preservation of biological and ecological resources, measures that would reduce exposure to seismic hazards, minimize earthquake damage, and to develop emergency response and recovery plans.	<u>Consistent.</u> <ul style="list-style-type: none"> ■ GOAL #1: BALANCED LAND USES – Provide For A Balanced Community With Residential, Commercial And Industrial Development The General Plan 2030 proposes a Safety Element, Resource Element and Noise Element that include provisions to protect resources, and minimize noise and hazard impacts, consistent with the Land Use Element. Reference Sections 5.4, 5.5, 5.7, 5.11.
3.24	Encourage efforts of local jurisdictions in the implementation of programs that increase the supply and quality of housing and provide affordable housing as evaluated in the Regional Housing Needs Assessment.	<u>Consistent.</u> <ul style="list-style-type: none"> ■ GOAL #1: BALANCED LAND USES – Provide For A Balanced Community With Residential, Commercial And Industrial Development The General Plan 2030 proposes a Housing Element, consistent with the Land Use Element that promotes Mixed-Use residential up to 60 du/ac. Reference Section 5.12.
3.27	Support local jurisdictions and other service providers in their efforts to develop sustainable communities and provide, equally to all members of society, accessible and effective services such as: public education, housing, health care, social services, recreational facilities, law enforcement, and fire protection.	<u>Consistent.</u> <ul style="list-style-type: none"> ■ GOAL #1: BALANCED LAND USES – Provide For A Balanced Community With Residential, Commercial And Industrial Development The General Plan 2030 proposes a Safety Element, consistent with the Land Use Element. Reference Section 5.13.

Table 5.9-4

General Plan 2030 Consistency with SCAG Policies

SCAG RCPG Policies Applicable to Land Use and Planning		General Plan 2030 Land Use Element Consistency Provisions
5.07	Determine specific programs and associated actions needed (e.g., indirect source rules, enhanced use of telecommunications, provision of community based shuttle services, provision of demand management based programs, or vehicle-miles-traveled/emission fees) so that option to command and control regulations can be assessed.	<p><u>Consistent.</u></p> <ul style="list-style-type: none"> ■ GOAL #1: BALANCED LAND USES – Provide For A Balanced Community With Residential, Commercial And Industrial Development <p>The General Plan 2030 promotes a balanced development, locating traffic intensive uses near transportation corridors, a new Mixed-Use land use designation. Reference Section 5.15.</p>
5.11	Through the environmental review process, ensure that plans at all levels of government (regional, air basin, county, subregional and local) consider air quality, land use, transportation and economic relationships to ensure consistency and minimize conflicts.	<p><u>Consistent.</u></p> <ul style="list-style-type: none"> ■ GOAL #1: BALANCED LAND USES – Provide For A Balanced Community With Residential, Commercial And Industrial Development ■ GOAL #2: ECONOMIC Development – Encourage A Diversified Economic Base ■ GOAL #3: AMPLE CITY SERVICES – Ensure Provision Of Adequate City Services And Infrastructure <p>The General Plan 2030 proposes balanced development, and reduction of air pollutant emissions and traffic. Reference Sections 5.3 and 5.15.</p>
9.01	Provide adequate land resources to meet the outdoor recreation needs of the present and future residents in the region and to promote tourism in the region.	<p><u>Consistent.</u></p> <ul style="list-style-type: none"> ■ GOAL #1: BALANCED LAND USES – Provide For A Balanced Community With Residential, Commercial And Industrial Development <p>The General Plan 2030 over 20,000 acres of Open Space and policies of the Resource Element to encourage outdoor recreation consistent with the Land Use Element. Reference Sections 5.13 and 5.14.</p>
9.02	Increase the accessibility to open space lands for outdoor recreation.	<p><u>Consistent.</u></p> <ul style="list-style-type: none"> ■ GOAL #1: BALANCED LAND USES – Provide For A Balanced Community With Residential, Commercial And Industrial Development <p>The General Plan 2030 over 20,000 acres of Open Space and policies of the Resource Element to encourage outdoor recreation consistent with the Land Use Element. Reference Sections 5.13 and 5.14.</p>
9.03	Promote self-sustaining regional recreation resources and facilities.	<p><u>Consistent.</u></p> <ul style="list-style-type: none"> ■ GOAL #1: BALANCED LAND USES – Provide For A Balanced Community With Residential, Commercial And Industrial Development <p>The General Plan 2030 over 20,000 acres of Open Space and policies of the Resource Element to encourage outdoor recreation consistent with the Land Use Element. Reference Sections 5.13 and 5.14.</p>
9.04	Maintain open space for adequate protection of lives and properties against natural and man-made hazards.	<p><u>Consistent.</u></p> <ul style="list-style-type: none"> ■ GOAL #1: BALANCED LAND USES – Provide For A Balanced Community With Residential, Commercial And Industrial Development <p>The General Plan 2030 over 20,000 acres of Open Space and policies to protect the Mojave River Corridor. Reference Section 5.4.</p>

Table 5.9-4

General Plan 2030 Consistency with SCAG Policies

SCAG RCPG Policies Applicable to Land Use and Planning		General Plan 2030 Land Use Element Consistency Provisions
9.05	Minimize potentially hazardous developments in hillsides, canyons, areas susceptible to flooding, earthquakes, wildfire and other known hazards, and areas with limited access for emergency equipment.	<u>Consistent.</u> <ul style="list-style-type: none"> ■ GOAL #1: BALANCED LAND USES – Provide For A Balanced Community With Residential, Commercial And Industrial Development The General Plan 2030 proposes a Safety Element that restricts development in areas of potential hazard areas, consistent with the Land Use Element. Reference Section 5.7.
9.06	Minimize public expenditure for infrastructure and facilities to support urban type uses in areas where public health and safety could not be guaranteed.	<u>Consistent.</u> <ul style="list-style-type: none"> ■ GOAL #1: BALANCED LAND USES – Provide For A Balanced Community With Residential, Commercial And Industrial Development ■ GOAL #3: AMPLE CITY SERVICES – Ensure Provision Of Adequate City Services And Infrastructure General Plan 2030 is the culmination of City effort to plan land use and infrastructure together.
9.07	Maintain adequate viable resource production lands, particularly lands devoted to commercial agriculture and mining operations.	<u>Consistent.</u> <ul style="list-style-type: none"> ■ GOAL #1: BALANCED LAND USES – Provide For A Balanced Community With Residential, Commercial And Industrial Development General Plan 2030 identifies mineral resources, and does not impact existing agricultural resources. Reference Sections 5.2 and 5.10.
9.08	Develop well-managed viable ecosystems or known habitats of rare, threatened and endangered species, including wetlands.	<u>Consistent.</u> <ul style="list-style-type: none"> ■ GOAL #1: BALANCED LAND USES – Provide For A Balanced Community With Residential, Commercial And Industrial Development The General Plan 2030 supports the West Mojave Plan. Reference Section 5.4.
11.07	Encourage water reclamation throughout the region where it is cost-effective, feasible, and appropriate to reduce reliance on imported water and wastewater discharges. Current administrative impediments to increased use of wastewater should be addressed.	<u>Consistent.</u> <ul style="list-style-type: none"> ■ GOAL #1: BALANCED LAND USES – Provide For A Balanced Community With Residential, Commercial And Industrial Development ■ GOAL #3: AMPLE CITY SERVICES – Ensure Provision Of Adequate City Services And Infrastructure The General Plan 2030 proposes balanced development, and provision of adequate water supply and infrastructure. Reference Sections 5.8 and 5.16.
Principle I	Improve mobility for all residents <ul style="list-style-type: none"> • Encourage transportation investments and land use decisions that are mutually supportive. • Locate new housing near existing jobs and new jobs near existing housing. • Encourage transit-oriented development. • Promote a variety of travel choices. 	<u>Consistent.</u> <ul style="list-style-type: none"> ■ GOAL #1: BALANCED LAND USES – Provide For A Balanced Community With Residential, Commercial And Industrial Development The General Plan 2030 promotes a balanced development, locating traffic intensive uses near transportation corridors, a new Mixed-Use land use designation. Reference Section 5.15.

Table 5.9-4

General Plan 2030 Consistency with SCAG Policies

SCAG RCPG Policies Applicable to Land Use and Planning		General Plan 2030 Land Use Element Consistency Provisions
Principle 2	<p>Foster livability in all communities</p> <ul style="list-style-type: none"> Promote infill development and redevelopment to revitalize existing communities. Promote developments, which provide a mix of uses. Promote “people scaled”, walkable communities. Support the preservation of stable, single-family neighborhoods. 	<p><u>Consistent.</u></p> <ul style="list-style-type: none"> GOAL #1: BALANCED LAND USES – Provide For A Balanced Community With Residential, Commercial And Industrial Development <p>The General Plan 2030 promotes a balanced development, locating traffic intensive uses near transportation corridors, a new Mixed-Use land use designation. Reference Section 5.15.</p>
Principle 3	<p>Enable prosperity for all people</p> <ul style="list-style-type: none"> Provide, in each community, a variety of housing types to meet the housing needs of all income levels. Support educational opportunities that promote balanced growth. Ensure environmental justice regardless of race, ethnicity or income class. Support local and state fiscal policies that encourage balanced growth. Encourage civic engagement. 	<p><u>Consistent.</u></p> <ul style="list-style-type: none"> GOAL #1: BALANCED LAND USES – Provide For A Balanced Community With Residential, Commercial And Industrial Development <p>The General Plan 2030 promotes a balanced development, locating traffic intensive uses near transportation corridors, a new Mixed-Use land use designation. Reference Sections 5.13 and 5.15.</p>
Principle 4	<p>Promote sustainability for future generations</p> <ul style="list-style-type: none"> Preserve rural, agricultural, recreational and environmentally sensitive areas. Focus development in urban centers and existing cities. Develop strategies to accommodate growth that uses resources efficiently, eliminate pollution and significantly reduce waste. Utilize “green” development techniques. 	<p><u>Consistent.</u></p> <ul style="list-style-type: none"> GOAL #1: BALANCED LAND USES – Provide For A Balanced Community With Residential, Commercial And Industrial Development <p>The General Plan 2030 promotes a balanced development, locating traffic intensive uses near transportation corridors, a new Mixed-Use land use designation. Reference Sections 5.3, 5.4, 5.15, and 5.16.</p>

Impact Finding: Less than significant impact.

5.9.4.3 Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Impact Discussion:

As discussed in Section 5.4 of this EIR, the proposed West Mojave Plan (WMPA) is the primary habitat conservation plan for Planning Area. The WMPA presents a multi-species conservation strategy applicable to public and private lands throughout the WMPA. It would amend the Bureau of Land Management's CDCA Plan for public lands, and would serve as a habitat conservation plan for private lands. The City of Victorville may become a signatory to the West Mojave Plan, and would be issued "incidental take" permits covering 49 listed, threatened, or otherwise sensitive plant and wildlife species. In exchange, the City would require the payment of a development fee (currently \$770 per acre) to cover the West Mojave Plan's costs for land acquisition, land management, and other operations. This would streamline the City's CEQA review process by providing a simplified means of mitigating impacts to sensitive plant and wildlife species potentially impacted by development projects within City limits. If the City chooses not to sign on to the West Mojave Plan, the City will be required to determine appropriate mitigation for potentially significant biological impacts on a case-by-case basis.

Provisions of the proposed Resource Element and Mitigation Measures BIO-1 through BIO-7, which are recommended for inclusion to the Project, would reduce the potential adverse impacts relative to conflicts with the provisions of WMPA would be less than significant.

Impact Finding: Less than significant with mitigation.

5.9.5 Cumulative Impacts

Impact Discussion:

The proposed General Plan 2030 Land Use Element proposes balanced growth within the Planning Area. Cumulative impacts of this growth related to land use and planning issues would be those that cumulative divide an established community, or cumulatively conflict with applicable land use plans or conservation plans. As discussed in this section, impacts of the proposed Project relative to these land use and planning issues would be less than or not significant. Consequently, cumulative impacts of the Project related to land use and planning issues would be less than significant.

Direct and indirect impacts of General Plan 2030 growth may result cumulative impacts relative to other topics addressed in this EIR, for example: population and housing, traffic or

air quality. These potential cumulative impacts are discussed and evaluated in their respective EIR section.

Impact Finding: Less than Significant.

5.9.6 Mitigation Measures – Reference Mitigation Measures BIO-1 through BIO-7, Section 5.4.6.

5.9.7 Level of Significance After Policies/Mitigation Measures – Less than Significant.

5.10 MINERAL RESOURCES

This section addresses issues related to existing mineral resources currently found within the Planning Area. Mineral resources include any form of natural rock materials that have commercial value. Potential impacts of the proposed General Plan 2030 on existing mineral resources are assessed.

5.10.1 Existing Conditions

Naturally occurring mineral resources within the Planning Area include sand, gravel or stone deposits that are suitable as sources of concrete aggregate, located primarily along the Mojave River.

5.10.2 Regulatory Setting

The California Surface Mining and Reclamation Act of 1975 (SMARA) requires that all cities incorporate into their general plans mapped mineral resources designations approved by the State Mining and Geology Board. SMARA was enacted to limit new development in areas with significant mineral deposits. The State Geologist classifies land in California based on availability of mineral resources. Because available aggregate construction material is limited, five designations have been established for the classification of sand, gravel and crushed rock resources:

- SZ – Scientific Resource area containing unique or rare occurrences of rocks, minerals or fossils that are of outstanding scientific significance.
- MRZ-1 – Mineral Resource Zone – adequate information indicates that no significant mineral deposits are present or likely to be present.
- MRZ-2 – Mineral Resource Zone – adequate information indicates that significant mineral deposits are present or there is a high likelihood for their presence and development should be controlled.
- MRZ-3 – Mineral Resource Zone – the significance of mineral deposits cannot be determined from the available data.
- MRZ-4 – Mineral Resource Zone – there is insufficient data to assign any other MRZ designation.

5.10.3 Planning Area Mineral Resources

Based on the above listed designations, the Division of Mines and Geology has classified the naturally occurring sand, gravel or stone deposits in the Planning Area as follows:

MRZ-2a: Areas underlain by mineral deposits where geologic data indicate that significant measured or indicated resources are present. Areas classified as MRZ-2a contain discovered mineral deposits that are either measured or indicated reserves as determined by such evidence as drilling records, sample analysis, surface exposure, and mine information. Land included in the MRZ-2a category is of prime importance because it contains known economic mineral deposits.

MRZ-2b: Areas underlain by mineral deposits where geologic information indicates that significant inferred resources are present. Areas classified as MRZ-2b contain discovered mineral deposits that are significant inferred resources as determined by their lateral extension from proven deposits or their similarity to proven deposits. Further exploration work could result in upgrading these areas to MRZ-2a.

MRZ-3a: Areas containing known mineral occurrences of undetermined mineral resource significance. Further exploration work within these areas could result in the reclassification of specific localities into MRZ-2A or MRZ-2b categories.

Figure 5.10-1 depicts these areas by category and location.

Victorville Mining Operations

Around the turn of the century, large deposits of limestone and granite were discovered, prompting cement manufacturing to become the leading industry in the valley. In 1916, the Southwestern Portland Cement Company (SPCC) began operation in Victorville. Located approximately one mile north of downtown Victorville on the northwest side of today's State Route 18, the SPCC plant was founded by Los Angeles-based concrete contractor Carl Leonard. Today there are three major cement operations in Victorville: Cemex, Mitsubishi Cement Corporation, and TXI Riverside Cement.¹

¹ http://www.vvchamber.com/member_directory/index.php?t=1217391380; accessed July 2008.

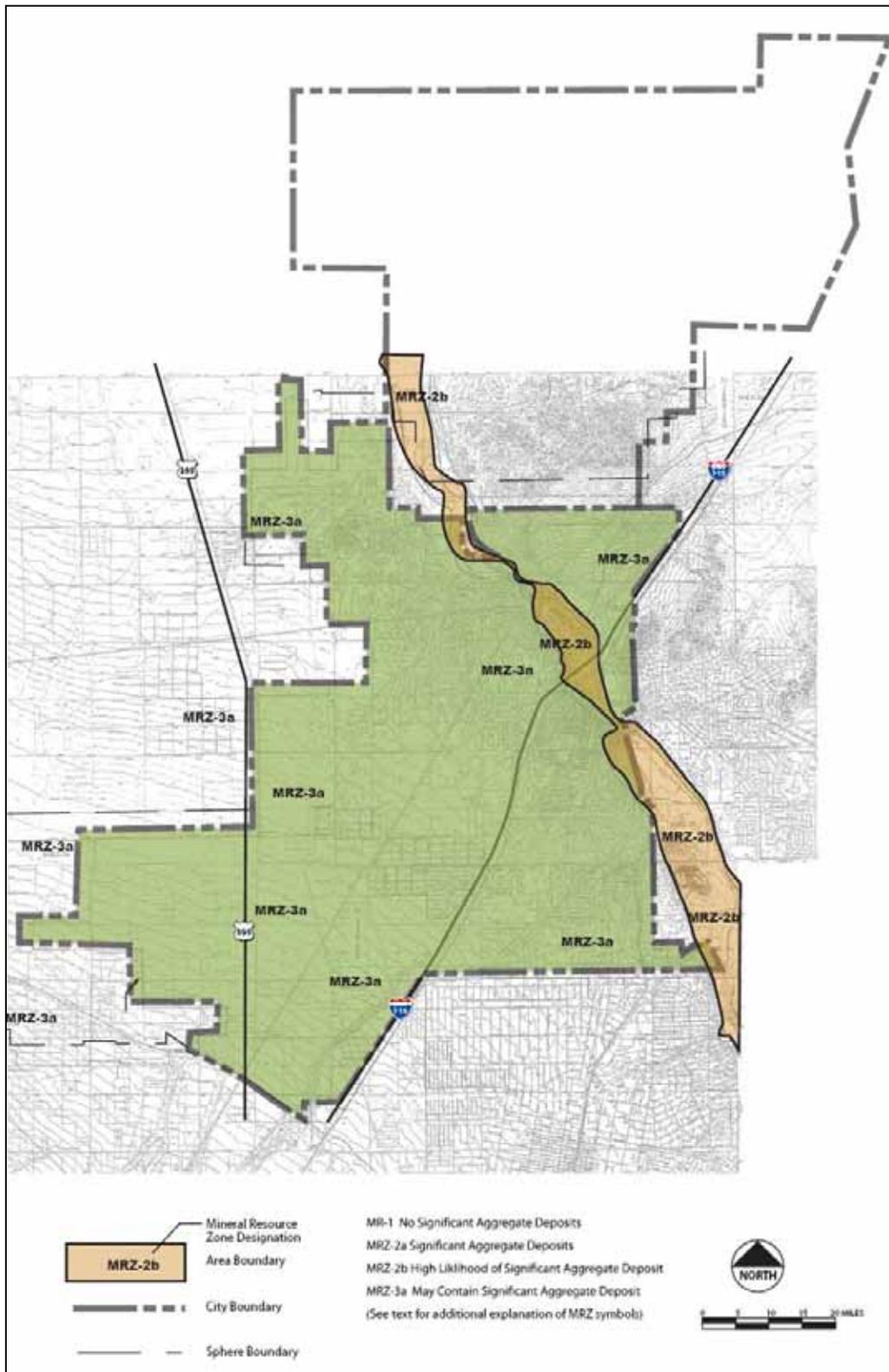


Figure 5.10-1. Victorville Planning Area Mineral Land Classification Map

5.10.3 Thresholds of Significance

Significant impacts relative to mineral resources are evaluated in this section based on Appendix G of the CEQA Guidelines. Implementation of the proposed project may have a significant adverse impact if it would do any of the following:

- 1) 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?
- 2) 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?

5.10.4 Project Impacts

General Plan 2030 Provisions: The Land Use Map of General Plan 2030 proposes to designate the aggregate resource areas in the Victorville Planning Area, located along the Mojave River, as Open Space. Because the Mojave River is an ecologically sensitive area containing habitat which does not naturally occur anywhere else in the Planning Area, the proposed Resource Element finds that it is unlikely that existing mineral resources will be recovered due to the potential for significant and unmitigable impacts of a mining operation.

Scope of Impact Analysis: This analysis considers impacts to mineral resources that would occur with implementation of the proposed General Plan 2030; whether growth would result in visual changes through land use modifications. These potential impacts are weighed against proposed General Plan 2030 provisions applicable to mineral resources.

5.10.4.1 Would the Project 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?

Impact Discussion:

Development pursuant to the proposed General Plan 2030 would increase the amount of development by 114% (99,253 acres of the proposed General Plan 2030 Planning Area to 46,409 acres of the existing General Plan area, resulting in an increase in 52,766 acres). This increase is due largely to the proposed inclusion of the Northern Expansion Area in the Victorville Planning Area. When analyzing significant environmental impacts to mineral resources, two types of impact must be considered: (1) adverse impacts of urban development on future availability and transport of the resource, and (2) adverse impacts on

urban development of potential increased mining, processing and transporting of construction aggregates.

The state classified mineral resources are located along the Mojave River corridor, as shown in Figure 5.10-1. The proposed General Plan Land Use Map designates these areas as Open Space. Because the Open Space designation strictly limits urban development, the proposed General Plan 2030 would protect the existing mineral resources in place. This protection is further noted by the proposed Resource Element which finds that it is unlikely that existing mineral resources will be recovered due to the potential for significant and unmitigable impacts of a mining operation along the ecologically sensitive Mojave River.

Figure 5.10-1 provides information for the incorporated and existing SOI within the Planning Area. Because the proposed Northern Expansion Area is largely undeveloped, mineral resource information for this proposed SOI is not currently available. There is reasonable probability that mineral resources occur along the Mojave River Corridor in the Northern Expansion Area. To ensure that potential mineral resources in this area are properly identified, Mitigation Measure MR-1 is recommended for inclusion into the project. With inclusion of this measure, potential impacts relative to the loss of known mineral resources is less than significant.

Impact Finding: Less than significant with mitigation incorporated.

5.10.4.2 Would the Project 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?

Impact Discussion:

The siting and permitting of mineral operations can raise issues including land use competition, surface and groundwater issues, as well as noise, dust, and truck-traffic in populated area. Active cement mining operations continue to be located on the northwest side of State Route 18. Issues related to air quality emissions and water quality impacts have been raised relative to these operations.²

The proposed General Plan Land Use Map designates these areas primarily for Heavy Industrial, which permits mining operations. The Land Use Map would not preclude the continued operation of these facilities. The sand and gravel mining used in these operations meet the definition of a mineral resource as any form of natural rock materials that have commercial value. However, these sand and gravel deposits are not classified by the Division of Mines and Geology as important mineral resources.

² <http://www.thefreelibrary.com/>; accessed July 2008.

The proposed General Plan 2030 is not expected to result in the loss of a locally important mineral resource recovery site.

Impact Finding: Less than significant.

5.10.5 Cumulative Impacts

Impact Discussion:

The proposed General Plan 2030 is not expected to result in the loss of a known mineral resource or mineral resource recovery site. Consequently, it is not expected to contribute to cumulative impacts to mineral resources.

Impact Finding: No impact.

5.10.6 Mitigation Measures

MR-1: Prior to any development occurring along the Mojave River corridor in the Northern Expansion Area, the applicant shall submit for City Development Services Director review and approval a geologic study identifying potential mineral resources. Every attempt shall be made to preserve these resources in place.

5.10.7 Level of Significance After Policies/Mitigation Measures – Less than Significant.

5.11 NOISE

5.11.1 Existing Conditions

This section of the EIR discusses existing noise conditions for the Planning Area, the noise standards relevant to the proposed General Plan update, and potential project noise impacts. When required, appropriate mitigation measures are recommended. Technical Information referenced in this section was obtained from the technical noise study prepared for the project by Giroux & Associates (Appendix I).

5.11.1.1 Definition of Noise

Noise is usually defined as unwanted or excessive sound. Noise consists of any sound that may produce physiological or psychological damage and/or interfere with communication, work, rest, recreation, and sleep.

To the human ear, sound has two significant characteristics: pitch and loudness. Pitch is generally an annoyance, while loudness can affect the ability to hear. Pitch is the number of complete vibrations, or cycles per second, of a wave, resulting in the tone's range from high to low. Loudness is the strength of a sound and describes a noisy or quiet environment; it is measured by the amplitude of the sound wave. Loudness is determined by the intensity of the sound waves, combined with the reception characteristics of the human ear. In an urban environment, sound that becomes noise is typically a byproduct of transportation systems, certain land uses and on-going human activity.

Definitions of acoustical terms are provided in Table 5.11-1.

Term	Definition
Decibel (dB)	A unit of level that denotes the ratio between two quantities that are proportional to power; the number of decibels is 10 times the logarithm (to the base 10) of this ratio.
Frequency (Hz)	Of a function periodic in time, the number of times that the quantity repeats itself in one second (i.e., number of cycles per second).
A-Weighted Sound Level (dBA)	The sound level obtained by use of A-weighting. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise. All sound levels in this report are A-weighted, unless reported otherwise.
L_{02} , L_{08} , L_{50} , L_{90}	The fast A-weighted noise levels that are equaled or exceeded by a fluctuating sound level 2 percent, 8 percent, 50 percent, and 90 percent of a stated time

Table 5.11-1.

Definitions of Acoustical Terms

Term	Definition
	period, respectively.
Equivalent Continuous Noise Level (L_{eq})	The level of a steady sound that, in a stated time period and at a stated location, has the same A-weighted sound energy as the time-varying sound.
Community Noise Equivalent Level (CNEL)	The 24-hour A-weighted average sound level from midnight to midnight, obtained after the addition of 5 decibels to sound levels occurring in the evening from 7:00 PM to 10:00 PM and after the addition of 10 decibels to sound levels occurring in the night between 10:00 PM and 7:00 AM
Day/Night Noise Level (L_{dn})	The 24-hour A-weighted average sound level from midnight to midnight, obtained after the addition of 10 decibels to sound levels occurring in the night between 10:00 PM and 7:00 AM
L_{max} , L_{min}	The maximum and minimum A-weighted sound levels measured on a sound level meter, during a designated time interval, using fast time averaging.
Ambient Noise Level	The all-encompassing noise associated with a given environment at a specified time, usually a composite of sound from many sources at many directions, near and far; no particular sound is dominant.
Intrusive	The noise that intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.
Source: <i>Handbook of Acoustical Measurement and Noise Control, 1991.</i>	

5.11.1.2 Noise Measurement

The common unit for measuring sound (or noise) to the faintest level detectable by a person with good hearing is called a decibel (dB).

Because sound or noise can vary in intensity by over one million times within the range of human hearing, a logarithmic loudness scale is used to keep sound intensity numbers at a convenient level. Since the human ear is not equally sensitive to all sound frequencies within the entire spectrum, noise levels at maximum human sensitivity are factored more heavily into sound descriptions in a process called A-weighting, written as dBA. References to noise levels in this Section are in dBA. Ambient sounds generally range from 30 dBA (very quiet) to 100 dBA (very loud).

Because community receptors (e.g. residents, the infirm, convalescents, children) are more sensitive to unwanted noise during the evening and night, state law requires that nighttime noise be more heavily weighted than noise occurring during the day. To measure this noise variation during different times of the day, an artificial dB increment is added to quiet time noise levels for planning purposes in a 24-hour noise descriptor called the Community Noise Equivalency Level (CNEL). The CNEL takes average sound levels at an observation point and adds a weighting penalty to those sounds that occur during the evening and night hours. A penalty of 5 dBA is added between 7 PM and 10 PM, and a 10 dBA penalty is added between 10 PM and 7 AM. CNEL noise levels are often reported as 65 dB CNEL or 65 CNEL.

When evaluating changes in 24-hour community noise levels, a 3 dBA increase is barely perceptible to most people. While a 5 dBA increase is readily noticeable, a 10 dBA increase would be perceived as a doubling of loudness (US DOT 1980).

Table 5.11-2, Common Noise Sources and Sound Levels, provides examples of some common sound levels and their noise sources.

Noise Source	A-Weighted Sound Level (dB)	Noise Effect
Near jet engine	140	Deafening
Civil defense siren	130	Threshold of pain
Hard rock band	120	Threshold of feeling
Accelerating motorcycle at a few feet away	110	Very loud
Pile driver; noisy urban street/heavy city traffic	100	Very loud
Ambulance siren; food blender	95	Very loud
Garbage disposal	90	Very loud
Freight cars; living room music	85	Loud
Pneumatic drill; vacuum cleaner	80	Loud
Busy restaurant	75	Moderately loud
Near freeway auto traffic	70	Moderately loud
Average office	60	Quiet
Suburban street	55	Quiet
Light traffic; soft radio music in apartment	50	Quiet
Large transformer	45	Quiet
Average residence without stereo playing	40	Faint
Soft whisper	30	Faint
Rustling leaves	20	Very faint
Human breathing	10	Very faint

5.11.1.3 Noise Regulations

The City of Victorville considers noise compatibility standards in evaluating land use projects. A proposed land use must be shown to be compatible with the ambient noise environment, particularly for noise sources over which direct City control is preempted by other agencies. Such sources include vehicle traffic on public streets, aircraft or trains. Since the City cannot regulate the noise level from the source, it exercises its land use decision authority to insure that noise/land use incompatibility is minimized.

The City of Victorville considers noise exposure for single or multi-family residential development to be “normally acceptable” if the maximum exterior noise level is 60 dB CNEL

or less. Exterior noise levels at residential occupancies of up to 65 dB CNEL are allowed if exterior levels have been substantially mitigated and interior noise exposures meet the interior noise standard of 45 dB CNEL. Exposures up to 70 dB CNEL for residential uses are considered conditionally acceptable if all measures to reduce such exposure have been taken but would be considered as significantly noise-impacted. Noise levels above 70 dB CNEL are considered normally unacceptable except in unusual circumstances.

New residential developments located adjacent to roadways experiencing traffic noise in excess of these standards can utilize a variety of mitigation measures to ensure compatibility. Such mitigation measures include erection of noise walls or earthen berm to reduce traffic noise upon exterior yards, while insulation and or construction upgrades (upgraded dual paned windows and doors, etc.) may be used to reduce noise impacts upon the interior of the dwellings.

An interior CNEL of 45 dBA is mandated by the State of California Noise Insulation Standards (CCR, Title 24, Part 6, Section T25-28) for multiple family dwellings, hotel and motel rooms. In 1988, the State Building Standards Commission expanded that standard to include all habitable rooms in residential use, including single-family dwelling units. Typical noise attenuation within older residential structures with standard construction practices and single paned closed windows is about 20 dB. Upgraded noise attenuation with closed, double-paned windows in modern frame and stucco construction is closer to 30 dB. Therefore, an exterior noise exposure of 65 dBA CNEL is compatible with an interior noise level of 45 dB CNEL for residential dwellings in Victorville. With modern construction practice, exterior levels exceeding 65 dB CNEL can be accommodated while meeting interior noise standards, so long as window closure is an option.

Because retail/commercial uses are not occupied on a 24-hour basis, the exterior noise exposure standard for less sensitive land uses generally not stringent. Unless commercial projects include noise-sensitive uses such as outdoor dining, noise exposure is generally not considered a commercial facility siting constraint for typical project area noise exposures. The City of Victorville noise compatibility guidelines recommends 65 dB CNEL as “normally acceptable” and 75 dB CNEL as a “conditionally acceptable” exterior noise exposure for commercial uses.

City Noise/Land Use Compatibility Matrix: Table 5.11-3 shows the noise/land use compatibility guideline for the City of Victorville, as contained in the existing Noise Element of the City of Victorville General Plan.

**Table 5.11-3
Victorville Land Use Compatibility Standards**

Land Use Categories	Community Noise Exposure Ldn or CNEL, dB						
	55	60	65	70	75	80+	
Residential - Low Density, Single Family, Duplex, Multi-family, Mobile Home	1	1	2	2	3	4	4
Transient Lodging - Motels, Hotels	1	1	2	2	3	3	4
Schools, Libraries, Churches, Hospitals, Nursing Homes	1	1	2	3	3	4	4
Auditoriums, Concert Halls, Amphitheaters	2	2	3	3	4	4	4
Sports Arena, Outdoor Spectator Sports	2	2	2	2	3	3	3
Playgrounds, Neighborhood Parks	1	1	1	2	3	3	3
Golf Courses, Riding Stables, Water Recreation, Cemeteries	1	1	1	2	2	4	4
Office Buildings, Business Commercial, Retail Commercial and Professional	1	1	1	2	2	3	3
Industrial, Manufacturing, Utilities	1	1	1	1	2	2	2
Agriculture	1	1	1	1	1	1	1
Legend: 1. NORMALLY ACCEPTABLE: Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements. 2. CONDITIONALLY ACCEPTABLE: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and Schools, Libraries, Churches, Hospitals, Nursing Homes needed noise insulation features included in the design. Conventional construction, with closed windows and fresh air supply systems or air conditioning will normally suffice. 3. NORMALLY UNACCEPTABLE: New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design. 4. CLEARLY UNACCEPTABLE: New construction or development should generally not be undertaken.							

City Municipal Code Noise Standards: Section 13.01 of the Victorville Municipal Code establishes standards for the regulation of noise levels within the Planning Area. Specifically, the code regulates noise from sources including, but not limited to; persons, animals, or fowl; automobiles, motorcycles, engines, machines, or other mechanical devices; loudspeakers, musical instruments, radios, televisions, phonographs, or other amplifying devices. The code establishes base ambient noise levels which establish maximum acceptable noise levels based on the area of noise and time of day. Table 5.11-4 summarizes these ambient noise measurements:

Zone	Time	Sound Level Decibels
All residential zones	10:00pm to 7:00am	55 dB(A)
	7:00am to 10:00pm	65 dB(A)
All commercial zones	Anytime	70 dB(A)

Pursuant to the code, noise levels shall not exceed the ambient noise levels in listed in Table 5.11-4 by the following dB(A) levels for the cumulative period of time specified:

- (1) Less than 5dB(A) for a cumulative period of more than thirty minutes in any hour;
- (2) Less than 10 dB(A) for a cumulative period of more than fifteen minutes in any hour;
- (3) Less than 15 dB(A) for a cumulative period of more than five minutes in any hour;
- (4) Less than 20 dB(A) for a cumulative period of more than one minute in any hour;
- (5) 20 dB(A) or more for any period of time.

Pursuant to the code, the following activities shall be exempted from the Section 13.01 of the Municipal Code regarding noise:

- (1) All mechanical devices, apparatus or equipment used, related to or connected with emergency machinery, vehicle or work;
- (2) The provisions of this regulation shall not preclude the construction, operation, maintenance and repairs of equipment, apparatus or facilities of park and recreation projects, public works projects or essential public works services and facilities, including those utilities subject to the regulatory jurisdiction of the California Public Utilities Commission;
- (3) Activities conducted on the grounds of any elementary, intermediate or secondary school or college;
- (4) Outdoor gatherings, public dances and shows, provided said events are conducted pursuant to a permit as required by this code;
- (5) Activities conducted in public parks and public playgrounds, provided said events are conducted pursuant to a permit as required by this code;
- (6) Any activity to the extent regulation thereof has been preempted by state or federal law;
- (7) Traffic on any roadway or railroad right-of-way;
- (8) The operation of the Southern California Logistics Airport;

- (9) Construction activity on private properties that are determined by the director of building and safety to be essential to the completion of a project.

5.11.1.4 Existing Noise Environment

The primary sources of noise in the Victorville Planning Area are freeways and roadways, railroad traffic, SCLA aircraft operations, and stationary sources, as described below.

Freeways and Roadways: The dominant noise sources of noise throughout the Planning Area are transportation-related. Motor vehicle noise commonly causes sustained noise levels, often in close proximity to sensitive land uses. The major sources of traffic noise in the Planning Area are the I-15, US-395, SR-18, Route 66, Bear Valley Road, Palmdale Road, Mojave Drive, 7th Street, Amethyst Road, El Evado Road, Green Tree Boulevard, Hesperia Road, and La Mesa Road.

Vehicular noise along these routes comes from both cars and trucks. The following roadways are designated truck routes, and are expected to have notably higher levels of truck related noise: Air Expressway; National Trails Highway / D Street; Hesperia Road from Bear Valley Road to D Street; Green Tree Boulevard from 7th Street to Hesperia Road; Mariposa Road from Bear Valley Road to Green Tree Boulevard; Bear Valley Road within the City limits; Amargosa Road from Bear Valley Road to Dos Palmas Road; Nisqualli Road from Hesperia Road to I-15.

Railroad Traffic: The Burlington Northern Santa Fe Company (BNSF) operates freight rail services through the City of Victorville, with a double main line and lead tracks for industrial uses. Union Pacific Railroad also operates on the double main line and Victorville is within its service area. The rail lines bisect the eastern portion of the City. In the future, with the expansion of the SCLA, Victorville plans to function as a major hub for cargo transfer and distribution. The City has begun construction of the first phase of rail lines leading to a new inter-modal/multi-modal rail yard. This facility will be located in the northwestern portion of the City, allowing transfer of freight from rail-to-truck and rail-to-rail.

SCLA Airport Noise: The SCLA site encompasses approximately 2,762 acres in the northwestern part of Victorville. It is bordered by the Mojave River to the east, a federal correctional facility to the south, and the City of Adelanto to the west. Aircraft noise is an important component of determining land use compatibility with airport operations. Aircraft activity noise contours have been calculated based upon long range SCLA utilization projections.

The existing aircraft noise contours presented in the “Comprehensive Land Use Plan for Southern California Logistics Airport” (Draft December 2007) are depicted in Figure 5.11-1. Future Noise Contours are presented in Figure 5.11-2. For existing activity levels, the 70 and 75 CNEL contours remain entirely on airport property. The 65 CNEL noise contour extends off airport property to the south. This area is presently undeveloped. The 60 CNEL noise

contour extends off airport property to the north, south, and southwest. The 55 CNEL noise contour extends off airport property to the north, south, northeast, and southwest.¹

SCLA is proposing to update its master plan and increase aircraft flight operations. As proposed, SCLA’s long-term forecast activity, expected in year 2025, would extend its noise contours (75, 70, 65, 60, 55 CNEL) beyond airport property. As shown in Figure 5.11-2, the contours that are considered to have a significant noise effect are the 75, 70, and 65 CNEL contours. The 75 CNEL noise contour extends a short distance beyond the airport property line to the north and south. To the east and west this contour does not go beyond the airport property line. The 70 CNEL noise contour extends north and south of airport property approximately one mile. This contour does not extend beyond the property line to the east or west. The 65 CNEL noise contour extends south of the airport property line approximately three miles to Mojave Drive. It extends north of airport property approximately 2.5 miles. Additionally, this contour extends beyond airport property west of Adelanto Road.

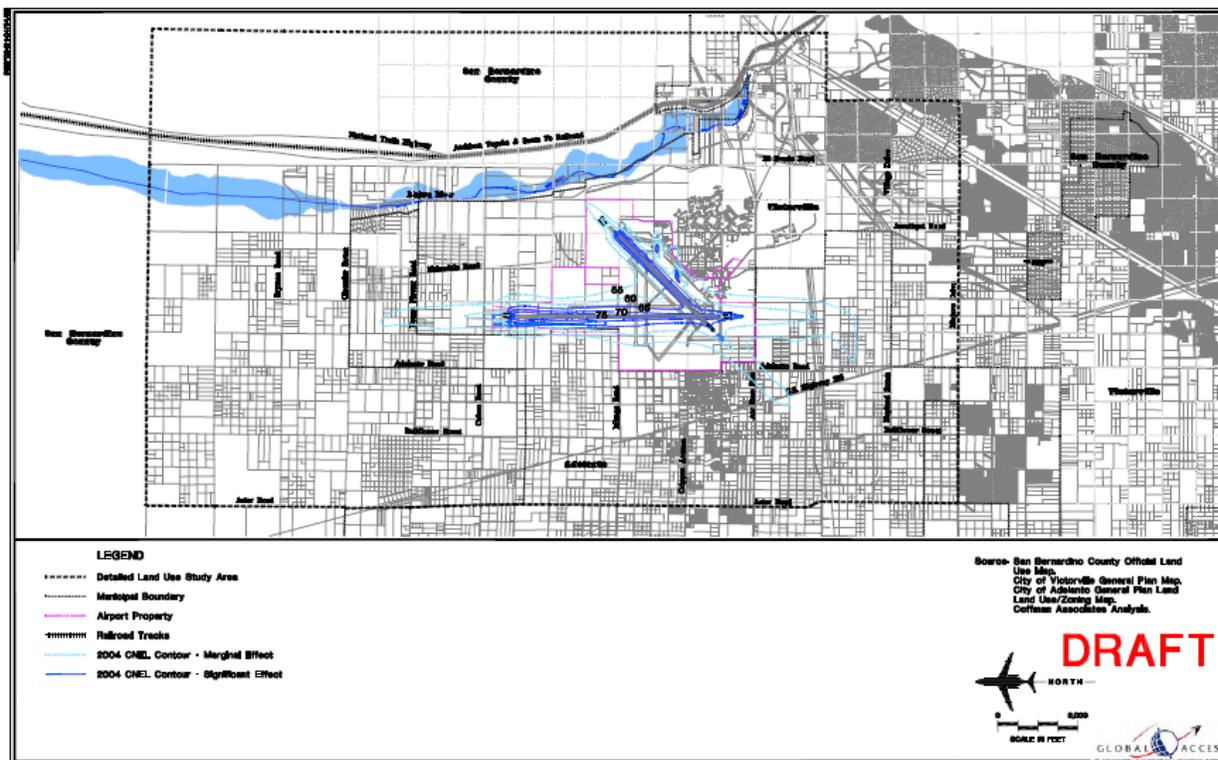


Figure 5.11-1. SCLA Existing Airport Noise Contours

¹ Comprehensive Land Use Plan for Southern California Logistics Airport, Draft December 2007, Coffman Associates.
 Draft Program EIR General Plan 2030 Page 5.11-8

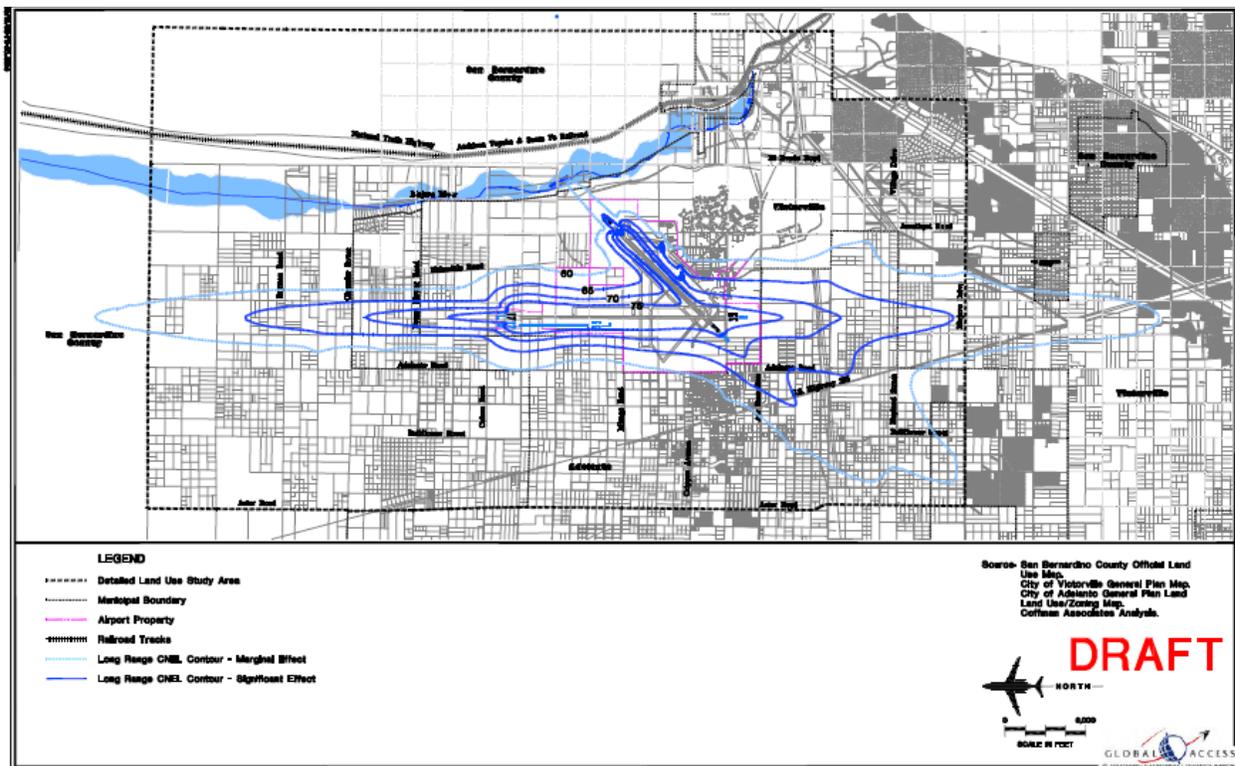


Figure 5.11-2. SCLA Proposed Future (2025) Airport Noise Contours

Stationary Noise Sources: Manufacturing operations are the major stationary noise sources in the Planning Area. Of the existing manufacturing operations in the Planning Area, cement manufacturers are expected to generate the most noise. There are currently two cement manufacturers in the Planning Area, both which have outdoor rock crushing operations. Both are located within Heavy Industrial land use designated areas where 75 decibels is "conditionally acceptable" for permitted uses.

5.11.1.5 Baseline Noise Levels

To assess existing noise levels in the Planning Area, Giroux & Associates conducted noise monitoring on Thursday, September 27, 2007 between 8:15 a.m. and 5:20 p.m. at twenty representative Victorville locations. Measurement locations are listed in Table 5.11-5 and shown in Figure 5.11-3. The few monitoring locations with noise levels in the 60 or 70 dB range were near major roadways, near the Southern California Logistics Airport (SCLA), or at a busy park with baseball practice in progress.

**Table 5.11-5
Measured Noise Levels (dBA)**

Site No.	Leq	Lmax	Lmin	L10*	L33*	L50*	L90*	Time of Day
1	58.5	75.5	43.5	62.0	50.5	46.5	44.5	08:15-08:30
2	49.3	56.5	44.5	51.5	49.0	48.0	46.0	08:46-09:01
3	57.7	69.0	45.5	61.5	58.0	53.5	47.5	09:12-09:27
4	48.4	66.5	39.0	49.5	44.0	42.5	40.0	09:42-09:57
5	48.6	59.0	40.5	52.0	48.0	46.0	42.0	10:10-10:25
6	52.4	67.0	36.5	56.5	46.0	41.5	38.0	10:37-10:52
7	53.8	69.5	41.0	56.5	48.0	46.0	43.0	11:00-11:15
8	59.5	69.0	42.5	63.0	59.0	57.5	52.0	11:23-11:38
9	49.8	64.5	37.5	54.0	47.5	45.0	40.0	11:50-12:05
10	56.1	73.0	42.5	58.5	54.5	52.5	46.0	12:24-12:39
11	59.8	67.5	53.5	62.0	60.0	58.5	56.0	13:02-13:17
12	50.8	65.5	46.0	52.5	50.5	49.5	47.5	13:30-13:45
13	53.6	64.5	48.0	55.5	53.0	52.0	49.5	13:58-14:13
14 ¹	62.4	83.5	49.5	63.5	58.0	56.5	52.5	14:27-14:42
15 ²	73.4	81.5	54.0	76.5	74.0	72.5	61.5	14:57-15:13
16 ³	63.2	80.5	46.0	59.0	53.0	51.0	48.0	15:22-15:37
17	56.8	69.5	45.0	59.0	56.0	54.0	49.0	15:55-16:10
18	52.9	66.0	45.5	55.0	51.5	50.5	47.5	16:16-16:31
19	57.1	74.0	50.0	58.5	56.0	55.5	53.0	16:45-17:00
20	55.3	59.0	41.5	58.0	54.5	52.5	47.0	17:06-17:21

Notes:

¹ At park with softball game in progress² Approximately 20 yards to Route 66 centerline³ Near airport with practice exercises

* Noise levels observed on 10, 33, 50 or 90 percent of readings.

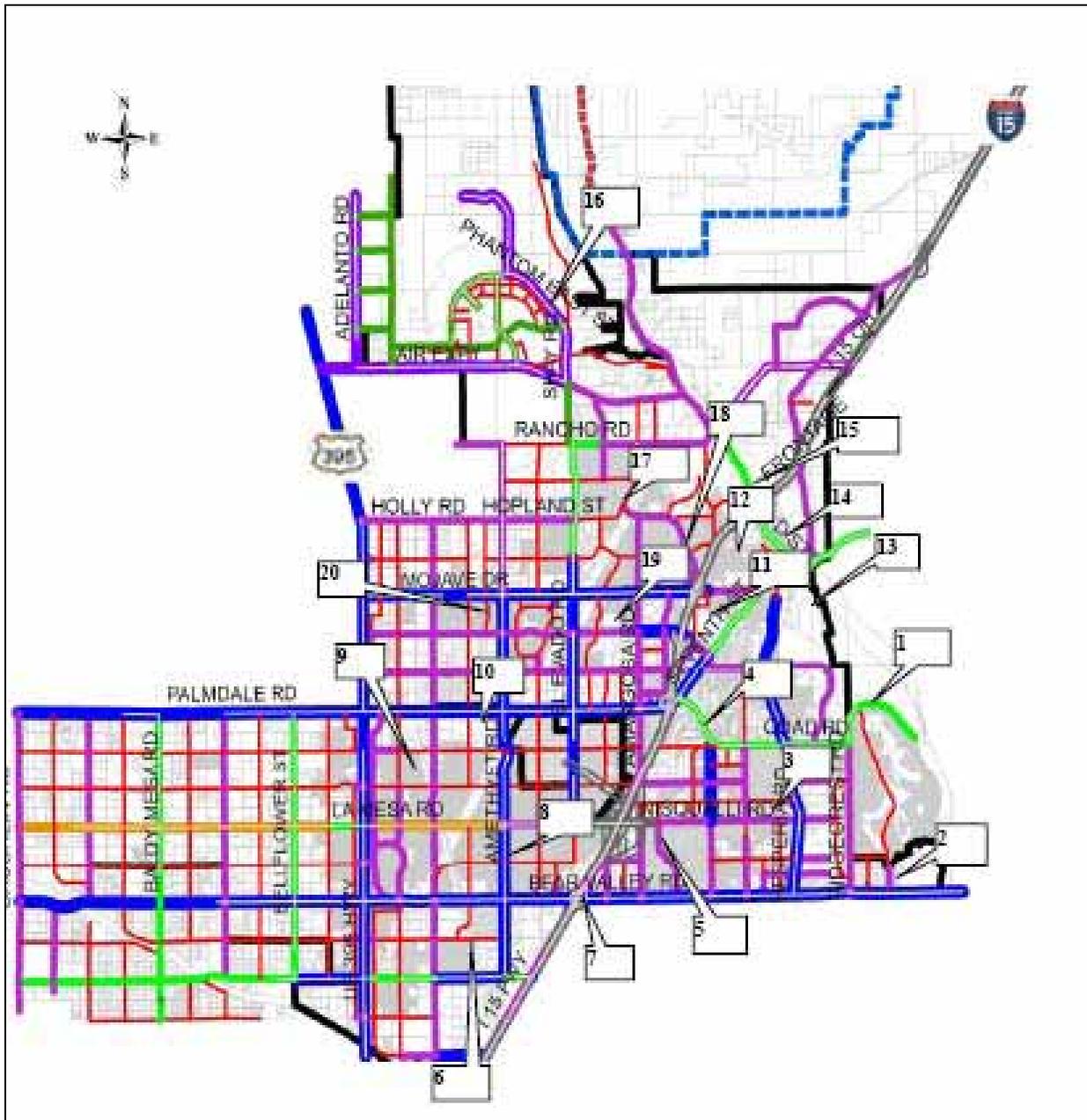


Figure 5.11-3. Noise Measurement Locations

5.11.3 Thresholds of Significance

Significant impacts relative to Noise are evaluated in this section based on Appendix G of the CEQA Guidelines. Implementation of the proposed project may have a significant adverse impact if it would do any of the following:

- I. 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?

2. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?
3. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?
4. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?
5. 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?
6. 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?

5.11.4 Project Impacts

General Plan 2030 Provisions: The Noise Element of the General Plan, mandated by Section 65302(f) of the Government Code, requires that a General Plan include provisions to guide decisions concerning land use and the location of excessive noise sources.

Within the proposed General Plan 2030 Noise Element the following goals, objectives, policies, and implementation measures would apply:

GOAL #1: Noise Sensitivity - Identify Significant Noise Sources that Could Adversely Affect Community

Objective 1.1: Locate noise sensitive land uses away from existing excessive noise sources, and locate new excessive noise generators away from existing sensitive land uses

Policy 1.1.1: Implement Table N-3 regarding placement of new land uses.

Implementation Measure 1.1.1.1: Continue to assess projects through the subdivision, site plan, conditional use permit, and other development review processes and incorporate conditions of approval which ensure noise compatibility where appropriate.

Implementation Measure 1.1.1.2: Prohibit new single family residential land uses in areas with a CNEL of 65 dB or greater.

Implementation Measure 1.1.1.3: Require a noise study to be performed and appropriate noise attenuation to be incorporated prior to approving any multifamily or mixed-use residential development in an area with a CNEL of 65 dB or greater.

Policy 1.1.2: Continue to ensure that there is no conflict or inconsistency between the operation of the Southern California Logistics Airport and future land uses within the Planning Area.

Implementation Measure 1.1.2.1: Continue to monitor Southern California Logistics Airport operations to ensure there is no conflict or inconsistency between the operation of the Southern California Logistics Airport and future land uses within the Planning Area.

Implementation Measure 1.1.2.2: Work closely with Southern California Logistics Airport planners to ensure that future master plan expansions do not impact sensitive Victorville land uses.

Implementation Measure 1.1.2.3: Require Southern California Logistics Airport to update its Specific Plan as directed by the City to accommodate changes in its master plan.

Objective 1.2: Design new transportation facilities to minimize noise impacts on nearby sensitive sources

Policy 1.2.1: Include noise mitigation measures in the design and use of new roadway projects.

Implementation Measure 1.2.1.1: Continue to use special paving materials that will buffer roadway noise.

Implementation Measure 1.2.1.2: Incorporate adequate setbacks in roadway design to maximize the distance from sensitive land uses.

Implementation Measure 1.2.1.3: Restrict new truck routes to roadways that are located away from sensitive land uses.

Policy 1.2.2: Promote noise mitigation measures in the design and use of new rail projects.

Implementation Measure 1.2.2.1: Continue to coordinate with regional agencies and rail providers to incorporate adequate setbacks in rail line to maximize the distance from sensitive land uses.

GOAL #2 Noise Control – Manage the Affects of Noise Emissions to Help Ensure Reduction of Adverse Affects on the Community

Objective 2.1: Ensure existing and future noise sources are properly attenuated

Policy 2.1.1: Continue to implement acceptable standards for noise for various land uses throughout the City.

Implementation Measure 2.1.1.1: Require a noise study to be performed and appropriate noise attenuation to be incorporated prior to approving any multifamily or mixed-use residential development in an area with a CNEL of 65 dB or greater.

Implementation Measure 2.1.1.2: Monitor noise complaints and enforce provisions of the City noise ordinance.

Implementation Measure 2.1.1.3: Discourage location of new educational facilities in areas with noise levels greater than 65 dB CNEL.

Implementation Measure 2.1.1.5: Continue to restrict noise and require mitigation measures for any noise-emitting construction equipment or activity.

Implementation Measure 2.1.1.6: Reduce speed limits on arterial streets if necessary to lower sound to appropriate levels for adjacent and surrounding land uses.

Objective 2.2: Ensure the community is properly informed regarding potential noise from SCLA operations

Policy 2.2.1: Incorporate current information regarding SCLA operations into the land use planning process.

Implementation Measure 2.2.1.1: Place the following condition on all new residential projects within the Planning Area: *The applicant/developer shall record an Airport Location Notice, which discloses the direction and distance from Southern California Logistics Airport. This notice shall record with the final map, including legal descriptions for all lots, and shall be subject to staff review and approval.*

Implementation Measure 2.2.1.2: Place the following condition on all development within the airport influence area, roughly north of Mojave Drive and west of Amargosa Road: *The applicant/developer shall record an Avigation Easement, which allows for the continued operation of overhead flights from Southern California Logistics Airport. The Avigation Easement shall be recorded prior to the issuance of any building permits, and shall be subject to staff review and approval.*

Scope of Impact Analysis: This analysis considers noise impacts that would occur with implementation of the proposed General Plan 2030. Compared to existing conditions, the proposed General Plan 2030 would substantially increase development in the Planning Area and associated vehicle trips. (Reference Section 5.15.) These expected changes under the General Plan 2030 could result in increased noise levels and incompatibilities between noise sources and sensitive land uses.

Vehicular Noise Impacts

Long-term noise concerns from the land use intensification in Victorville are primarily based on vehicular operations on project area roadways. The Giroux noise study estimated expected changes in roadway noise using the California specific vehicle noise curves (CALVENO) in the federal roadway noise model (the FHWA Highway Traffic Noise Prediction Model, FHWA-RD-77-108). The model calculates the Leq noise level for a reference set of input conditions, and then makes a series of adjustments for site-specific traffic volumes, distances, speeds, or noise barriers.

The Giroux noise study utilized data from the project traffic analysis, prepared for this project. Two traffic scenarios were evaluated; existing conditions and future conditions (year 2030). Variable traffic speeds were used for each specific roadway as follows:

Local Roadway	–	25 mph
Collectors	–	30 mph
Secondary Arterial	–	35 mph
Residential Arterial	–	35 mph
Arterial	–	40 mph
Major Arterial	–	45 mph
Super Arterial	–	50 mph

Table 5.11.6 summarizes the average range of 24-hour CNEL level at 50 feet from the roadway centerline along area roadway segments by future roadway classification.

Table 5.11-6 Future Traffic Noise Impact Analysis (Average dBA CNEL at 50 feet from centerline and distance from centerline to 65 dB CNEL contour)		
Roadway Classification	Range	Range
Local	54-65	ROW-49'
Collector	51-69	ROW-93'
Secondary & Res. Arterial	61-72	ROW-138'
Arterial	63-74	ROW-189'
Major Arterial	62-76	ROW-286'
Unclassified	72-78	152'-380'
ROW= Contour is within right-of-way (less than 50 feet)		

Table 5.11-6 shows that local roads are not forecast to carry enough traffic to cause any significant noise impact outside the roadway right-of-way. The maximum extent of the 65 dB CNEL contour of 49 feet would occur along Seneca Road between Mesa Linda Avenue and US-395.

Several collector roadways are forecast to carry enough traffic as to cause the 65 dB CNEL contour to extend well beyond the roadway right-of-way. The maximum extent of the 65 dB CNEL contour would be 93 feet from the roadway centerline on the segment of El Evado Road between Palmdale and Dos Palmas Roads. The traffic noise level at the right-of-way edge

would be 71 dB CNEL. The noise attenuation of a typical subdivision perimeter wall will reduce traffic noise by 6 dB. Structural attenuation with closed dual-paned windows will reduce noise by up to 30 dB. With the application of standard mitigation, traffic noise along any collector roadways can be reduced to an acceptable exterior (65 dB CNEL) and interior (45 dB CNEL) level.

Peak traffic noise levels at 50 feet from the centerline of secondary or residential arterials may be as high as 72 dB CNEL with a 65 dB CNEL contour distance of 138 feet from the centerline. The maximum noise exposure for this roadway classification would occur along 7th Street between “D” and “C” Streets. The maximum noise level at the edge of right-of-way would be 73 dB CNEL. A perimeter wall of up to 8 feet in height (or wall and small berm combination) would be needed to achieve 65 dB CNEL in usable outdoor space. Indoor levels can be achieved with normal mitigation. Reasonably available noise mitigation can meet City standards for noise-sensitive uses along residential or secondary arterials.

Arterial roadways could have peak noise levels of 75 dB CNEL at the edge of right-of-way along La Mesa Road between Armargosa and El Evado Roads. Most arterials, however, have noise levels at the edge of right-of-way in the low 70 dB CNEL range. Along most arterial roadways, noise-sensitive uses can be protected with standard noise mitigation. Along the most heavily traveled arterials, increased set-back or placement of less noise sensitive uses to buffer more sensitive uses may be necessary.

Major arterials could have traffic noise levels as high as 76 dB CNEL at the edge of the right-of-way. Without any intervening obstruction, the 65 dB CNEL contour could extend to 286 feet from the centerline. Along the most heavily future noise-impacted major arterials, a combination of land use control and noise mitigation measures would be required for siting noise-sensitive uses in close proximity to major arterials.

Super arterial roadways would have traffic noise levels ranging from 71-77 dB CNEL at the edge of the right-of-way. Noise levels in the low 70 dB CNEL range can be accommodated in siting noise sensitive uses near super arterials. Maximum noise exposure locations would require site design features (locating usable outdoor space within shielded areas) and upgraded structural features (premium windows and extra insulation) to meet general plan noise standards.

Tables 5.11-7 through Table 5.11-12 below provide a full display of the data by Giroux noise study by roadway category and segment. The tables are organized according to Local Roads (Table 5.11-7), Collector Roads (Table 5.11-8), Residential and Secondary Arterials (Table 5.11-9), Arterials (Table 5.11-10), Major Arterials (Table 5.11-11), and Super Arterials (Table 5.11-12). Noise levels for expected current conditions (2005) and future with General Plan 2030 buildout (2030) are presented in each table.

A potentially significant impact is one that would cause noise levels to increase to over 65 CNEL or if over 65 CNEL, to increase by 3 dB or more when adjacent to noise-sensitive uses. In Tables 5.11-7 through Table 5.11-12, segments where noise levels are projected to increase to over 65 CNEL or if over 65 CNEL, to increase by 3 dB or more, are shown in yellow highlight. Most of these highlighted segments are Arterial, Major Arterial and Super Arterial roadways. The proposed General Plan 2030 proposes primarily industrial and commercial uses along these roads. Local roadways, which primarily serve residential areas (noise sensitive land uses), are projected to be below the threshold of potential

significance. However certain Collectors and numerous Residential and Secondary Arterials, which could serve residential areas, are projected to exceed the threshold.

**Table 5.11-7
Future Local Roadways
Traffic Noise Impact Analysis
dB CNEL at 50 feet from centerline
Distance to 65 dB CNEL in Feet**

Roadway	Segment		2005 CNEL	Distance to 65 dB	2030 CNEL	Distance to 65 dB
5th Ave	Silica Dr	Bear Valley Rd	55	11	55	10
I 1th St	B St	Verde St	58	16	59	20
Cobalt Rd	Hopland St	Mojave Dr	ND	n/a	63	36
Cobalt Rd	Mojave Dr	Hook Blvd	ND	n/a	65	48
Cobalt Rd	Hook Blvd	Seneca Rd	ND	n/a	63	39
Del Rey Dr	Forrest Ave	Mojave Dr	57	15	57	15
Del Rey Dr	Mojave Dr	7th St	56	12	61	27
E St	Willow St	I-15 NB Ramps	54	10	58	17
Forrest St	3rd Ave	Moore Sr	54	9	54	10
Luna Rd	Mesa Linda St	US 395	59	21	64	41
Rodeo Dr	Victor St	Seneca Rd	59	21	61	29
Seneca Rd	Cobalt Rd	Topaz Rd	ND	N/a	65	47
Seneca Rd	Topaz Rd	Mesa Linda Ave	ND	N/a	65	49
Seneca Rd	Mesa Linda Ave	US 395	ND	N/a	65	49
Verde St	I 1th St	Hesperia Rd	59	19	60	22
Verde St	Hesperia Rd	Mojave St	60	25	61	26

**Table 5.11-8
Future Collectors
Traffic Noise Impact Analysis
dB CNEL at 50 feet from centerline
Distance to 65 dB CNEL in Feet**

Roadway	Segment		2005 CNEL	Distance to 65 dB	2030 CNEL	Distance to 65 dB
Hesperia Rd	D St	B St	63	37	64	44
Hesperia Rd	B St	Forrest Ave	65	53	66	57
Hesperia Rd	Forrest Ave	Rio Vista St	65	53	68	79
Hesperia Rd	Rio Vista St	Verde St	65	53	68	80
Mariposa Rd	I-15 NB Off-ramp	Kingswood Dr	67	67	67	71
Mariposa Rd	Kingswood Dr	Yates Rd	67	68	67	73
Mariposa Rd	Yates Rd	Nisqualli Rd	67	67	68	81
Pacoima Rd	Luna Rd	La Mesa Rd	59	20	63	40
Spring Valley Pkwy	Driftwood Dr	Country Club Dr	ND	N/a	65	49
Spring Valley Pkwy	Country Club Dr	Pahute Rd	62	31	63	36

**Table 5.11-8
Future Collectors
Traffic Noise Impact Analysis
dB CNEL at 50 feet from centerline
Distance to 65 dB CNEL in Feet**

Roadway	Segment		2005 CNEL	Distance to 65 dB	2030 CNEL	Distance to 65 dB
Spring Valley Pkwy	Pahute Rd	Bear Valley Rd	65	51	67	72
1st Ave	Green Tree Blvd	Ottawa St	ND	N/a	65	47
1st Ave	Ottawa St	Winona St	ND	n/a	57	15
1st Ave	Winona St	Nisqualli Rd	ND	N/a	57	16
1st Ave	Nisqualli Rd	Silica Rd	62	30	62	32
1st Ave	Silica Rd	Jasmine St	57	16	58	17
2nd Ave	Nisqualli Rd	Silica Rd	ND	N/a	57	14
6th St	D St	C St	52	7	62	31
6th St	C St	B St	55	11	63	35
6th St	B St	A St	54	9	63	35
6th St	A St	Union St	60	23	59	21
6th St	Union St	Mojave Dr	60	24	61	27
11th Ave	Winona St	Nisqualli Rd	57	16	58	17
11th St	D St	B St	58	18	60	24
Arlette Dr	Joshua St	Hook Blvd	58	18	59	20
Ashley Glen Dr	Mojave Dr	Joshua St	ND	N/a	59	21
Ashley Glen Dr	Joshua St	Hook Blvd	57	16	62	32
Avalon Ave	Fresno Dr	A St	56	12	56	13
Balsam Rd	Winona St	Nisqualli Rd	ND	N/a	60	23
Brucite Rd	Hopland St	Tawney Ridge Ln	ND	N/a	55	10
Brucite Rd	Tawney Ridge Ln	Mojave Dr	ND	N/a	52	7
Brucite Rd	Mojave Dr	Hook Blvd	ND	N/a	62	30
Burning Tree Dr	Pebble Beach Dr	Green Tree Blvd	59	19	62	31
Cahuenga Rd	Palmdale Rd	Dos Palmas Rd	44	2	65	49
Cahuenga Rd	Dos Palmas Rd	Luna Rd	51	6	62	30
Cantina Dr	La Mesa Rd	Eagle Ranch Pkwy	ND	N/a	65	53
Cantina Dr	Eagle Ranch Pkwy	Bear Valley Rd	58	18	65	54
Cantina Dr	Holly Rd	Mojave Rd	ND	N/a	63	36
Cantina Dr	Mojave Rd	Seneca Rd	ND	N/a	65	47
Cantina Dr	Seneca Rd	Palmdale Rd	ND	N/a	67	64
Civic Dr	Mojave Dr	Roy Rogers Dr	53	8	62	34
Clovis St	Amargosa Rd	Village Dr	54	9	55	11
Clovis St	Village Dr	El Evado Rd	57	14	61	26
Clovis St	El Evado Rd	Cordova Rd	ND	N/a	51	6
Clovis St	Cordova Rd	Amethyst Rd	ND	N/a	54	10
Cobalt Rd	Seneca Rd	Palmdale Rd	54	9	61	28
Cobalt Rd	Palmdale Rd	Dos Palmas Rd	61	27	64	44

**Table 5.11-8
Future Collectors
Traffic Noise Impact Analysis
dB CNEL at 50 feet from centerline
Distance to 65 dB CNEL in Feet**

Roadway	Segment		2005 CNEL	Distance to 65 dB	2030 CNEL	Distance to 65 dB
Cobalt Rd	Dos Palmas Rd	Luna Rd	59	20	64	44
Cobalt Rd	La Mesa Rd	Northstar Ave	58	17	62	33
Cobalt Rd	Northstar Ave	Bear Valley Rd	57	15	61	26
Cobalt Rd	Bear Valley Rd	Sycamore St	60	25	61	26
Cobalt Rd	Sycamore St	Eucalyptus St	ND	N/a	60	24
Condor Rd	Tawney Ridge Ln	Mojave Dr	56	13	59	20
Cordova Rd	Rancho Rd	Clovis St	ND	N/a	55	11
Cordova Rd	Clovis St	Hopland St	ND	N/a	57	14
Cordova Rd	Hopland St	Tawney Ridge Ln	ND	N/a	56	13
Cordova Rd	Tawney Ridge Ln	Mojave Dr	ND	N/a	53	8
Cottonwood Ave	Mariposa Rd	Bear Valley Rd	63	38	65	53
Cypress Ave	Yates Rd	Ottawa St	ND	N/a	55	11
Cypress Ave	Ottawa St	Nisqualli Rd	ND	N/a	58	18
Cypress Ave	Nisqualli Rd	9th Ave	55	11	59	21
Cypress Ave	9th Ave	11th St	52	7	56	12
Cypress Ave	11th St	Bear Valley Rd	44	2	54	10
Dos Palmas Rd	Park Ave	Amargosa Rd	ND	N/a	58	17
Dos Palmas Rd	Amargosa Rd	Cahuenga Rd	ND	N/a	61	26
Dos Palmas Rd	Cahuenga Rd	El Evado Rd	ND	N/a	63	35
Dos Palmas Rd	El Evado Rd	Pacoima Rd	ND	N/a	65	52
Dos Palmas Rd	Pacoima Rd	Amethyst Rd	ND	N/a	65	53
Dos Palmas Rd	Amethyst Rd	Cobalt Rd	ND	N/a	62	33
Dos Palmas Rd	Cobalt Rd	Topaz Rd	ND	N/a	63	39
Dos Palmas Rd	Topaz Rd	Mesa Linda St	ND	N/a	65	51
Dos Palmas Rd	Mesa Linda St	US-395	ND	N/a	64	46
Dos Palmas Rd	US-395	Bellflower St	ND	N/a	66	58
Dos Palmas Rd	Bellflower St	Monte Vista Rd	ND	N/a	65	50
Dos Palmas Rd	Monte Vista Rd	Braceo St	ND	N/a	65	47
Dos Palmas Rd	Braceo St	Baldy Mesa Rd	ND	N/a	61	27
El Evado Rd	Palmdale Rd	Dos Palmas Rd	64	45	69	93
Francesca Rd	Spring Valley Pkwy	Tamarisk Rd	ND	N/a	64	42
Francesca Rd	Tamarisk Rd	Ridgecrest Rd	ND	N/a	63	39
Hopland St	Amethyst Rd	El Evado Rd	ND	N/a	64	42
Hopland St	El Evado Rd	Llanada Ave	53	8	63	35
Hook Blvd	Amethyst Rd	Brucite Rd	52	7	65	52
Hook Blvd	Brucite Rd	Cobalt Rd	ND	N/a	67	65
Hughes Rd	La Paz Dr	Rodeo Dr	55	11	60	22
Hughes Rd	Rodeo Dr	Hesperia Rd	57	14	57	15
Jeraldo Dr	Mojave Dr	Joshua St	53	8	53	8
Kentwood	Hook Blvd	Seneca Rd	ND	N/a	60	24

**Table 5.11-8
Future Collectors
Traffic Noise Impact Analysis
dB CNEL at 50 feet from centerline
Distance to 65 dB CNEL in Feet**

Roadway	Segment		2005 CNEL	Distance to 65 dB	2030 CNEL	Distance to 65 dB
Blvd						
La Paz Dr	Forrest Ave	Mojave Dr	61	28	62	30
La Paz Dr	Mojave Dr	Redondo Dr	62	33	64	43
La Paz Dr	Redondo Dr	Plaza Dr	64	41	64	43
La Paz Dr	Seneca Rd	Lorene Dr	60	23	65	48
La Paz Dr	Lorene Dr	Hughes Rd	60	22	63	40
La Paz Dr	Hughes Rd	Pebble Beach Dr	57	14	61	26
Lindero St	7th Ave	9th Ave	ND	N/a	58	17
Lindero St	9th Ave	11th St	ND	N/a	56	13
Lindero St	11th St	Cypress Ave	ND	N/a	56	13
Lindero St	Cypress Ave	Balsam Rd	ND	N/a	59	19
Llanada Ave	Amargosa Rd	Village Dr	58	18	59	20
Llanada Ave	Village Dr	Hopland St	54	10	60	23
Locust Ave	Pahute Rd	Bear Valley Rd	ND	N/a	64	43
Luna Rd	Amargosa Rd	Cahuenga Rd	56	13	62	33
Luna Rd	Cahuenga Rd	El Evado Rd	60	22	62	31
Luna Rd	El Evado Rd	Pacoima Rd	61	28	62	31
Luna Rd	Pacoima Rd	Amethyst Rd	61	27	62	31
Luna Rd	Amethyst Rd	Cobalt Rd	62	31	65	50
Luna Rd	Cobalt Rd	Topaz Rd	62	30	65	47
Luna Rd	Topaz Rd	Mesa Linda St	57	16	64	45
Luna Rd	US-395	Mesa View Dr	ND	N/a	66	58
Luna Rd	Mesa View Dr	Bellflower St	ND	N/a	64	45
Luna Rd	Bellflower St	Monte Vista St	ND	N/a	65	51
Luna Rd	Monte Vista St	Braceo St	ND	N/a	65	47
Luna Rd	Braceo St	Baldy Mesa Rd	ND	N/a	66	56
Mesa St	Amargosa Rd	Topaz Rd	ND	N/a	64	42
Mesa St	Topaz Rd	Eagle Ranch Pkwy	ND	N/a	63	38
Mesa St	Eagle Ranch Pkwy	US-395	ND	N/a	60	24
Mesa St	US-395	Pena Ave	ND	N/a	65	49
Mesa Linda St	Mojave Dr	Hook Blvd	ND	N/a	61	28
Mesa Linda St	Dos Palmas Rd	Luna Rd	ND	N/a	62	30
Mesa Linda St	Luna Rd	La Mesa Rd	ND	N/a	61	27
Mesa Linda St	Holly Rd	Cactus Rd	ND	N/a	57	14
Mesa Linda St	Cactus Rd	Hook Blvd	ND	N/a	61	27
Mesa Linda St	Hook Blvd	Seneca Rd	ND	N/a	62	33
Mesa Linda St	Seneca Rd	Palmdale Rd	ND	N/a	64	43
Mesa Linda St	Palmdale Rd	Bear Valley Rd	ND	N/a	61	26
Mesa Linda St	Bear Valley Rd	Sequoia St	ND	N/a	66	59
Mesa Linda St	Sequoia St	Sycamore St	ND	N/a	63	38

**Table 5.11-8
Future Collectors
Traffic Noise Impact Analysis
dB CNEL at 50 feet from centerline
Distance to 65 dB CNEL in Feet**

Roadway	Segment		2005 CNEL	Distance to 65 dB	2030 CNEL	Distance to 65 dB
Mesa Linda St	Sycamore St	Eucalyptus St	ND	N/a	65	50
Mesa Linda St	Eucalyptus St	Verano St	ND	N/a	65	50
Mesa Linda St	Verano St	Mesa St	ND	N/a	61	28
Mesa View Dr	La Mesa St	Olivine Rd	ND	N/a	59	19
Mesa View Dr	Olivine Rd	Bear Valley Rd	ND	N/a	58	17
Mesa View Dr	Bear Valley Rd	Sycamore St	ND	N/a	63	39
Mesa View Dr	Sycamore St	Eucalyptus St	ND	N/a	63	37
Mojave Dr	Victor St	7th St	ND	N/a	61	27
National Trails Hwy	n/o Turner Rd	Turner Rd	60	25	61	27
National Trails Hwy	Turner Rd	Air Expwy	64	46	65	49
National Trails Hwy	Air Expwy	Rancho Rd	65	51	67	68
National Trails Hwy	Rancho Rd	I-15 SB Ramps	66	56	68	81
Northstar Ave	Pacoima Rd	Amethyst Rd	59	20	61	27
Northstar Ave	Amethyst Rd	Cobalt Rd	58	18	60	22
Northstar Ave	Cobalt Rd	High Desert Rd	ND	N/a	58	17
Olivine Rd	Cantina Dr	US-395	ND	N/a	67	73
Olivine Rd	US-395	Pena Rd	ND	N/a	61	26
Olivine Rd	Pena Rd	Mesa View Dr	ND	N/a	59	21
Olivine Rd	Mesa View Dr	Bellflower St	ND	N/a	58	18
Olivine Rd	Bellflower St	Monte Vista Rd	ND	N/a	60	23
Olivine Rd	Monte Vista Rd	Baldy Mesa Rd	ND	N/a	62	30
Olivine Rd	Baldy Mesa Rd	Beaver Ave	ND	N/a	66	57
Ottawa St	Hesperia Rd	1st Ave	50	5	67	66
Ottawa St	1st Ave	3rd Ave	51	6	66	63
Ottawa St	3rd Ave	Arrowhead Dr	ND	N/a	67	67
Ottawa St	Arrowhead Dr	Cypress Ave	ND	N/a	66	58
Ottawa St	Cypress Ave	Mariposa Rd	ND	N/a	66	60
Pacoima Rd	Dos Palmas Rd	Luna Rd	ND	N/a	60	23
Pacoima Rd	La Mesa Rd	Northstar Ave	60	23	65	51
Pacoima Rd	Northstar Ave	Bear Valley Rd	60	22	63	38
Pacoima Rd	Seneca Rd	Palmdale Rd	ND	N/a	58	18
Pacoima Rd	Palmdale Rd	Dos Palmas Rd	ND	N/a	60	25
Pahute Rd	Spring Valley Pkwy	Tamarisk Rd	ND	n/a	66	58
Pahute Rd	Tamarisk Rd	Ridgecrest Rd	ND	N/a	66	58
Pahute Rd	Cottonwood Ave	Balsam Rd	ND	N/a	65	47
Pebble Beach Dr	La Paz Dr	Rodeo Dr	54	9	58	18

**Table 5.11-8
Future Collectors
Traffic Noise Impact Analysis
dB CNEL at 50 feet from centerline
Distance to 65 dB CNEL in Feet**

Roadway	Segment		2005 CNEL	Distance to 65 dB	2030 CNEL	Distance to 65 dB
Pena Ave	Bear Valley Rd	Sycamore St	ND	N/a	63	35
Pena Ave	Sycamore St	Eucalyptus	ND	N/a	62	31
Redrock Rd	Topaz Rd	Eagle Ranch Pkwy	58	18	63	35
Reno Loop East	E Trail	Hook blvd	59	21	60	23
Reno Loop East	Hook blvd	S Trail	55	10	61	27
Reno Loop West	W Trail	Hook blvd	57	16	60	24
Reno Loop West	Hook blvd	S Trail	54	9	54	9
Rodeo Dr	Seneca Rd	Lorene Dr	62	33	64	44
Rodeo Dr	Lorene Dr	Hughes Rd	63	34	64	46
Rodeo Dr	Hughes Rd	Pebble Beach Dr	63	35	65	49
Rodeo Dr	Pebble Beach Dr	Green Tree Blvd	60	23	63	38
Seneca Rd	Amargosa Rd	Borego Rd	60	24	65	47
Seneca Rd	Borego Rd	Cahuenga Rd	60	22	66	59
Seneca Rd	Cahuenga Rd	El Evado Rd	58	18	67	63
Seneca Rd	El Evado Rd	S Trail	59	19	66	63
Seneca Rd	S Trail	Amethyst Rd	47	3	67	65
Seneca Rd	Amethyst Rd	Cobalt Rd	54	9	66	60
Silica Rd	Hesperia Rd	2nd Ave	59	20	63	37
Silica Rd	2nd Ave	3rd Ave	Nd	N/a	63	40
Silica Rd	3rd Ave	7th Ave	ND	N/a	62	30
Smoketree Rd	Topaz Rd	Mesa Linda St	ND	N/a	66	60
Sycamore St	Amethyst Rd	Cobalt Rd	ND	N/a	62	32
Sycamore St	Cobalt Rd	Topaz Rd	57	16	62	34
Sycamore St	Topaz Rd	Mesa Linda St	53	8	62	33
Sycamore St	Mesa Linda St	US 395	54	9	66	60
Sycamore St	Amargosa Rd	Amethyst Rd	ND	N/a	60	24
Sycamore St	US-395	Pena Rd	ND	N/a	67	66
Sycamore St	Pena Rd	Mesa View Dr	ND	N/a	64	41
Sycamore St	Mesa View Dr	Bellflower St	ND	N/a	64	43
Sycamore St	Bellflower St	Verbena Rd	ND	N/a	62	34
Sycamore St	Verbena Rd	Monte Vista Rd	ND	N/a	64	44
Tawney Ridge L	Puesta Del Sol Dr	Sueno Ln	49	4	60	23
Tawney Ridge L	Sueno Ln	Village Dr	59	19	60	22
Tawney Ridge L	Village Dr	Condor Rd	54	9	58	18

**Table 5.11-8
Future Collectors
Traffic Noise Impact Analysis
dB CNEL at 50 feet from centerline
Distance to 65 dB CNEL in Feet**

Roadway	Segment		2005 CNEL	Distance to 65 dB	2030 CNEL	Distance to 65 dB
Tawney Ridge L	Condor Rd	Amargosa Rd	49	4	58	18
Tawney Ridge L	Amargosa Rd	Ferndale Rd	ND	N/a	62	30
Tawney Ridge L	Ferndale Rd	Cahuenga Rd	ND	N/a	61	27
Tawney Ridge L	Cahuenga Rd	El Evado Rd	ND	N/a	58	17
Tawney Ridge L	El Evado Rd	Cordova Rd	ND	N/a	58	18
Tawney Ridge L	Cordova Rd	Amethyst Rd	ND	N/a	57	16
Tawney Ridge L	Amethyst Rd	Cobalt Rd	ND	N/a	61	29
Tawney Ridge L	Cobalt Rd	Topaz Rd	ND	N/a	56	13
Tawney Ridge L	Topaz Rd	Mesa Linda Ave	ND	N/a	62	31
Tawney Ridge L	Mesa Linda Ave	US-395	ND	N/a	63	35
Turner Rd	National Trails Hwy	Air Expressway	ND	N/a	54	9
Verbena Rd	Palmdale Rd	Dos Palmas Rd	ND	N/a	60	23
Verbena Rd	Dos Palmas Rd	Luna Rd	ND	N/a	61	26
Verbena Rd	Luna Rd	Olivine Rd	ND	N/a	59	19
Verbena Rd	Olivine Rd	Bear Valley Rd	ND	N/a	58	17
Verbena Rd	Bear Valley Rd	Sycamore St	ND	N/a	58	16
Victor St	Mojave Dr	Rodeo Dr	54	10	57	16
Victor St	Rodeo Dr	Corta Dr	58	18	62	32
Victor St	Corta Dr	7th St	59	21	63	36
West Trail	Mojave Dr	Reno Loop Rd	54	10	58	17
Yates Rd	Arrowhead Dr	Mariposa Rd	59	19	65	48

**Table 5.11-9
Future Residential & Secondary Arterials
Traffic Noise Impact Analysis
dB CNEL at 50 feet from centerline
Distance to 65 dB CNEL in Feet**

Segment			2005 CNEL	Distance to 65 dB	2030 CNEL	Distance to 65 dB
7 th St	D St	C St	68	75	72	138
7 th St	C St	B St	68	81	71	135
7 th St	B St	A St	69	87	71	133
7 th St	A St	Forrest Ave	69	88	71	121
11 th Ave	Nisqualli Rd	Cypress Ave	56	13	61	28
11 th Ave	Cypress Ave	Lindero St	58	17	62	30
11 th Ave	Lindero St	Bear Valley Rd	59	19	61	26
La Mesa Rd	Mesa Linda St	Cantina Dr	ND	N/a	67	70
La Mesa Rd	Cantina Dr	US-395	ND	N/a	69	90
La Mesa Rd	US-395	Pana Rd	ND	N/a	69	96
La Mesa Rd	Pana Rd	Mesa View Dr	ND	N/a	69	93
La Mesa Rd	Mesa View Dr	Bellflower St	ND	N/a	69	92
La Mesa Rd	Bellflower St	Verbena Rd	ND	N/a	70	104
La Mesa Rd	Verbena Rd	Monte Vista Rd	ND	N/a	69	93
La Mesa Rd	Monte Vista Rd	Braceo St	ND	N/a	65	51
La Mesa Rd	Braceo St	Baldy Mesa Rd	ND	N/a	66	60
La Mesa Rd	Baldy Mesa Rd	White Rd	ND	N/a	64	42

**Table 5.11-10
Future Arterials
Traffic Noise Impact Analysis
dB CNEL at 50 feet from centerline**

Distance to 65 dB CNEL in Feet

Roadway	Segment		2005 CNEL	Distance to 65 dB	2030 CNEL	Distance to 65 dB
3 rd Ave	Nisqualli Rd	Silica Dr	58	16	66	57
3 rd Ave	Silica Dr	Bear Valley Rd	ND	N/a	64	45
7 th Ave	Lindero St	Bear Valley Rd	67	73	71	118
Roy Rogers Dr	I-15 SB Ramps	Civic Dr	71	135	73	169
Roy Rogers Dr	Civic Dr	Amargosa Rd	69	96	72	154
2nd Ave	Silica Rd	Bear Valley Rd	65	50	65	50
Air Base Rd	National Trails Hwy	Gas Line Rd	67	68	68	85
Air Base Rd	Gas Line Rd	Village Dr	67	65	68	83
Air Base Rd	Village Dr	Phantom East St	69	98	72	145
Cantina Dr	Palmdale Rd	Dos Palmas Rd	ND	N/a	71	129

**Table 5.11-10
Future Arterials
Traffic Noise Impact Analysis
dB CNEL at 50 feet from centerline**

Distance to 65 dB CNEL in Feet

Roadway	Segment		2005 CNEL	Distance to 65 dB	2030 CNEL	Distance to 65 dB
Cantina Dr	Dos Palmas Rd	Luna Rd	ND	N/a	71	132
Cantina Dr	Luna Rd	La Mesa Rd	ND	N/a	72	141
Civic Dr	Roy Rogers Dr	Seneca Rd	64	44	66	60
Civic Dr	Seneca Rd	Park Ave	63	37	64	40
Civic Dr	Park Ave	Amargosa Rd	51	6	67	69
Jasmine St	Industrial Blvd	Hesperia Rd	67	65	67	70
Jasmine St	Hesperia Rd	1st Ave	64	46	65	49
Jasmine St	1st Ave	2nd Ave	63	38	64	41
La Mesa Rd	Amargosa Rd	El Evado Rd	65	50	74	189
La Mesa Rd	El Evado Rd	Petaluma Rd	65	54	71	117
La Mesa Rd	Petaluma Rd	Pacoima Rd	65	53	71	117
La Mesa Rd	Pacoima Rd	Triple Tree Tr	66	56	71	123
La Mesa Rd	Triple Tree Tr	Amethyst Rd	66	55	71	123
La Mesa Rd	Amethyst Rd	Cobalt Rd	60	25	70	115
La Paz Dr	7th St	Seneca Rd	66	62	71	122
Mesa Linda St	La Mesa Rd	Eagle Ranch Pkwy	60	24	66	56
Mojave Dr	7th St	6th St	67	70	68	76
Mojave Dr	6th St	Del Rey Dr	68	84	69	92
Mojave Dr	Del Rey Dr	La Paz Dr	69	91	72	138
Nisqualli Rd	Hesperia Rd	1st Ave	67	72	69	97
Nisqualli Rd	1st Ave	3rd Ave	67	69	68	80
Nisqualli Rd	3rd Ave	Arrowhead Dr	66	61	69	91
Nisqualli Rd	Arrowhead Dr	Cypress Ave	67	64	70	108
Nisqualli Rd	Cypress Ave	11th Ave	66	63	71	117
Nisqualli Rd	11th Ave	Balsam Rd	67	68	71	127
Nisqualli Rd	Balsam Rd	Mariposa Rd	68	75	73	162
Nisqualli Rd	11th Ave	Mariposa Rd	67	69	71	127
Seneca Rd	Industrial Blvd	Hesperia Rd	ND	N/a	63	34
Seneca Rd	Hesperia Rd	Rodeo Dr	66	54	70	105
Seneca Rd	Rodeo Dr	La Paz Dr	65	49	70	111
Village Dr	Mojave Dr	Calgo Ln	68	77	70	114
Village Dr	Calgo Ln	Tawney Ridge Ln	67	68	70	103
Village Dr	Tawney Ridge Ln	Puesta Del Sol Dr	65	54	69	89
Village Dr	Puesta Del Sol Dr	Amargosa Rd	66	54	70	102
Village Dr	Amargosa Rd	Clovis St	67	70	71	121
Village Dr	Clovis St	Rancho Rd	66	62	70	107
Village Dr	Rancho Rd	Air Base Rd	66	60	70	112
Amargosa Rd	Village Dr	Tawney Ridge Ln	65	49	68	74
Amargosa Rd	Tawney Ridge Ln	Mojave Dr	66	57	69	90
Amargosa Rd	Mojave Dr	Roy Rogers Dr	69	86	70	103
Amargosa Rd	Roy Rogers Dr	Seneca Rd	67	68	70	110

**Table 5.11-10
Future Arterials
Traffic Noise Impact Analysis
dB CNEL at 50 feet from centerline**

Distance to 65 dB CNEL in Feet

Roadway	Segment		2005 CNEL	Distance to 65 dB	2030 CNEL	Distance to 65 dB
Amargosa Rd	Seneca Rd	Civic Dr	66	62	71	124
Amargosa Rd	Civic Dr	Palmdale Rd	66	63	70	101
Amargosa Rd	Palmdale Rd	Dos Palmas Rd	69	89	70	107
Amargosa Rd	Dos Palmas Rd	Luna Rd	68	76	70	103
Amargosa Rd	Luna Rd	La Mesa Rd	67	66	70	113
Amargosa Rd	La Mesa Rd	King Ranch Rd	69	94	70	115
Amargosa Rd	King Ranch Rd	Bear Valley Rd	70	100	70	113
Amargosa Rd	Bear Valley Rd	Christa Way	67	72	71	121
Amargosa Ra	Christa Way	California Aqueduct	64	45	69	90
Eagle Ranch Pkwy	Redrock Rd	Bear Valley Rd	63	34	65	53
Holly Rd	US-395	Mesa Linda Ave	ND	N/a	69	88
Holly Rd	Mesa Linda Ave	Topaz Rd	ND	N/a	68	84
Hook Blvd	Amargosa Rd	Arlette Dr	69	93	70	115
Hook Blvd	Arlette Dr	Ashley Glen Dr	67	70	71	124
Hook Blvd	Ashley Glen Dr	El Evado Rd	69	92	71	118
Hook Blvd	El Evado Rd	Reno Loop Rd East	66	56	69	87
Hook Blvd	Reno Loop Rd East	Reno Loop Rd West	65	47	69	97
Hook Blvd	Reno Loop Rd West	Amethyst Rd	61	26	69	93
Hopland St	Topaz Rd	Cobalt Rd	ND	N/a	70	102
Hopland St	Cobalt Rd	Amethyst Rd	ND	N/a	70	101
Industrial Blvd	Silica Rd	Bear Valley Rd	70	108	71	117
Industrial Blvd	Seneca Rd	Green Tree Blvd	ND	N/a	63	39
Kentwood Blvd	Civic Dr	Palmdale Rd	67	6	69	88
La Mesa Rd	Cobalt Rd	Topaz Rd	64	41	70	113
La Mesa Rd	Topaz Rd	Blair St	64	40	70	115
La Mesa Rd	Blair St	Mesa Linda St	61	27	70	106
La Paz Dr	Plaza Dr	Roy Rogers Dr	66	60	67	64
La Paz Dr	I-15 NB Ramps	Valley Center Dr	71	135	73	167
La Paz Dr	Valley Center Dr	7th St	67	64	73	166
Mall Blvd	Petaluma Rd	Bear Valley Rd	68	76	68	80
Mariposa Rd	Nisqualli Rd	Bear Valley Rd	69	87	69	94
Mojave Dr	Amargosa Rd	Jeraldo Dr	66	61	71	117
Mojave Dr	Jeraldo Dr	Ashley Glen Dr	66	55	71	119
Mojave Dr	Ashley Glen Dr	El Evado Rd	65	51	71	123
Mojave Dr	El Evado Rd	East Trail	66	55	71	130
Mojave Dr	East Trail	Rocky Knoll Way	64	44	71	125

**Table 5.11-10
Future Arterials
Traffic Noise Impact Analysis
dB CNEL at 50 feet from centerline**

Distance to 65 dB CNEL in Feet

Roadway	Segment		2005 CNEL	Distance to 65 dB	2030 CNEL	Distance to 65 dB
Mojave Dr	Rocky Knoll Way	West Trail	64	44	71	123
Mojave Dr	West Trail	Amethyst Rd	68	74	72	157
Mojave Dr	Amethyst Rd	Brucite Rd	67	70	72	153
Mojave Dr	Brucite Rd	Cobalt Rd	64	44	72	138
Mojave Dr	Cobalt Rd	Topaz Rd	64	45	71	129
Mojave Dr	Topaz Rd	Mesa Linda Ave	64	45	71	131
Monte Vista Rd	Palmdale Rd	Dos Palmas Rd	ND	N/a	65	51
Monte Vista Rd	Dos Palmas Rd	Luna Rd	ND	N/a	67	64
Monte Vista Rd	Luna Rd	La Mesa Rd	ND	N/a	63	37
Monte Vista Rd	La Mesa Rd	Olivine Rd	ND	N/a	68	75
Monte Vista Rd	Olivine Rd	Bear Valley Rd	ND	N/a	67	73
Monte Vista Rd	Bear Valley Rd	Sycamore St	ND	N/a	67	64
Rancho Rd	El Evado Rd	Amethyst	ND	N/a	66	56
Ridgecrest Rd	Green Tree Blvd	Pahute Rd	65	49	71	134
Ridgecrest Rd	Pahute Rd	Bear Valley Rd	67	70	68	85
Seneca Rd	Civic Dr	Amargosa Rd	60	25	61	27
Silica Rd	Industrial Blvd	Hesperia Rd	62	30	68	79
Smoketree Rd	Amargosa Rd	Topaz Rd	ND	N/a	73	164
Stoddard Wells Rd	Dante St	I-15 SB Ramps	62	30	73	178
Stoddard Wells Rd	I-15 NB Ramps	Happy Trails Hwy	58	18	69	100
Topaz Rd	Holly Rd	Cactus Rd	ND	N/a	67	70
Topaz Rd	Cactus Rd	Mojave Dr	ND	N/a	69	93
Topaz Rd	Mojave Dr	Hook Blvd	ND	N/a	68	76
Topaz Rd	Hook Blvd	Seneca Rd	ND	N/a	69	86
Topaz Rd	Seneca Rd	Palmdale Rd	ND	N/a	68	80
Topaz Rd	Palmdale Rd	Dos Palmas Rd	ND	N/a	69	86
Topaz Rd	Dos Palmas Rd	Luna Rd	ND	N/a	68	82
Topaz Rd	Luna Rd	La Mesa Rd	60	22	67	66
Topaz Rd	La Mesa Rd	Redrock Rd	62	33	68	77
Topaz Rd	Redrock Rd	San Miguel St	63	38	68	84
Topaz Rd	San Miguel St	Bear Valley Rd	63	38	69	89
Topaz Rd	Bear Valley Rd	Sycamore St	ND	N/a	69	93
Topaz Rd	Sycamore St	Eucalyptus St	ND	N/a	70	101

**Table 5.11-10
Future Arterials
Traffic Noise Impact Analysis
dB CNEL at 50 feet from centerline**

Distance to 65 dB CNEL in Feet

Roadway	Segment		2005 CNEL	Distance to 65 dB	2030 CNEL	Distance to 65 dB
Topaz Rd	Eucalyptus St	Verano St	ND	N/a	69	93
Topaz Rd	Verano St	Smoketree Rd	ND	N/a	70	116

**Table 5.11-11
Future Major Arterials
Traffic Noise Impact Analysis
dB CNEL at 50 feet from centerline
Distance to 65 dB CNEL in Feet**

Roadway	Segment		2005 CNEL	Distance to 65 dB	2030 CNEL	Distance to 65 dB
3 rd Ave	Green Tree Blvd	Ottawa St	66	58	66	63
3 rd Ave	Ottawa St	Nisqualli Rd	66	57	66	60
7th St	Forrest Ave	Center St	71	122	73	179
7th St	Center St	Union St	71	133	73	161
7th St	Union St	Mojave Dr	72	148	73	166
7th St	Mojave Dr	Victor St	71	122	72	151
7th St	Victor St	Plaza Dr	72	140	73	159
7th St	Plaza Dr	La Paz Dr	71	134	73	169
7th St	La Paz Dr	Lorene Dr	71	121	73	176
7th St	Lorene Dr	Green Tree Blvd	71	128	75	221
7th St	Mojave Dr	Palmdale Rd / Green Tree Blvd	72	141	75	221
7 th Ave	Yates Rd	Ottawa St	68	84	73	160
7 th Ave	Ottawa St	Nisqualli Rd	68	80	73	166
7 th Ave	Nisqualli Rd	Silica Dr	69	88	72	148
7 th Ave	Silica Dr	Lindero St	69	96	72	145
Adelanto Rd	La Paz Ave	Chamberlaine Way	48	4	69	91
Adelanto Rd	Chamberlaine Way	Bartlett Ave	48	4	68	84
Amethyst Rd	Rancho Rd	Hopland St	ND	N/a	70	117
Amethyst Rd	Hopland St	Mojave Dr	ND	N/a	71	120
Amethyst Rd	Mojave Dr	Quail Cove Pl	61	26	74	186
Amethyst Rd	Quail Cove Pl	Hook Blvd	61	27	74	190
Amethyst Rd	Hook Blvd	Woodpecker Rd	62	33	74	203
Amethyst Rd	Woodpecker Rd	Seneca Rd	62	34	74	204
Amethyst Rd	Seneca Rd	Begonia St	62	30	74	208
Amethyst Rd	Begonia St	Palmdale Rd	62	31	74	199
Amethyst Rd	La Mesa Rd	Northstar Ave	69	94	74	199
Amethyst Rd	Northstar Ave	Glengarry Dr	70	104	74	201
Amethyst Rd	Glengarry Dr	Bear Valley Rd	70	109	74	208

**Table 5.11-11
Future Major Arterials
Traffic Noise Impact Analysis
dB CNEL at 50 feet from centerline
Distance to 65 dB CNEL in Feet**

Roadway	Segment		2005 CNEL	Distance to 65 dB	2030 CNEL	Distance to 65 dB
Amethyst Rd	Bear Valley Rd	Sycamore St	ND	N/a	74	200
Amethyst Rd	Sycamore St	Eucalyptus St	ND	N/a	74	193
Baldy Mesa Rd	Palmdale Rd	Luna Rd	50	6	72	156
Baldy Mesa Rd	Luna Rd	La Mesa Rd	50	6	73	159
Baldy Mesa Rd	La Mesa Rd	Bear Valley Rd	50	6	72	154
Baldy Mesa Rd	Bear Valley Rd	5 th St	60	24	72	136
Baldy Mesa Rd	5 th St	Goss Rd	60	24	72	138
Balsam Rd	Nisqualli Rd	Bear Valley Rd	67	67	70	108
Bear Valley Rd	Fish Hatchery Rd	Jacaranda Ave	75	218	76	283
Bear Valley Rd	Jacaranda Ave	Peach Ave	73	180	76	278
Bear Valley Rd	Peach Ave	Industrial Blvd	76	275	76	286
Bear Valley Rd	Industrial Blvd	Hesperia Rd	76	257	76	293
Bellflower Rd	Palmdale Rd	Luna Rd	ND	N/a	72	156
Bellflower Rd	Luna Rd	La Mesa Rd	ND	N/a	73	162
Bellflower Rd	La Mesa Rd	Bear Valley Rd	ND	N/a	73	173
Bellflower Rd	Bear Valley Rd	Sycamore St	ND	N/a	74	189
D St	I 1th St	Hesperia Rd	74	213	75	234
D St	Hesperia Rd	7th St	74	202	74	202
D St	7th St	6th St	73	160	75	217
D St	6th St	Forrest Ave	72	155	74	208
D St	Forrest Ave	3rd St	72	156	74	210
D St	3rd St	2nd St	72	157	74	211
D St	Sherman Way	I-15 NB Ramps	74	189	74	213
Eagle Ranch Pkwy	Cantina Dr	Mesa Linda St	ND	N/a	65	48
Eagle Ranch Pkwy	Mesa Linda St	Redrock Rd	61	27	66	59
El Evado Rd	Air Base Rd	Rancho Rd	ND	N/a	73	174
El Evado Rd	Rancho Rd	Clovis St	ND	N/a	72	145
El Evado Rd	Clovis St	Hopland St	61	25	72	154
El Evado Rd	Hopland St	Tawney Ridge Ln	62	32	72	154
El Evado Rd	Tawney Ridge Ln	Mojave Dr	64	43	74	192
El Evado Rd	Mojave Dr	Hook Blvd	65	54	74	215
El Evado Rd	Hook Blvd	Seneca Rd	69	97	74	188
El Evado Rd	Seneca Rd	Begonia St	69	94	74	198
El Evado Rd	Begonia St	Palmdale Rd	70	107	74	207
El Evado Rd	Dos Palmas Rd	Luna Rd	68	79	73	166
El Evado Rd	Luna Rd	Manzano Rd	67	68	73	179
El Evado Rd	Manzano Rd	La Mesa Rd	67	6	73	179
El Evado Rd	La Mesa Rd	Northstar Ave	65	47	65	49
Eucalyptus St	Amargosa Rd	Amethyst Rd	ND	N/a	77	311

**Table 5.11-11
Future Major Arterials
Traffic Noise Impact Analysis
dB CNEL at 50 feet from centerline
Distance to 65 dB CNEL in Feet**

Roadway	Segment		2005 CNEL	Distance to 65 dB	2030 CNEL	Distance to 65 dB
Eucalyptus St	Amethyst Rd	Cobalt Rd	ND	N/a	74	204
Eucalyptus St	Cobalt Rd	Topaz Rd	ND	N/a	74	207
Eucalyptus St	Topaz Rd	Mesa Linda St	ND	N/a	74	194
Eucalyptus St	Mesa Linda St	Cantina Dr	ND	N/a	73	175
Eucalyptus St	Cantina Dr	US-395	ND	N/a	73	163
Eucalyptus St	US-395	Pena Ave	ND	N/a	76	259
Eucalyptus St	Pena Ave	Mesa View Dr	ND	N/a	76	252
Eucalyptus St	Mesa View Dr	Bellflower St	ND	N/a	75	233
George Blvd	Phantom St	Nevada Ave	53	7	63	36
George Blvd	Nevada Ave	Air Expressway	60	22	68	79
Green Tree Blvd	7 th St	St Andrews Dr	72	144	74	214
Green Tree Blvd	St Andrews Dr	Burning Tree Dr	72	151	74	211
Green Tree Blvd	Burning Tree Dr	Yates Rd	72	145	75	218
Green Tree Blvd	Yates Rd	Rodeo Dr	70	110	73	162
Green Tree Blvd	Rodeo Dr	Hesperia Rd	69	91	73	181
Green Tree Blvd	Hesperia Rd	Industrial Blvd	ND	N/a	75	239
Green Tree Blvd	Industrial Blvd	Ridgecrest Dr	ND	N/a	75	251
Hesperia Rd	Verde St	Center St	70	113	72	150
Hesperia Rd	Center St	Seneca Rd	71	118	73	184
Hesperia Rd	Seneca Rd	Hughes Rd	72	142	75	244
Hesperia Rd	Ottawa St	Winona St	73	178	74	206
Hesperia Rd	Winona St	Nisqualli Rd	74	186	74	200
Nevada Ave	Phantom West St	George Blvd	ND	N/a	62	33
Rancho Rd	Ranch Rd	Gas Line Rd	ND	N/a	65	54
Rancho Rd	Gas Line Dr	Village Dr	ND	N/a	65	49
Rancho Rd	Village Rd	El Evado Rd	ND	N/a	67	72

**Table 5.11-12
Future Super Arterials
Traffic Noise Impact Analysis
dB CNEL at 50 feet from centerline
Distance to 65 dB CNEL in Feet**

Roadway	Segment		2005 CNEL	Distance to 65 dB	2030 CNEL	Distance to 65 dB
Bear Valley Rd	Hesperia Rd	2 nd Ave	76	284	77	301
Bear Valley Rd	2 nd Ave	3 rd Ave	76	254	77	300
Bear Valley Rd	3 rd Ave	7 th Ave	75	243	77	304
Bear Valley Rd	7 th Ave	11 th Ave	75	247	77	296
Bear Valley Rd	11 th Ave	Balsam Rd	75	240	77	300
Bear Valley Rd	Balsam Rd	Locust Ave	75	238	77	323
Bear Valley Rd	Locust Ave	Cottonwood Ave	76	290	77	325
Bear Valley Rd	Mariposa Rd	I-15 NB Ramps	78	350	78	386
Bear Valley Rd	I-15 SB Ramps	Amargosa Rd	76	283	78	342
Bear Valley Rd	Amargosa Rd	Amethyst Rd	76	252	78	356
Bear Valley Rd	Topaz Rd	Eagle Ranch Pkwy	72	141	77	302
Bear Valley Rd	Eagle Ranch Pkwy	Cantina Dr	71	133	76	285
Bear Valley Rd	Cantina Dr	US-395	71	135	75	219
Bear Valley Rd	US-395	Mesa View Dr	68	78	76	266
Bear Valley Rd	Mesa View Dr	Bellflower St	64	43	76	259
Bear Valley Rd	Bellflower St	Monte Vista Rd	64	42	75	236
Bear Valley Rd	Monte Vista Rd	Baldy Mesa Rd	64	41	75	216
Bear Valley Rd	Baldy Mesa Rd	White Rd	59	21	75	227
Hesperia Rd	Hughes Rd	Green Tree Blvd	74	187	76	286
Hesperia Rd	Green Tree Blvd	Ottawa St	74	194	75	243
Hesperia Rd	Nisqualli Rd	Silica Rd	75	239	76	270
Hesperia Rd	Silica Rd	Jasmine St	75	231	74	192
Hesperia Rd	Jasmine St	Bear Valley Rd	73	180	74	191
La Paz Dr	I-15 NB Ramps	Valley Center Dr	74	195	75	241
Mojave Dr	La Paz Dr	I-15 NB Ramps	73	162	74	215
Mojave Dr	I-15 SB Ramps	Village Dr	74	187	76	293
Mojave Dr	Village Dr	Amargosa Rd	69	92	75	238
Mojave Dr	West Trail	Amethyst Rd	70	107	74	188
Mojave Dr	Amethyst Rd	Brucite Rd	70	100	73	183
Mojave Dr	Mesa Linda Ave	US-395	70	112	74	185
Palmdale Rd	Green Tree Blvd	Mariposa Rd	75	241	78	363
Palmdale Rd	I-15 SB Ramps	Amargosa Rd	76	288	78	375
Palmdale Rd	Amargosa Rd	Cahuenga Rd	74	208	77	311
Palmdale Rd	Cahuenga Rd	El Evado Rd	73	169	77	302
Palmdale Rd	El Evado Rd	Pacoima Rd	71	119	76	275
Palmdale Rd	Pacoima Rd	Amethyst Rd	73	179	76	256

Palmdale Rd	Amethyst Rd	Cobalt Rd	71	121	75	240
Palmdale Rd	Cobalt Rd	Topaz Rd	70	115	75	251
Palmdale Rd	Topaz Rd	Mesa Linda Ave	70	115	76	264
Palmdale Rd	Mesa Linda Ave	Cantina Dr	70	115	75	227
Palmdale Rd	Cantina Dr	US-395	72	142	74	201
Palmdale Rd	US-395	Pana Rd	71	127	75	233
Palmdale Rd	Pana Rd	Mesa View Dr	69	96	75	233
Palmdale Rd	Mesa View Dr	Bellflower St	69	94	75	223
Palmdale Rd	Bellflower St	Verbena Rd	68	86	74	211
Palmdale Rd	Verbena Rd	Monte Vista Rd	67	72	74	211
Palmdale Rd	Monte Vista Rd	Baldy Mesa Rd	69	99	74	190
Palmdale Rd	Baldy Mesa Rd	White Rd	68	74	75	249
Perimeter Rd	N/o Phantom St	Phantom East St	ND	N/a	74	187
Phantom East St	Shay Rd	Turner Rd	57	16	77	313
Phantom East St	Turner Rd	Air Expressway	59	21	77	334
Phantom West	George Blvd	Sabre Blvd	63	38	72	153
Phantom West	Sabre Blvd	Mustang St	63	38	72	152
Phantom West	Mustang St	Air Expressway	63	36	72	152
Roy Rodgers St	I-15 SB Ramps	Civic Dr	74	195	75	244
Roy Rodgers St	Civic Dr	Amargosa Rd	72	138	75	222
US-395	Cactus Rd	Mojave Dr	73	164	75	231
US-395	Mojave Dr	Hook Blvd	71	132	76	255
US-395	Hook Blvd	Seneca Rd	71	132	76	260
US-395	Seneca Rd	Palmdale Rd	73	181	74	204
US-395	Palmdale Rd	Dos Palmas Rd	72	141	76	281
US-395	Dos Palmas Rd	Luna Rd	72	138	76	264
US-395	Luna Rd	La Mesa Rd	71	134	76	281
US-395	La Mesa Rd	Olivine Rd	71	134	76	289
US-395	Olivine Rd	Bear Valley Rd	74	186	76	279
US-395	Bear Valley Rd	Sycamore St	72	145	77	302
US-395	Sycamore St	Eucalyptus St	72	147	76	270
US-395	Eucalyptus St	Mesa St	72	148	78	361
US-395	Mesa St	California Aqueduct	73	167	78	380

4.11.4.1. Would the project expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Impact Discussion: Policy I.1.1 of the General Plan 2030 Noise Element incorporates Table 5.11-3, above, into the Noise Element as Table N-3. This table establishes noise standards for the placement various land uses. Noise exposure is "normally acceptable" if the level of exposure does not require any special noise insulation or special construction techniques to reduce interior noise levels. The maximum exterior noise level considered to be normally acceptable for residential development is 65 dBA.

The State also provides additional standards through the implementation of the State Noise Insulation Standards. These standards apply to new multiple-family residential development located in areas exposed to ambient noise levels that exceed 65 dB (CNEL or Ldn). New multiple-family development in these areas must reduce exterior to interior noise levels through insulation, construction, or design.

In addition to proposed Noise Element provisions, the proposed Resource Element contains provisions that encourage compliance with the California Air Resources Board (CARB) "Air Quality and Land Use Handbook: A Community Health Perspective". These provisions include:

Implementation Measure 6.2.1.1: 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.

Implementation Measure 6.2.1.2: 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).

Implementation Measure 6.2.1.3: Avoid siting new sensitive land uses within 1,000 feet of a major service and maintenance rail yard.

Although these provisions are intended to protect new sensitive land uses from air pollutant emitting sources, they also would reduce noise impacts to sensitive uses.

The proposed General Plan 2030 Land Use Map maintains a Specific Plan designation over the SCLA area, ensuring that only non-noise sensitive land uses are located proximate to the airport. The Land Use Map also retains the Heavy Industrial designation over the existing cement operations. The General Plan provisions are expected to reduce exposure of persons to or generation of excessive noise levels to less than significant levels.

Impact Finding: Less than significant

5.11.4.2. Would the project expose persons to or generate excessive groundborne vibration or groundborne noise levels?

Impact Discussion:

As discussed above, provisions of the proposed Noise Element, Resource Element and Land Use Map are expected to reduce exposure of persons to or generation of excessive noise levels. Implementation Measure 2.1.1.5 of the Noise Element would specifically restrict noise and require mitigation measures for any noise-emitting construction equipment or activity. These provisions also are expected to reduce exposure of persons to or generation of excessive groundborne vibration or groundborne noise to less than significant levels.

Impact Finding: Less than significant

5.11.4.3 Would the project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Impact Discussion: The proposed General Plan 2030 would comprehensively update and supersede the City's current General Plan. However, the most significant change to land use proposed by the General Plan 2030 is the provision of larger commercial corners at major intersections, and a circulation plan to implement it, the extension of the SOI to include the Northern Expansion Area, and the addition of a Mixed-Use land use category in the already urbanized mixed commercial/residential areas of the City. None of the proposed General Plan 2030 provisions would result in new excessive noise emitting land uses.

As discussed in Section 5.15.3, despite proposed roadway improvements outlined in proposed General Plan 2030 Circulation Plan, proposed General Plan growth will cause roadway segments in the Planning Area to experience unacceptable levels of service at General Plan buildout. These deficient segments are located in built-out areas, along Interstate 15, US-395, SR-18, and along Bear Valley Road. Noise levels generated by vehicular and truck noise along these arterials are also expected to increase.

Tables 5-11-7 through 5.11-12 demonstrate how these expected increases in roadway traffic will impact traffic noise. As discussed above, certain Collectors and numerous Residential and Secondary Arterials, which could serve residential areas, are projected to cause noise levels to increase to over 65 CNEL or if over 65 CNEL, to increase by 3 dB or more when potentially adjacent to noise-sensitive uses

Proposed General Plan 2030 Noise Element provisions, particularly Policies 1.1.1 and 1.2.1 and their respective implementation measures, are expected to reduce potential noise impacts from roadway noise. Implementation Measure 6.2.1.1 of the proposed Resource Element would

restrict the siting of 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. These measures are expected to protect future land uses from locating adjacent to excessive noise generating roadways. However, existing sensitive land uses may be located adjacent to roadways where future traffic noise would exceed levels of significance. These proposed General Plan measures would not protect potential impacts to existing sensitive land uses. No mitigation measures have been identified that could reduce these potential permanent increases in ambient noise levels to less than significant levels.

Impact Finding: Significant and unavoidable.

5.11.4.4 Would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Impact Discussion: As discussed above, provisions of the proposed Noise Element, Resource Element and Land Use Map are expected to reduce exposure of persons to or generation of excessive noise levels. Implementation Measure 2.1.1.5 of the Noise Element would specifically restrict noise and require mitigation measures for any noise-emitting construction equipment or activity. All subsequent development projects in the Planning Area will be subject to separate CEQA reviews, including identification and if necessary mitigation of specific temporary or permanent noise increases. Substantial temporary or periodic increases in ambient noise levels resulting from implementation of General Plan 2030 are expected to be less than significant.

Impact Finding: Less than significant.

5.11.4.5 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?

Impact Discussion: As discussed above, the existing SCLA aircraft 70 and 75 CNEL contours remain entirely on airport property. The 65 CNEL noise contour extends off airport property to the south. This area is presently undeveloped. The 60 CNEL noise contour extends off airport property to the north, south, and southwest. The 55 CNEL noise contour extends off airport property to the north, south, northeast, and southwest.²

The City of Victorville has jurisdiction over the lands immediately east and southeast of SCLA. To the east of the airport, there is land designated Open Space. To the southeast there is land

² Comprehensive Land Use Plan for Southern California Logistics Airport, Draft December 2007, Coffman Associates.
Draft Program EIR General Plan 2030 *Page 5.11-35*

classified as light industrial and low-density residential. The remaining portions of land surrounding the airport are under the jurisdiction of San Bernardino County or the City of Adelanto.

The City of Victorville has also adopted a Specific Plan for development near SCLA. The Specific Plan includes Public/Open Space, Business Park, and Industrial designations for land southeast of the runways. The SCLA Specific Plan establishes policies to ensure SCLA operations are compatible with proximate land uses.

SCLA is proposing to update its master plan and increase aircraft flight operations. As proposed, SCLA's long-term forecast activity, expected in year 2025, would extend its noise contours (75, 70, 65, 60, 55 CNEL) beyond airport property.

Policies of the proposed Noise Element, notably Policy 1.1.2 and 2.2.1 and their respective implementation measures, seek to ensure that there is no conflict or inconsistency between the operation of the Southern California Logistics Airport and future land uses within the Planning Area. These policies and measures require the City to continue to monitor SCLA operations and coordinate these activities into the planning process. Implementation measure 1.1.2.3 would require that SCLA update its Specific Plan as directed by the City to accommodate changes in its master plan. These provisions are expected to reduce to less than significant levels the possibility that people living or working in the Planning Area would be to excessive noise levels from existing or future SCLA operations.

Impact Finding: Less than significant.

5.11.4.6 For a project located within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

Impact Discussion: Currently there is a private runway just to the north of the existing City limits, within the SOI. This runway is non-conforming, and possibly illegal. An application has been in process with the County on two occasions to legalize the use of the runway for private business purposes. While the current amount of use appears to be minimal, the City has written letters of opposition due to future development and safety concerns.

The proposed General Plan 2030 proposes new urban land uses in both the existing SOI and proposed Northern Expansion Area. Proposing new urban land uses in these northern SOI areas could result in a significant adverse impact by permitting new development in the vicinity of the non-conforming/illegal airstrip or its flight path.

This private airstrip is discussed in Section 5.7.4.6 in regard to safety hazards. To mitigate this potential impact, Section 5.7.6 recommends Mitigation Measure HAZ-3, which states as follows:

The City shall ensure closure and/or removal of the non-regulated private airstrip prior to issuance of any grading or building permits in areas adjacent to or within the general flight path area of the private airstrip.

This mitigation measure would also serve to reduce noise impacts for future land uses in the vicinity of a private airstrip.

Impact Summary: Less than Significant with Mitigation.

5.11.5 Cumulative Impacts

Impact Discussion: As discussed under 5.11.4.3, proposed General Plan growth will cause noise levels generated by vehicular and truck noise along deficient roadways to increase. Proposed General Plan 2030 provisions are not expected to reduce future roadway noise so that existing land uses would not be exposed to excessive noise levels. This potential increase in roadway noise is expected to combine with other sources of ambient noise resulting in potential cumulative increases in permanent ambient noise levels in excess of acceptable levels. No mitigation measures have been identified that would reduce this potential cumulative impact to less than significant levels.

Impact Finding: Significant and unavoidable.

5.11.6 Mitigation Measures – Reference Mitigation Measure HAZ-3 (Section 5.7.6)

5.11.7 Level of Significance After Policies/Mitigation Measures – Significant and unavoidable.

5.12 POPULATION & HOUSING

This section addresses population and housing issues within the Planning Area. Potential Project impacts on these population and housing issues, and any mitigation measures necessary to resolve impacts are also discussed. Information referenced in this section was obtained from the United States Bureau of the Census, the California Department of Finance (DOF), the Southern California Association of Governments (SCAG), City of Victorville Traffic Model completed January 2008 under the direction of the City Traffic Engineer (Traffic Model).

5.12.1 Existing Conditions

5.12.1.1 Population

During the past decades, Victorville has grown rapidly. From 1990-2007, Victorville's population increased from 40,674 to 102,538¹, a 152% increase. Between 2000 and 2007, Victorville's growth was almost more than twice its closest neighbor.

As shown in Table 5.12-1, during those seven years, Victorville's population increased by 91%. Neighboring Victor Valley cities grew from between 10% - 50%. The City of San Bernardino, the most urbanized of the cities listed in Table 5.12-1, grew by 10%; Hesperia by 37%, Adelanto by 50%, and Apple Valley by 30%. By comparison, during the same 2000-2007, the County and the state grew much slower, with San Bernardino County's population at 20% and the state of California at 11%.

	2000	2007	% Change 2000-2007
VICTORVILLE	53,691	102,538	91%
HESPERIA	62,582	85,876	37%
ADELANTO	18,130	27,139	50%
APPLE VALLEY	54,239	70,297	30%
SAN BERNARDINO CITY	186,351	205,010	10%
SAN BERNARDINO COUNTY	1,689,281	2,028,013	20%
STATE OF CALIFORNIA	33,871,648	37,662,518	11%

Source: Census 2000, U.S. Census Bureau; Table 2: E-5 City/County Population and Housing Estimates, 1/1/2007, State of California Department of Finance.

¹ May 1, 2007 population estimate from the State of [California](#) Department of Finance.

5.12.1.2 Housing

Housing Supply

Since the 2000 Census housing count, Victorville's housing supply has been increasing at a rate of approximately 10% per year. During the past eight years, from the 2000 Census count in 1999 and current City building permit tabulations, Victorville's housing supply has increased from 22,656 units to 36,797 units, a 62% or 14,141 unit increase. Table 5.12-2 summarizes the City's recent housing development activity.

Year	Housing Units	Percent Change
2007 ^[1]	36,797	2000-2007: 62% Per Year: 10%
2005 ^[2]	33,509	2000-2005: 48% Per Year: 10%
2000 ^[3]	22,656	

Notes:
 [1] Based on City building permit data as of February 2008.
 [2] City Traffic Model, existing housing units as of December 2005.
 [3] Census 2000.

Housing Type

Victorville is primarily a community of single family houses. As shown in Table 5.12-3, the 2000 Census reports that 16,573 (73% of the City's total housing stock) are single family units, most of which are detached units. Multifamily units range in size from duplex to over 20 units in a complex, and total 4,314 (19%) of the City housing stock. Mobile homes units total 1,769 (8%) of the City housing stock.

Housing Type	# of Housing Units	Percent of Total Units
Single Family Detached	16,181	71%

Housing Type	# of Housing Units	Percent of Total Units
Single Family Attached	392	2%
<i>Subtotal Single Family</i>	<i>16,573</i>	<i>73%</i>
Duplex	449	2%
3-4 Unit Multifamily	893	4%
5-9 Unit Multifamily	1,078	5%
10-19 Unit Multifamily	443	2%
20 or More Unit Multifamily	1,451	6%
<i>Subtotal Multifamily</i>	<i>4,314</i>	<i>19%</i>
Mobile Home	1,769 ^[1]	8%
Total	22,656	100%

Notes: [1] Includes boats, RVs, vans, etc.

5.12.1.3 Jobs to Housing

According to the 2000 Census, over 56% of Victorville residents were employed outside the home. The average commute time for these workers was 35.4 minutes each way. Most of these workers were employed in education and retailing.

Since the 2000 Census, employment opportunities in Victorville have grown. From 1991-2004, California Employment Development Department data show that Victorville's employment rose from 14,068 to 25,212, up 11,145 jobs or 79.2%. In the 1990s, the City's job level sagged due to the national recession and the closure of George Air Force Base. Since 1998, employment has grown in every year. In 2004, the city's job base was led by population serving sectors including retail (8,188), education (3,526), health (2,513) and other consumer services (2,234).

According to the Victorville Chamber of Commerce 2007 Economic Profile Report, the largest employers in the City are as follows:

- Southern California Logistics Airport - 1,990 jobs
- City of Victorville – 1,280 jobs
- Victor Valley College – 1,150 jobs
- Desert Valley Hosp./Medical Group – 1,000 jobs

- Verizon – 940 jobs
- Victor Valley Union High School District – 877 jobs
- Victor Elementary School District – 848 jobs
- Federal Correction Complex Victorville – 844 jobs
- Wal-Mart – 830 jobs
- Victor Valley Community Hospital – 548 jobs.

Today, there are 0.66 jobs for each occupied dwelling in the Victorville area. Southern California's average is 1.25 jobs per dwelling. Consequently, despite its continued growth, Victorville's jobs-to-housing is only about half that of the region. This means that most Victorville residents continue to commute to areas outside the High Desert to work.

5.12.2. Regulatory Framework

5.12.2.1 Regional Growth Forecasts

In a letter response to the project NOP dated March 11, 2008, Sylvia Patsaouras, Manager of the Environmental Planning Division for SCAG², stated that the EIR for Victorville General Plan 2030 should reflect the most current SCAG forecasts, which are the 2004 Regional Transportation Plan (RTP). These forecasts are provided for the SCAG region, San Bernardino Association of Governments (SANBAG) subregion and cities, inclusive of Victorville, for the years 2010, 2015, 2020, 2025 and 2030. They project population, numbers of households and employees. The Draft 2008 RTP Baseline Growth Forecast, which provides 2035 projections, was released on November 1, 2007 for public review and comment. Information from both of these forecasts is summarized in Table 5.12-4.

The table also provides a comparison of population, households and employment for Victorville's incorporated boundaries to the SCAG region for the five year periods between 2010 and 2035. As shown in the table, Victorville is projected to become a larger portion of the SCAG region, increasing from a 2010 percentage of the SCAG region of .42% for population, .41% for households and .05% for employment to a 2035 percentage of the SCAG region of .76% for population, .74% for households and .82% for employment.

² Correspondence from SCAG in Appendix B.

Table 5.12-4 SCAG RTP Projections 2010 through 2035						
	2010	2015	2020	2025	2030	2035
SCAG Region						
Population	19,208,661	20,191,117	21,137,519	22,035,416	22,890,797	24,056,000
Households	6,072,578	6,463,402	6,865,355	7,626,519	7,660,107	7,710,000
Employment	8,729,2192	9,198,618	9,659,847	10,100,776	10,527,202	10,287,000
SANBAG Sub-Region						
Population	2,059,420	2,290,700	2,397,709	2,558,729	2,713,149	3,133,797
Households	618,782	686,584	756,640	826,669	897,729	972,565
Employment	770,877	870,491	972,243	1,074,861	1,178,890	1,254,752
SANBAG Sub-Region – Unincorporated Area						
Population	329,293	357,214	384,773	411,188	436,515	487,698
Households	104,352	116,091	128,197	140,270	152,477	163,943
Employment	77,38	84,619	92,000	99,448	106,997	128,681
City of Victorville – Incorporated Boundaries						
Population	81,592	92,548	103,353	113,711	123,641	182,272
Households	24,762	28,621	32,567	36,490	40,427	56,877
Employment	47,362	57,873	68,611	79,439	90,415	84,336
City of Victorville – Incorporated Boundaries - % of SCAG Region						
Population	0.42%	0.46%	0.49%	0.52%	0.54%	0.76%
Households	0.41%	0.44%	0.47%	0.05%	0.53%	0.74%
Employment	0.05%	0.63%	0.71%	0.79%	0.86%	0.82%

5.12.2.2 Regional Policies

In the March 11, 2008 correspondence from Sylvia Patsouras, Manager of the Environmental Planning Division for SCAG³, Ms. Patsouras identifies the regional goals from the Growth Management chapter of the Regional Comprehensive Plan and Guide (RCPG) that are applicable to the Project. These goals that are applicable to population and housing include:

- Encourage local jurisdictions' efforts to achieve a balance between the types of jobs they seek to attract and housing prices.
- Support provisions and incentives created by local jurisdictions to attract housing growth in job rich subregions and job growth in housing rich subregions.

³ Correspondence from Sylvia Patsouras, Manager of the Environmental Planning Division for SCAG contained in Appendix B.

5.12.3 Thresholds of Significance

Significant impacts relative to population and housing are evaluated in this section based on Appendix G of the CEQA Guidelines. Implementation of the proposed project may have a significant adverse impact if it would do any of the following:

- 1) 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)?
- 2) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?
- 3) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

5.12.4 Project Impacts

General Plan 2030 Provisions: The proposed Land Use Element provides for a wide variety of residential land use designations and a broad range of dwelling unit densities. Residential designations include: Very Low Residential, Low Density Residential, Medium Density Residential, High Density Residential, Mixed Density, and Mixed-Use Density. Within these designations, residential housing types vary from single family estate at a maximum density of 2 dwelling units per acre, to high-rise multifamily mixed-use development at a maximum density of 60 dwelling units per acre.

The proposed General Plan 2030 Land Use Map allocates 38,839 acres for residential uses. These residential acres are expected to generate a total of 138,617 dwelling units, 87,014 which are single family and 51,508 which are multi-family. Assuming an average household size of 2.94 persons per unit, there would be 407,534 persons within Victorville by year 2030.

Within the proposed General Plan 2030 Land Use Element the following goals, objectives, policies and implementation measures would apply to population and housing:

GOAL #1: BALANCED LAND USES – Provide for a Balanced Community With Residential, Commercial and Industrial Development

Policy 1.1.4: Encourage continued development of a variety of residential uses and residential densities meeting the needs of those desiring to live in Victorville.

GOAL #2: ECONOMIC DEVELOPMENT – Encourage a Diversified Economic Base

Objective 2.1: Support Victorville as a major regional center for business and commerce.

Policy 2.1.1: Encourage development of land uses and infrastructure to support growth of businesses and commerce.

Objective 2.2: Seek a balance jobs to housing.

Policy 2.2.1: Encourage development of land uses which provide jobs for those who choose to both live and work within the Planning Area.

Implementation Measure 2.2.2.1: Work with Victor Valley College, local regional occupational programs, local adult schools, and the California Employment Development Department to establish systems that will increase the flow of information on job needs from employers to the agencies that can help fill them, as well as accelerate the pace at which public or private schools and institutions can respond to training needs.

Implementation Measure 2.2.2.2: Encourage Victor Valley College to adopt an On-Line College program.

Implementation Measure 2.2.2.3: Through the City Economic Development Department, join and participate in CORENET, the national organization in which networking takes place between location executives and consultants.

Implementation Measure 2.2.2.4: Through the City Economic Development Department, work with other economic development agencies (EDA) plus San Bernardino County's WIB, representatives of Victor Valley College, local ROPs and adult schools, San Bernardino County's TAD, and the CA Employment Development Department on a long term effort to establish a Labor Force Coordination Council of mid-level staff to facilitate the monthly flow of job information and training between them.

GOAL #3: AMPLE CITY SERVICES – Ensure Provision of Adequate City Services and Infrastructure

Objective 3.1: Permit development in areas where such uses are appropriate and provide for adequate roadways, infrastructure, and public services.

Policy 3.1.1: Provide mechanisms through which development can pay the cost of its infrastructure and services needs.

Implementation Measures 3.1.1.1: Collect and apply development impact fees to pay for infrastructure improvements as identified in the capital improvement plan.

Implementation Measures 3.1.1.2: Continue to review and add projects to the capital improvement plan as deemed necessary to ensure the orderly growth of the City.

Implementation Measures 3.1.1.4: Continue to require new development to pay the capital costs of public facilities and services needed to serve those developments.

Implementation Measures 3.1.1.5: Continue to contact utility companies, school districts, and special districts as necessary when new projects are submitted to ensure their capability to serve the new projects.

Policy 3.1.2: Discourage speculation in the undeveloped portions of the City.

Implementation Measures 3.1.2.1: Constantly monitor the potential for land speculation and react with specific zoning proposals to help ensure that it is minimized.

Scope of Impact Analysis: This analysis considers population and household growth that would occur with implementation of the proposed General Plan 2030; whether this growth is consistent with regional forecasts; whether this growth is substantial relative to regional forecasts and relative to the existing City population; whether this growth would displace substantial numbers of housing or people.

5.1.2.4.1 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?)

Impact Discussion:

Growth projections for the proposed General Plan 2030 were prepared in support of the City Traffic Model. These projections include the existing City boundaries, County islands, existing SOI areas, as well as the Northern Expansion Area. These projections calculated dwelling units, population and employment for the Planning Area for base year 2005 and build-out. These forecasts are summarized in Table 5.12-5.

Between 2005 and Planning Area build-out, the number of dwelling units is expected to increase by 314%, population by 314% and total jobs by 298%.

Analysis Year	Dwelling Units		Total	Resident	Employment (# of Jobs)			
	SDU	MDU		Population	Retail	Service	Other	Total
2005	26,803	6,712	33,509	98,515	10,272	11,021	8,535	29,829
Build-out	87,014	51,603	138,617	407,534	43,245	34,675	40,874	118,794
% Change: 2005 – Build-out	225%	669%	314%	314%	321%	215%	379%	298%

Jobs to Housing

As indicated in Table 5.12-5, the proposed General Plan 2030 is expected to result in substantial increases to population, housing and employment. Both population and housing are expected to increase by 314% between 2005 and Planning Area build-out. Employment (number of jobs) is expected to increase by 298% during that same period. At build-out, the jobs-to-housing ratio for the Planning Area would be .85 (118,794 jobs to 138,617 housing units). This represents an increase of .19 jobs to each housing unit over the current ratio of 0.66.

This increase in the ratio of jobs to housing is further supported by General Plan 2030 Land Use Element Objective 2.2, Policy 2.2.1 and its supporting implementation measures listed above. Consequently, build-out of the Planning Area pursuant to the proposed General Plan 2030 is expected to improve Victorville’s job to housing ratio.

Regional Projections

As indicated in Table 5.12-4, SCAG RTP projections expect the City of Victorville to experience increases in population, housing and employment. Between 2010 and 2035, the City population is expected to increase by 123%, from 81,592 to 182,272 persons; the number of households by 130% from 24,762 to 56,877 households, and employment by 78%, from 47362 to 84,336 jobs.

Northern Expansion Area: Victorville’s General Plan 2030 includes expansion of the Northern Expansion Area into the City SOI. This expansion area would extend the City’s northern SOI boundary to include an additional 37,000± acres. This expansion area is currently mostly undeveloped. Inclusion of this area into the Planning Area has been recommended by the City to promote logical and orderly development, to allow a single multipurpose agency, the City, establish community service priorities and promote cohesive master planning of infrastructure extension.

Current County of San Bernardino zoning for the Northern Expansion Area is shown in Figure 5.12-1, Current County of San Bernardino Zoning – Northern Expansion Area. The County designates the majority (approximately 85%) of the area Rural Living (RL) and Resource

Conservation (RC), which allow a maximum housing density of 1 dwelling unit (du)/ 2.5 acres, 1 du/ 5 ac, and 1 du/40 acres depending on the underlying county land use regulations.

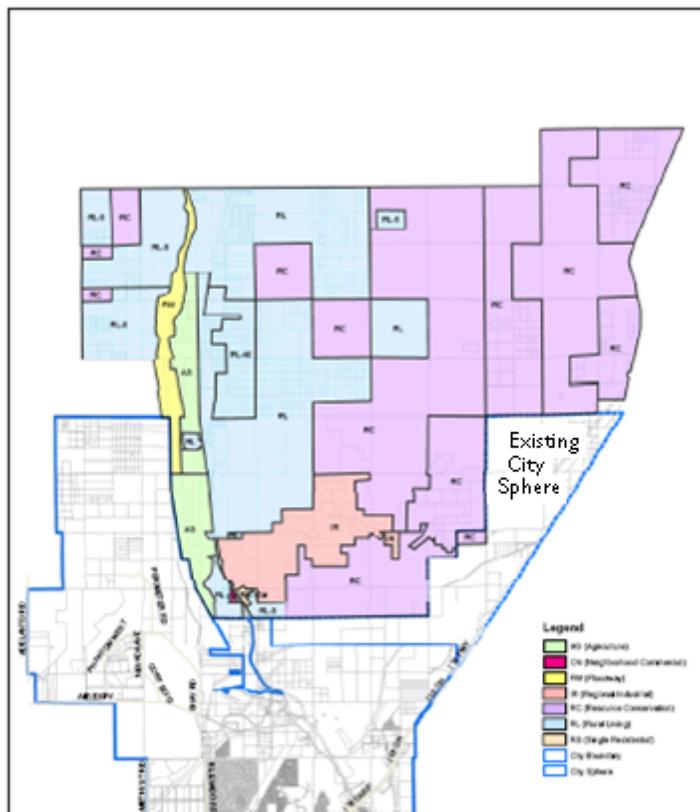


Figure 5.12-1. Current County of San Bernardino Zoning – Northern Expansion Area

As shown in Table 5.12-6, the proposed General Plan 2030 Land Use Element proposes to designate approximately half (51%) of the Northern Expansion Area as Open Space, with the balance of the area (49%) designated for urban uses, including residential, commercial and industrial. Compared to the County designations which allocate approximately 85% of the area for rural land uses, the General Plan 2030 land use proposal for the Northern Expansion Area is expected to increase the area’s land use intensity.

Land Use Designation	Acres	% of
Low Density Residential	10,605	29%

Land Use Designation	Acres	% of
Commercial	1,115	3%
Light Industrial	3,800	10%
Heavy Industrial	343	1%
Open Space	18,935	51%
Specific Plan	2,049	6%
TOTALS	36,847	100%

Existing City Sphere of Influence: The General Plan 2030 Land Use Map also proposes to change the land use designation of the existing SOI area located northeast of the City boundaries and contained within the proposed Northern Mojave Planning Area. (Reference Figure 3.2, Section 3.4.2 of this EIR.) This existing SOI Area would change from mostly Urban Conservation to Specific Plan. The Urban Conservation land use designation, which would be deleted in the General Plan 2030 Land Use Element, matches the current San Bernardino County Rural Living and Resource Conservation, allowing rural residential land uses from 1 du/ 2.5 acres to 1 du/40 acres. The proposed General Plan 2030 change to Specific Plan anticipates mostly urban land uses, and consequently, is expected to increase the land use intensity of the existing northeastern sphere.

Summary of Regional Projection Impacts: As indicated in Table 5.12-5, with inclusion of the Northern Expansion Area and the changes to the existing northeastern SOI area, the General Plan 2030 would increase Planning Area population from a 2005 population of 98,515 to a build-out population of 407,534. This projected growth represents a by 314% increase over the existing (2005) population, and is considered substantial.

Compared to the SCAG RTIP 2035 City of Victorville population of 182,272 (Table 5.12-4), the General Plan 2030 build-out population reflects a 225,262 (407,534 minus 182,272 persons) or 124% increase over the SCAG projection. This General Plan 2030 population growth, which is concomitant with proposed housing and employment growth, is substantial relative to the SCAG regional forecasts.

Goal #3 of the Land Use Element and its supporting Objectives, Policies and implementation measures, listed above, aim to ensure that planned growth would be adequately supported by infrastructure. However, these measures do not eliminate or lessen the fact that the proposed General Plan 2030 would induce substantial growth not currently anticipated by regional plans. No mitigation measures are identified that could reduce this substantial growth to less than significant levels.

Regional Policies

As noted above, the SCAG RCPG goals that are applicable to population and housing encourage balanced growth and support for job growth in housing rich areas such as Victorville. Goals #1 and #2 of the proposed Land Use Element, listed above, are consistent with the SCAG regional policies.

Jobs to housing and balanced development policies of the proposed General Plan 2030 are consistent with regional plans. As proposed within the City existing boundaries, these policies of the General Plan 2030 would not induce substantial population growth.

In regard to consistency with regional projections, inclusion of the Northern Expansion Area into the City Planning Area and changes to the existing northeastern SOI area would substantial population growth, both directly (by proposing new homes and businesses) and indirectly (through extension of roads or other infrastructure). No mitigation measures have been identified to eliminate or lessen this growth inducing impact.

Impact Finding: Significant and unavoidable.

5.12.4.2 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?

Impacts Discussion:

Land use designation changes proposed by the General Plan 2030 Land Use Map occur primarily on undeveloped land. No substantial demolition of residential uses is proposed under the General Plan 2030.

Subsequent development projects that occur consistent with the proposed Land Use Plan may result in demolition of limited existing residential units and the concomitant displacement of persons residing in those units. The extent to which this may occur is too speculative to be analyzed in this EIR and will be evaluated on a project-specific basis. Should subsequent development projects result in potential displacement of housing or people, a relocation analysis would be required to be prepared in accordance

with federal and State law. Because the project does not propose uses that would displace substantial numbers of existing housing or people, impacts relative to displacement of housing or people is less than significant.

Impact Finding: Less than significant.

5.12.5 Cumulative Impacts

Impact Discussion:

Cumulative population and housing impacts relative to the Victorville General Plan 2030 are considered in view of the SCAG region.

As proposed by the General Plan 2030, at build-out, the Victorville Planning Area will account for approximately 2% of the SCAG regional population (407,534 in Victorville to 24,056,000 persons in the SCAG region). According to the SCAG RTIP projections (Table 5.12-6), the City of Victorville incorporated boundaries (without inclusion of the Northern Expansion Area and changes to the northeastern SOI) would account for less than one percent (0.76%) of the SCAG population. Housing would also increase from 0.74% to 2% of the SCAG region. An increase of over one percent on a regional basis is considered substantial and significant. No mitigation measures have been identified to eliminate or lessen this growth inducing impact.

Impact Finding: Significant and unavoidable.

5.12.6 Mitigation Measures – None feasible.

5.12.7 Level of Significance After Policies/Mitigation Measures – Significant and unavoidable.

5.13 PUBLIC SERVICES

This section of the EIR discusses existing public services available in the study area, and summarizes the potential impacts to existing public services and the need for new or expanded services due to buildout of the proposed General Plan Update. The adequacy of the City's existing public services (e.g. fire, police, schools, parks and other public facilities) is also assessed. When required appropriate mitigation measures are recommended. Technical Information referenced in this section was obtained from the City of Victorville City departments and websites.

5.13.1 Existing Conditions

The City of Victorville comprises approximately 74 square miles and had a 2007 population of 102,538 persons.¹ The existing conditions for public services are discussed topically below.

5.13.1.1 Fire Protection

Fire protection and emergency medical services for the City of Victorville are provided by San Bernardino County Fire Department (SBCFD), North Desert Division. Within the City limits, four (4) fire stations are manned and operated by SBCFD. A fifth station is located at SCLA. In addition, three (3) County fire stations are located within the City's existing Sphere of Influence that provide fire protection services to the City and adjacent unincorporated areas. Fire stations are listed in Table 5.13-1. Currently, there are 58 firefighters serving the City. Each station is equipped with at least one fire engine and three firefighters, with ten staff on call if needed. Fire Station 319 (SCLA) has three dedicated personnel onsite. Paramedics are provided at every fire station.

Station #	Address	Major Equipment
311/311A	16200 Desert Knoll Drive	2 engines, 1 truck, 1 water tender and 1 brush engine
312	15182 El Evado Road	2 engines
313	13086 Amethyst Road	1 engine and 1 brush engine
314	17008 Silica Drive	2 engines, 1 brush engine, 1 truck and 1 hazmat unit
319	18550 Readiness Street (SCLA)	5 aircraft rescue firefighting trucks and 1 engine
16	11855 E Street, Baldy Mesa	Paid Call Firefighters (PCF)
22	12550 Jacaranda Avenue	1 paramedic engine, 1 brush engine
37	13782 El Evado	Paid Call Firefighters (PCF)

¹ May 1, 2007 population estimate from the State of California Department of Finance.

Table 5.13-1 Existing City of Victorville Fire Stations by Location and Major Equipment		
Station #	Address	Major Equipment
Source: City of Victorville, SBCFD Website		

In 2007, fire stations responded to over 12,000 calls within the City of Victorville. The largest numbers of responses were Good Intent (e. g. Cancelled in route, wrong location, controlled burn, barbecues, smoke or odor in the area) and EMS/Rescues. Table 5.13-2 lists the number of fire station service calls in the City by type of call.

Table 5.13-2 Fire Safety Response Calls in City of Victorville (2007)	
Request	Number
EMS/Rescue	8,515
Good Intent	1,640
Service Calls	581
False Calls	565
Fires	458
Hazardous Conditions	168
Other	101
Ruptures/Explosions	15
Total	12,043
Source: City of Victorville, Development Department, June 2008	

5.13.1.2 Police Protection

Police protection for the City is provided by the Victorville Police Department, which is contracted with the San Bernardino County Sheriff. The Police Department is located at 14200 Amargosa Road. The City also has four satellite police stations: (1) Wimbleton Center at 12370 Hesperia Road Suite 10, (2) Transportation Center at 16838 D Street, (3) Rodeo Drive at 16464 Lariat Road #A and (4) Victor Valley Mall at 14400 Bear Valley Road.

Currently, the Police Department has for 86 sworn officers and 22 non-sworn positions. Police Department requests for more officers are based on service needs. During the past decade, officers have been added annually based on professional judgment rather than a formulaic approach with sworn officers per capita. It is the standard practice of the City to continue to increase staffing levels as growth continues. The City currently has a ratio of 0.84 sworn officers per 1,000 residents. In 2006, there were 120,227 calls for service, or 1,794 service calls per deputy.

Average Police response time to emergency calls in 2006 was 5 minutes.

The Police Department currently provides School Resource Officers to area school districts under a Memorandum of Understanding. The officers serve the Victor Valley Union, Adelanto and Victor Elementary School Districts. Three deputies provide direct service to retailers at local malls.

5.13.1.3 Schools

Currently, there are twenty-three (23) public elementary schools, five (5) public junior high/middle schools, three (3) high schools, a community college and a university (extension), eight (8) academy/preparatory schools and ten (10) private schools located in the City. Table 5.13-3 list these schools by type of facility, name and address

Table 5.13-3 Educational Facilities in Victorville		
Number	Facility	Address
Victor Elementary School District		
1	Academy of Performing Arts & Foreign Language	15907 S. Mojave Drive
2	Brentwood Elementary	13962 Hook Boulevard
3	Challenger School of Sports & Fitness	14777 Hopland Street
4	Del Rey Elementary	15332 Del Rey Drive
5	Discovery Elementary	13247 Amethyst Street
6	Endeavor School of Exploration	12403 Ridgecrest Road
7	Galileo Academy 101	17000 Silica Road
8	Green Tree East Elementary	17246 Gibraltar Drive
9	Irwin Elementary	15907 Mojave Drive
10	Liberty Elementary	12900 Amethyst Road
11	Lomitas Elementary	2571 First Avenue
12	Mojave Vista Elementary	16100 Burwood Avenue
13	Mountain View Elementary	12900 Amethyst Road
14	Park View Elementary	13427 Cahuenga Road
15	Puesta Del Sol Elementary	15889 Academy Street
16	Sixth Street Prep	15476 Sixth Street
17	Village Elementary	14711 Mojave Drive
18	West Palms Elementary	14375 Del Gado (county)
Adelanto School District		
19	Harold George Visual & P. A. Elementary	17738 Nevada Street
20	Eagle Ranch Elementary	122545 Eagle Ranch Parkway
21	Mesa Linda Middle School	13001 Mesa Linda Boulevard
22	Morgan-Kincaid Prep Elementary	13257 Mesa Linda Boulevard
23	West Creek Elementary	15763 Cobalt Road
Hesperia School District		
24	Hollyvale Elementary	11665 Hollyvale
Victor Valley Union High School District		

**Table 5.13-3
Educational Facilities in Victorville**

Number	Facility	Address
25	Victor Valley High School	16500 Mojave Drive
26	Silverado High School	14048 Cobalt Road
27	Maverick High School	15733 First Street
28	Victor Junior High	16925 Forest
29	Imogene Garner Hook Junior High	15000 Hook Boulevard
30	Victor Valley Home Academy	16664 E Street
31	Cobalt Middle	13801 Cobalt Road
32	Susie Matthews Academy	16550 Mojave Drive
33	University Preparatory Middle	15312 Center Street
34	Excelsoir Education Center (7-12)	12217 Spring Valley Lake Parkway
35	Options for Youth	16932 Bear Valley Road
36	High Desert Academy	15421 Village Drive
Colleges		
37	Victor Valley College	18422 Bear Valley Road
38	Chapman University Extension	12421 Hesperia Road
Private Schools		
39	Victor Valley Christian Elementary	15260 Nisqualli Road
40	Lakeside Academy	11303 Ridgecrest Road
41	Zion Lutheran School	15342 Jeraldo Drive
42	Faith Community Christian	11783 Amethyst Road
43	Keystone Schools	12199 Industrial Boulevard
44	Kids Discovery World	15858 Bear Valley Road
45	Bonanza Preschool & Kindergarten	14624 Bonanza Road
46	Victor Valley SDA	17137 Crestview Drive
47	Gate Way Chapel Christian Academy	13640 Begonia Road (county)
48	Sedona Charter Academy	16519 Victor Street

Source: District websites, National Center for Educational Statistics.

5.13.1.4 Parks

Existing outdoor recreation resources in the City include public parks, public golf courses, public access lakes, bicycle paths, pedestrian trails and linkages between recreation areas and urbanized places.

The City maintains 409.9 acres of parkland (including golf courses). Greentree Golf Course (150 acres, 18-hole) and SCLA (Westwinds) Golf Course (60 acres, 9-hole) are located within the City.

The existing twenty-three (23) parks and golf courses are identified in Table 5.13-4.

**Table 5.13-4
Existing Parks and Golf Courses**

Number	Name	Address	Acres
1	Activity Center	15075 Hesperia Road	1.0
2	Avalon Park	16335 Avalon Drive	4.1
3	Brentwood Park	14026 Hook Boulevard	7.9
4	Center Street Park	15413 Center Street	5.5
5	Doris Davies Park	16305 Hughes Road	24.0
6	Eagle Ranch Park	12587 Eagle Ranch Parkway	6.5
7	Eva Dell Park	15714 First Street	13.0
8	Sunset Ridge Park	Eucalyptus Street (under construction)	17
9	Grady Trammel Park	17184 Stoddard Wells Road	2.7
10	Hollyvale Park	12773 Sycamore Street	2.5
11	Hook Park	14973 Joshua Street	28.4
12	Liberty Park	13016 Amethyst Road	10.0
13	Mesa Linda Park	13151 Mesa Linda Road	10.0
14	Mojave Vista Park	16252 Burwood Avenue	10.0
15	Old Victor Park	15476 Sixth Street	2.0
16	Park View	13427 Cahuenga Road	4.9
17	Schmidt Park	13576 Mustang Road	9.0
18	Village Pool/Park	15720 El Camino Road	2.8
19	Westwinds Activity Center	18040 George Boulevard	--
20	Westwinds Sport Center	18241 George Boulevard	2.3
Subtotal			147.9
21	Green Tree Golf Course	14144 Green Tree Blvd.	150.0
22	Westwinds Golf Course	18003 Westwinds Drive	60.0
23	Rockview Nature Park	17800 National Trails Hwy.	52.0
Subtotal			262.0
Total			409.9

Source: City of Victorville website: Victorville Rec Pages January – May 2008, pp. 34, 35.

The City also maintains paseo systems within Specific Plan communities that link neighborhoods to local parks and other neighborhoods.

In addition, the County of San Bernardino maintains the Mojave Narrows Regional Park, which is located at 18000 Yates Road in Victorville, along the ancient riverbed of the Mojave River. Mojave Narrows is described on the County website as “a virtual oasis in the Mojave Desert”.² It consists of 840 acres and contains two lakes. Activities available at the Mojave Narrows include fishing, hiking, nature trails and horseback riding.

² <http://www.co.san-bernardino.ca.us/parks/mojave.htm>; accessed July 10, 2008.

5.13.1.5 Other Public Facilities

The Civic Center Planning Area serves as the governmental core for the City. This area includes local, county, state and federal governmental offices, as well as the State of California Superior Court County of San Bernardino courthouse. Other public facilities, including the library and community centers are located within the City.

Desert Valley Medical Hospital (16850 Bear Valley Road) is an 83-bed acute care private for-profit hospital and Victor Valley Community Hospital (15248 11th Street) is a nonprofit 115-bed hospital with a heliport. The City requires conditional use permit approval for new construction or the expansion of medical services in these private facilities.

5.13.1.2 Existing Service Ratios

City departments have provided information on acceptable service ratios, response times or other performance objectives for public services provided within the City.

Fire Protection: The existing Safety Element has a goal of having the first fire vehicle arrive on scene within five minutes of the report. The current average response time is 6.73 minutes. No specific SBCFD response time is used.

The minimum fire flow for commercial/industrial land uses is 1,500 gallons per minute at 20 PSI.

Police Protection: Police Department request for more officers is based on service needs and are not related to a specific population ratio. The current service ratio for sworn officers is 0.84 per 1,000 City population.

Schools: Each school district sets its own standards for student population for its campuses and when new facilities are required. According to the California Department of Education, average student-teacher ratios for 2006-2007 were as follows:³ Elementary (20 students per teacher), Middle School or Junior High (22.3 students per teacher) and High School (23.6 students per teacher).

Typical student generation factors used by the (Val Verde Unified School District) are 1.014/du for total students, 0.465/du for elementary students, 0.245/du for middle school students and 0.2724/du for high school. For projection purposes, the following assumptions were used for average future school capacity: elementary (1,000), middle/junior high (1,000) and high school (3,000) students.

³ Ed-Data website; <http://www.ed-data.k12.ca.us/Navigation/fsTwoPanel.asp?bottom=%2Fprofile.asp%3Flevel%3D04%26reportNumber%3D16>; accessed July 10, 2008.

Parks: The City strives to comply with the Quimby Act for parks, and currently requires 3.0 acres per 1,000 population in private developments.

Other Public Facilities: The City determines the spatial needs required for its employees and services. There are no specific standards for City governmental facilities. Hook Community Center, 14973 Joshua Street is administered by the Community Services Department, based on population and service needs.

The Victorville City Library (15011 Circle Drive), recently taken over by the City and removed from the County library system, has its own service standards based on population and service needs. The City is moving forward on a plan to build a 30,000 square foot central library and several new branch locations.

5.13.3 Thresholds of Significance

Significant impacts relative to public services are evaluated in this section based on Appendix G of the CEQA Guidelines. Implementation of the proposed project may have a significant adverse impact if it would the following:

- I) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered government facilities, the construction of which would 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?

5.13.4 Project Impacts

General Plan 2030 Provisions: The Safety Element is one of the General Plan elements mandated by State Government Code (Section 65302(g)). It is intended to identify and, whenever possible, reduce the impact of natural and man-made hazards which may threaten the health, safety, and property of the residents living and working in the Victorville Planning Area. Relative to public services, the Element address: Fire, Police and Medical Services.

Within the proposed General Plan 2030 Safety Element the following goal, objective, policy, and implementation measures would apply to public services:

GOAL #2: Protection of Public Health And Safety - Integrate Public Health and Safety Issues into Planning and Development Policies.

Objective 2.1: Achieve Desired Fire Protection, Police and Emergency Medical Services Performance Standards

***Policy 2.1.1:** Ensure that new private or public development has sufficient fire protection, police and emergency medical services available. Such developments shall not strain capabilities to a level where service standards could not be met.*

Implementation Measure 2.1.1.1: Define appropriate performance standards for fire protection, police protection and emergency medical services, and update the standards as conditions in the community change, resources are added or eliminated, technological improvements occur, or other information becomes available that indicates a need for revisions to the standards.

Implementation Measure 2.1.1.2: Provide appropriate performance standards for fire protection, police protection and emergency medical services to development applicants to assist in the review of new development plans and projects.

Implementation Measure 2.1.1.3: Require the review of development proposals to determine impacts on emergency services and ensure developments meet appropriate safety standards. Examples of these standards include fire hydrant spacing, sprinkler requirements in certain types of construction, safe vehicular access for evacuation or response, and ensuring the development does not negatively impact response times.

Implementation Measure 2.1.1.4: Ensure that new development is designed and constructed following the requirements of the California Fire Code and the fire safety measures of the Victorville Municipal Code, which includes safety measures such as smoke detector requirements and automatic fire extinguishing systems in certain types of construction.

Implementation Measure 2.1.1.5: Continue to implement the weed abatement program to reduce brush fire hazards.

Scope of Impact Analysis: The Land Use Element of the General Plan 2030 proposes an increased service area and increased urban development. Demands for public services will increase commensurate with development and increased population facilitated by the changes in the proposed Land Use Element. Projected increases in public service demand would be related to population and employment growth. This analysis considers whether projected growth would physically impact public facilities, or established public service ratios or response times

5.13.4.1 Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered government facilities, the construction of which would 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?

Impact Discussion: Growth projections for the proposed General Plan 2030 were prepared in support of the City Traffic Model. These projections calculated dwelling units, population and employment for the Planning Area for base year 2005 and build-out, and are summarized in Table 5.13-5. Between 2005 and Planning Area build-out, the number of dwelling units is expected to increase by 314%, population by 314% and total jobs by 298%.

Year	Dwelling Units	Population	Employment (# of Jobs)
2005	33,509	98,515	29,829
Build-out	138,617	407,534	118,794
Change: 2005 – Build-out	105,108	309,019	88,965
% Change: 2005 – Build-out	314%	314%	298%

The change to General Plan build-out will be incremental, based on economic and market factors, and result in public service demand increases over the next 20 years.

Fire Protection

The San Bernardino County Fire Department (SBCFD) plans for future service needs and facilities in its North Desert Division planning process. The North Desert Division plan is updated regularly and the projected City service demands for fire protection and emergency medical services will be accommodated in future master plan updates. Based on communications with City staff⁴, the SBCFD has indicated that it expects to have the resources to provide expanded services for the City related to the General Plan 2030.

There is no indication of the need for new fire stations in the City or Sphere of Influence. The above listed General Plan 2030 provisions would require that adequate fire protection is included in the planning process for all new development. Therefore, there are no projected

⁴ E-mail correspondence from Chris Borchert, Assistant Planning Director, City of Victorville, June 27, 2008.

impacts on the physical environment due to new fire stations. The need for new fire stations will be considered during the review for each new development project.

However, the magnitude of development anticipated with buildout of the General Plan 2030 is substantial (i.e. both as a population and employment increase and as area of potential development). Therefore, it is mandatory that the SBCFD North Desert Division plans be updated to accommodate the forecasted increases. To ensure the update is carried out as part of the part of General Plan 2030 implementation, PS-1 is recommended for inclusion to the project. This measure would require the City to work with San Bernardino County Fire Department to update its North Desert Division plans to accommodate the expected growth.

With inclusion of PS-1, future fire protection needs would be included in the SBCFD and General Plan 2030 planning process, and the impact of the General Plan 2030 on fire services would be reduced to less than significant levels.

Police Protection

Police services are funded through the City's General Funds. The City owns the facilities on Amargosa Road and at the Transportation Center. The other two satellite facilities are leased. All six police facilities are in good or excellent condition and the need for new facilities is not projected within the timeframe of the General Plan 2030.

If the current 2008 police service ratio of 0.84 sworn officers per 1,000 population is maintained in the future, the police force will increase from 86 sworn officers to 342 sworn officers in 2035, based on a build-out population of 407,534 (Table 5.13.5).

Increased population and development related to the General Plan 2030 will require expansion of the police force in the future. The above listed General Plan 2030 provisions would require that adequate police protection is included in the planning process for all new development. Therefore, there are no projected impacts on the physical environment due to new police stations or facilities. The need for police facilities and services would be considered during the review for each new development project.

However, the magnitude of development anticipated with buildout of the General Plan 2030 is substantial (i.e. both as a population and employment increase and as area of potential development). Therefore, it is mandatory that the police planning process accommodate the forecasted increases. To ensure the police planning for facilities and staffing is updated as part of the part of General Plan 2030 implementation, PS-2 is recommended for inclusion to the project. This measure would require that the City work with the Victorville Police Department to update its plans to accommodate the expected growth.

With inclusion of PS-2, future police protection needs would be included in the General Plan 2030 planning process, and the impact of the General Plan 2030 on police services would be reduced to less than significant levels.

Schools

Growth related to the General Plan 2030 is expected to increase the number of dwelling units in the Planning Area by 105,108 and population by 309,019 (Table 5.13.5). This growth would require expansion or development of new educational facilities in the future. Future student enrollment and educational facility needs are assessed by each school district based on dwelling unit and/or population projections. The incremental changes in student enrollment may be accommodated within the regular master planning process used by the school districts, as well as the planning associated with each development plan review.

Typical student generation factor used to project future student enrollments is 1.014/du for total students, 0.465/du for elementary students, 0.245/du for middle school students and 0.2724/du for high school students (Val Verde Unified School District). Because the General Plan 2030 is forecasted to increase dwelling units at buildout by 105,108, the projected total student increase is at buildout is expected to be 106,580 students. Most of these students are expected to attend traditional public schools in the Planning Area, generating an expected 48,875 elementary students, 25,751 middle school students and 28,631 high school students.

The student forecasts equates to approximately fifty (50) elementary schools (1,000 students/school), twenty-six (26) middle schools (1,000 students/school) and ten (10) high schools (3,000 students/school). The addition of eighty-six (86) schools in a 23-year period requires about four (4) new schools annually. The maximum school capacity factors used approximate the 2005-2006 enrollments at Eagle Ranch Elementary, Mesa Linda Middle School and Silverado High School.

To provide for these future schools, each of the school districts are expected to charge future development school impact fees, which as permitted by state law, are used to fund new school facilities and programs. Therefore, the impact of the General Plan 2030 on educational facilities is regarded as less than significant.

However to best accommodate future school needs in the City General Plan 2030 implementation process, PS-3 is recommended for inclusion to the project. This measure would require that the City work with the Planning Area school districts to plan for future school facility needs.

Parks

The City currently has 147.9 acres of recreational parkland with an additional 17 acres under construction, 210.0 acres of golf courses and a 52.0 acre nature park. This excludes paseo systems in local neighborhoods and the County Mojave Narrows Regional Park.

The Los Angeles Department of Water and Power (LADWP) electrical power line corridors present recreational opportunities for bicycle paths and pedestrians trails. Since the corridors

cross City streets, any future trail/path designs must avoid potential conflicts between vehicles, bicycles and pedestrians.

The City will update its master plan for Parks and Facilities to accommodate the incremental changes in population associated with the General Plan 2030. However, the magnitude of development anticipated with buildout of the General Plan 2030 is substantial (i.e. both as a population and employment increase and as area of potential development). Therefore, it is mandatory that the master plan for parks be updated to accommodate the forecasted increases. Park needs are funded by park fees and facilities are provided consistent with the City's Quimby Act requirements for private projects.

To ensure the master plan for parks is updated as part of the part of General Plan 2030 implementation, PS-4 is recommended for inclusion to the project. This measure would require the City to accommodate future parks and community trails in the City General Plan 2030 implementation process. With inclusion of PS-4, the impact of the General Plan 2030 on parks would be reduced to less than significant levels.

Other Public Facilities

The Civic Center Planning Area is anticipated to accommodate service and facility needs associated with development of the General Plan 2030. The City has recently expanded City Hall to accommodate current and expected community growth.

However, the magnitude of development anticipated with buildout of the General Plan 2030 is substantial (i.e. both as a population and employment increase and as area of potential development). Therefore, it is mandatory that plans be updated to accommodate the forecasted increases for library services and community centers.

To ensure plans for other public facilities including libraries and community centers are updated as part of the part of General Plan 2030 implementation, PS-5 is recommended for inclusion to the project. This measure would require the City to accommodate future libraries and community centers in the City General Plan 2030 implementation process. With inclusion of PS-5, the impact of the General Plans 2030 on future library and community center needs would be reduced to less than significant levels.

Public Services Impact Summary

Upon implementation of the General Plan 2030, with the above listed Goal, Objectives, Policies and Implementation Measures, and inclusion of Mitigation Measures PSI through PS-5, potential adverse impacts relative to public services would be reduced to less than significant.

Impact Finding: Less than Significant with Mitigation.

5.13.4 Cumulative Impacts

Impact Discussion: Cumulative public service impacts of the General Plan 2030 and other future projects (both within and outside the City in the case of large service districts like fire protection and schools) will be evaluated in the appropriate master plans and/or planning processes used by the providing agency/district. In consultation with the agencies to date, there is no indication that cumulative impacts cannot be accommodated within their service mandates.

Conformity with proposed General Plan 2030 provisions and recommended mitigation measures would reduce project impacts to less than significant levels. No cumulative impacts relative to public services are identified.

Impact Finding: No impact.

5.13.5 Mitigation Measures

PS-1: The City shall ensure that the San Bernardino County Fire Department updates its North Desert Division plans to ensure facilities and staffing continue to be able to accommodate the growth projected for buildout of the General Plan 2030. The first update shall occur within one year of approval of the General Plan 2030 and encompass a minimum period of 5 years. This information shall be incorporated into the City contracts with the County Fire Department and into the City capital improvement program process.

PS-2: The City shall ensure that the City of Victorville Police Department updates its facility, equipment and personnel plans to accommodate the growth projected for buildout of the General Plan 2030. The first update shall occur within one year of approval of the General Plan 2030 and encompass a minimum period of 5 years. The plans shall be incorporated into City contracts with the County of San Bernardino Sheriff and into the City capital improvement program process.

PS-3: The City shall work with the Victor Elementary School District, Adelanto School District, Hesperia School District and the Victor Valley Union High School District to update their school facilities master plans to accommodate the growth projected for buildout of the General Plan 2030. Based on these master plan directives, the City shall work with the school districts to locate and plan for adequate school sites.

PS-4: The City shall update its master plan for Parks at least once every five years, beginning in 2010. The master plan shall be based on the most current City population and Total dwelling unit projections and consider the spatial need for recreational facilities throughout the City. The master plan shall be incorporated into the City capital improvement program process.

PS-5: The City shall update its planning for libraries and community centers at least once every five years, beginning in 2010. The plans shall be based on the most current City population and total dwelling unit projections and consider the spatial need for libraries and community centers throughout the City. The plans shall be incorporated into the City capital improvement program process.

5.13.6 Level of Significance After Policies/Mitigation Measures – Less than Significant.

5.14 RECREATION

This section of the EIR discusses existing recreational facilities available in the Planning Area, and summarizes the potential impacts to existing recreational facilities and the need for new or expanded recreational facilities due to substantial physical deterioration of existing facilities related to buildout of the proposed General Plan Update. The adequacy of the City's existing recreational facilities (e.g. neighborhood parks, regional parks, other recreational facilities) is also assessed. When required appropriate mitigation measures are recommended. Technical Information referenced in this section was obtained from the City of Victorville City departments and websites.

5.14.1 Existing Conditions

The City currently has 147.9 acres of parkland, which is comprised of 20 parks and recreation centers. An additional 17 acres of park are currently under construction. These park facilities range in size from the one acre Activity Center on Hesperia Road to the 28.4 acre Hook Park on Joshua Street (reference Table 5.13-4, Section 5.13.1.4). The City also has 210.0 acres of public golf courses (Green Tree and Westwinds), and one 52-acre nature park (Rockview Nature Park).

The major regional recreational areas within and near the City are the Mojave Narrows Regional Park (840 acres), Lake Gregory (150 acres) and Mojave River Forks (1,100 acres). The three parks are operated by the County of San Bernardino Regional Parks system.

Existing conditions for each of the types of facilities are discussed below.

5.14.1.1 City Parks

City parks are planned and maintained by the Community Services Department. Typical facilities within a 5.0-acre park are picnic areas, barbecues, tables, play equipment, open grass play areas, and a basketball or volleyball court. Parks greater than of 5.0 acres in the City typically have similar facilities to a 5.0-acre park, but have additional ball fields, lighting, restrooms and a greater variety and number of facilities.

Rockview Nature Park (52-acres) has a gazebo, an outdoor amphitheater and a Nature Center located along the Mojave River.

5.14.1.2 Regional Parks

The County of San Bernardino Regional Parks (SBRP) system operates three regional parks near the City of Victorville. The SBRP operates a total of nine regional parks within the County.

Lake Gregory and San Moritz Lodge (24171 Lake Drive, Crestline): Opportunities for fishing, picnics, hiking, swimming and boating occur on 150-acre Lake Gregory. The San Moritz Lodge provides catering and banquet facilities for 405 people.

Mojave River Forks Regional Park (18395 Highway 173, Hesperia): Opportunities for camping, equestrian camping, hiking and equestrian trails and direct access to the Pacific Crest Trail are available on 1,100 acres.

Mojave River Narrows Regional Parks (18000 Yates Road, Victorville): Horseback riding, fishing on two lakes, camping, and hiking activities are available within the 840-acre park.

5.14.1.3 Other Recreational Facilities

The City has six (6) community/recreation centers, including Hook Park/Community Center (14973 Joshua Street), Westwinds Sports Center (18241 George Boulevard), Westwinds Activity Center (18040 George Boulevard), the Activities Center (15075 Hesperia Road) and a recreation center under construction at Sunset Ridge Park. Typical facilities include an activity room, restrooms, stage, play equipment, gymnasium or racquetball. A unique focus of a community center may be its emphasis on indoor recreation, structured programs and individual/group sports (e.g. tennis, racquetball, volleyball, basketball and weight training). The Village Pool/Park (15729 Eto Camino Road) and the Pebble Beach Pool at Doris Davies Park are the only City facilities with a swimming pool.

Westwinds Golf Course (9-hole) and Green Tree Golf Course (18-hole) each have a full service Pro Shop and Clubhouse. Westwinds also has a driving range and Green Tree has a restaurant.

5.14.2 Existing Recreational Facilities Service Ratios

City departments have provided information on acceptable service ratios, maintenance indicators and other performance objectives for recreational facilities provided within the City.

Neighborhood Parks: The City strives to comply with the Quimby Act for parks, and currently requires 3.0 acres per 1,000 population in private developments.

Regional Parks: The County of San Bernardino Regional Parks Department determines regional demand and opportunities for regional facilities.

Other Recreational Facilities: Community centers are planned by the Community Services Department.

5.14.3 Thresholds of Significance

Significant impacts relative to public services are evaluated in this section based on Appendix G of the CEQA Guidelines. Implementation of the proposed project may have a significant adverse impact if it would the following:

- 1) Would the project 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?
- 2) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse effect on the environment?

5.14.4 Project Impacts

General Plan 2030 Provisions: Pursuant to Section 65302(a) of the Government Code, the Land Use Element of the proposed General Plan 2030 identifies the distribution of recreational facilities and open space. The proposed Land Use Plan allocates 22,536 acres, or 22.7% of the Planning Area, for open space uses. “Open Space” is defined by the Land Use Element as: land that is to remain undeveloped due to severe development constraints, lake or river bodies and floodplains; and reserved public open space in parks and golf courses.

Pursuant to Government Code Section 65560, all general plans are required to include an open space plan that includes provision of outdoor recreation. Within the proposed General Plan 2030 Resource Element the following goal, objective, policy, and implementation measures would apply to recreations:

GOAL #2: Protection of Public Health And Safety - Integrate Public Health And Safety Issues into Planning and Development Policies.

Objective 2.1: Achieve Desired Fire Protection, Police and Emergency Medical Services Performance Standards

GOAL #2: Sufficient park land – Provide Sufficient Local, Community and Regional Park Land to Meet Current and Future Outdoor Recreation Needs of the Planning Area

Objective 2.1: Provide at least three acres of parkland for every 1,000 residents

Policy 2.1.1: Require new residential subdivision projects to provide parkland on-site or to pay in-lieu fees equal to the value of such parkland, calculated to provide 3 acres of parkland per 1,000 residents

Policy 2.1.2: Prohibit development on land identified for outdoor recreation purposes in a local or regional parks, trails, and/or open space plan

Implementation 2.1.2.1: Develop and maintain a city-wide parks master plan that identifies sites of sufficient size, and in optimal locations, to meet a variety of outdoor recreation needs of the community.

Implementation 2.1.2.2: Complete a master recreational trails plan for the Mojave River Corridor, within the Planning Area

Implementation 2.1.2.3: Designate all existing and planned park sites as Open Space-Recreation on the Land Use Policy Map and in the Open Space Plan.

Scope of Impact Analysis: The Land Use Element of the General Plan 2030 proposes an increased service area and increased urban development. Demands for recreational facilities will increase commensurate with development and increased population facilitated by the changes in the proposed Land Use Element. The projected increase in recreational facilities is primarily related to population but is also impacted by social recreational trends and the availability of facilities at public schools. For example, skateboard parks were not in demand ten years ago, and soccer fields and mountain bike/running trails are in high demand now.

The future recreational demands related to the General Plan Update may be met by a combination of City, school and regional facilities.

5.14.4.1 Would the project 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?

Impact Discussion: The proposed General Plan Update will increase the number of dwelling units and population of the City substantially. As shown in Table 5.13-5 (Section 5.13), between 2005 and Planning Area build-out, the number of dwelling units is expected to increase by 314%, population by 314% and total jobs by 298%. To accommodate this expected growth, an accompanying increase in park and recreational facilities would be needed.

While new development is required to comply with the Quimby Act by providing recreational acreage for future facilities, the planning, funding and construction of future recreational facilities may not always be in “sync” with recreational demand.

The desire of future residents for specific types of recreational facilities (e.g. golf courses, soccer fields, swimming pools, etc.) may also place inordinate demand on existing facilities. In some cases, continual use of a facility (i.e. either building or grounds maintenance) may result in

physical deterioration or accelerate physical deterioration through excessive demand for a specific facility.

The proposed General Plan 2030 Resource Element provisions listed above encourage allocation and retention of land for future park use and the preparation of a Parks Master Plan. Park needs would be funded by park fees and facilities are provided consistent with the City's Quimby Act requirements for private projects. However, the magnitude of development anticipated with buildout of the General Plan 2030 is substantial (i.e. both as a population and employment increase and as area of potential development). To keep up with this growth, the City would need to update its Park Master Plan regularly to accommodate the incremental changes in population associated with the General Plan 2030.

To ensure the master plan for parks is updated as part of the part of General Plan 2030 implementation, Mitigation Measure PS-4, delineated in Section 5.13.5, is recommended for inclusion to the project. This measure would require the City to accommodate future parks and community trails in the City General Plan 2030 implementation process. PS-4, together with the Resource Element provisions, are expected to reduce potential impacts of the General Plan 2030 on existing recreational facilities to less than significant levels.

Impact Finding: Less than significant with mitigation.

5.14.4.2 Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse effect on the environment?

Impact Discussion: As discussed above, the proposed General Plan Resource Element requires the City to establish a Park Master Plan, and PS-4 requires the master plan to be updated regularly. No specific new recreational facilities or expansion of an existing recreational facility are proposed as part of the General Plan 2030 update.

Proper planning and increases in park facilities as development occurs, with any required CEQA review for new facilities, would prevent adverse physical impacts on the environment. Therefore, the General Plan 2030 impact on existing parks and potential adverse impacts of future new recreational facilities would be less than significant.

Impact Finding: Less than significant with mitigation.

5.14.5 Cumulative Impacts

Impact Discussion:

Cumulative recreational facility impacts of the General Plan Update and other future projects (both within and outside the Planning Area in the case of large recreational districts like County of San Bernardino Parks and Recreation) would be evaluated in the appropriate Master Plans and/or planning processes used by the providing agency/district. In consultation with the agencies to date, there is no indication that cumulative impacts cannot be accommodated within their service mandates.

Impact Finding: Less than significant with mitigation.

5.14.6 **Mitigation Measures** – Reference Section 5.13.5, Mitigation Measure P-4.

5.14.7 **Level of Significance After Policies/Mitigation Measures** – Less than Significant.

5.15 TRANSPORTATION/TRAFFIC

This section of the EIR discusses existing vehicular traffic conditions in the Planning Area, and summarizes the potential impacts to traffic flows from buildout of the proposed General Plan Update. The adequacy of the City's Existing Roadway Network and Circulation Element is also assessed. When required appropriate mitigation measures are recommended. Technical Information referenced in this section was obtained from the City of Victorville General Plan Update Transportation Study Report (TSR), prepared by Parsons Brinckerhoff, Inc., July 2008. The Transportation Study Report, which has been reviewed and accepted by the City of Victorville Traffic Engineer, is summarized below and included as Appendix C of this EIR.

The TSR included the following components: (1) Review of all applicable related traffic studies for the analysis area, (2) Assessment of the existing transportation systems (i.e. freeways, arterials/local roadways, public transportation, freight operations, park and ride facilities, bicycle/pedestrian facilities and goods movement), (3) Evaluation of existing traffic conditions and forecasted future traffic conditions in 2035, (4) Recommendation of Circulation improvements/upgrades and (5) Recommendation of goals, objectives and policies for implementation for the Circulation Element.

The final TSR section and the recommended 2035 Roadway Classifications comprise the primary content of the Circulation Element of the General Plan 2030.

5.15.1 Existing Conditions

The City of Victorville is located in the High Desert approximately 35 miles northeast of the City of San Bernardino and approximately 97 miles northeast of the City of Los Angeles. The City shares boundaries with the City of Adelanto to the northwest, the Town of Apple Valley to the east, the City of Hesperia to the south and unincorporated San Bernardino County to the southwest and to the north. The analysis area used in the TSR is shown in Figure 5.15-1.



Figure 5.15-1. *TSR Analysis Area*

Interstate 15 (Mojave Freeway) and United States Federal Highway 395 (US-395) are the primary regional connections to other cities in the County of San Bernardino. State Route 18 (SR-18) provides connection to San Bernardino County communities to the east and west of the City. The City of Victorville includes the Southern California Logistics Airport (SCLA), formerly George Air Force Base, and is within 30 minutes of driving from Ontario International Airport. Major trucking and rail routes (Burlington Northern Santa Fe) also pass through the City. (Reference General Plan 2030 Circulation Element, shown in Figure Cir-6.)

Six related studies were reviewed as part of the transportation analysis: (1) Southern California Logistics Airport, (2) High Desert Corridor, (3) Interstate 15 Corridor Study, (4) Interchange Improvements at I-15 at La Mesa Road/Nisqualli Road, (5) Interchange Improvements at I-15 at Eucalyptus Street and, (6) US-395 Realignment. The completion of the High Desert Corridor is assumed in the 2035 Roadway Classification. The realignment of US-395 is not included in the 2035 Roadway Classification.

5.15.1.1 Roadways

Four major roadway facilities serve the City of Victorville: Interstate 15, United States Federal Highway 395, State Route 18 and Historic Route 66.

Interstate 15 is a major north-south corridor having three lanes through Victorville in each direction, with seven full-service interchanges providing access to: (1) Bear Valley Road, (2) Palmdale Road (SR-18)/7th Street, (3) Roy Rogers Drive/La Paz Drive, (4) Mojave Drive, (5) National Trails Highway/D Street, (6) E Street and (7) Stoddard Wells Road.

United States Federal Highway 395 is a north-south highway that passes through the western part of the City. Primarily a two-lane highway, the roadway widens to four lanes north and south of Palmdale Road. Five at-grade intersections occur on Highway 395 with: (1) Bear Valley Road/Duncan Road, (2) Luna Road, (3) Palmdale Road (SR-18), (4) Mojave Road and, (5) Cactus Road.

State Route 18 is a four-lane divided street with a continuous left-turn lane in the City of Victorville (D Street). The easterly segment of SR-18 intersects with Interstate 15, and continued west of Interstate 15 at Palmdale Road. SR-18 is a designated Truck Route within the City of Victorville. SR-18 in the Town of Apple Valley is known as Happy Trails Highway.

Historic Route 66 (National Trails Highway) was established in 1926 and extended 2,500 miles from Chicago, Illinois to Los Angeles, California. Today, Historic Route 66 follows the current alignment of Interstate 15 from the City's southern border to Palmdale Road (SR-18), continues northeast on D Street (Happy Trails Highway) to the northwestern edge of the City.

The City of Victorville has fourteen different street classifications, from two lane, undivided collectors to an eight-lane divided roadway with a raised median. Two new street classifications have recently been added to the current Circulation Element: an 8-lane divided roadway and a Modified Super Arterial (six lanes divided into a major arterial with a 100 foot right-of-way). The right-of way (R/W) for the street classifications range from 60 feet to 148 feet. Figure 2.2a-2.2c in Appendix C illustrates the rights-of-way, and lane configurations for each of the eleven street classifications. The existing roadway network street classifications are shown in Figure 5.15-2.

The street classifications may be modified in Specific Plans. Despite varying standards, traffic flows and movements may be accommodated within the altered roadway dimensions and lane configurations.

Figure 2.1: Existing Roadway Classification

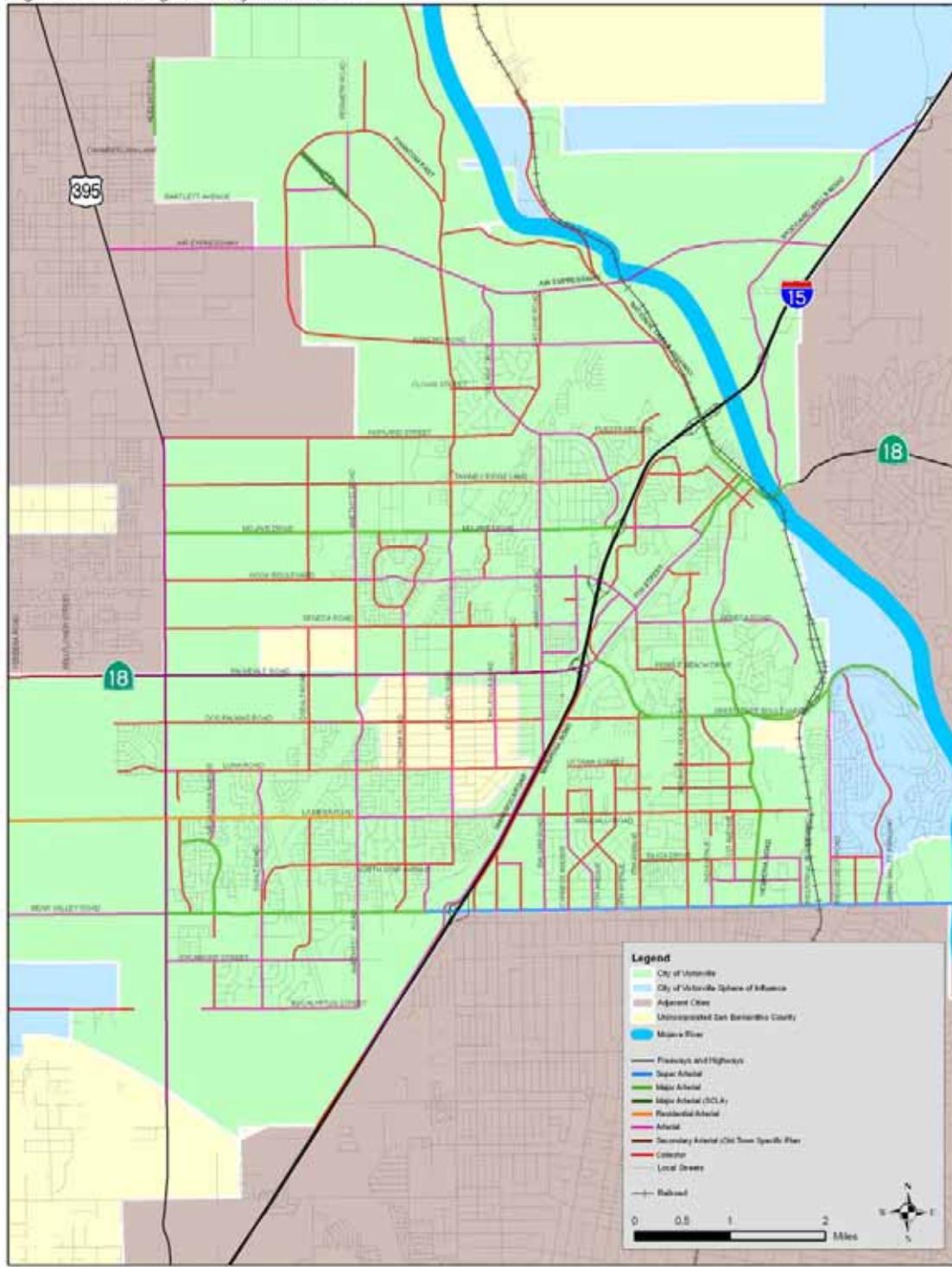


Figure 5.15-2. Existing Roadway Network

5.15.1.2 Transit

The Victor Valley Transit Authority (VVTA) provides bus service within the City. VVTA currently operates ten (10) fixed-routes within or through the City of Victorville. Transit service is provided from 6:00 AM to 9:00 PM Monday through Friday, and from 7:00 AM to 8:00 PM on Saturdays. The existing bus routes are listed in Table 2.1 in Appendix C and are shown in Figure Circ-4 in the General Plan 2030 Circulation Element. VVTA provides 145 parking spaces onsite for commuter use. A 70-space Park and Ride facility is also located at the southwest corner of Amargosa Road and Bear Valley Road.

Daily passenger rail service is provided by Amtrak at the Victor Valley Transportation Center on the north side of D Street between 2nd Street and 6th Street. Amtrak's Southwest Chief Liner connects Chicago, Illinois with Los Angeles, California. Amtrak Motor Coach service provides two daily round trips to San Joaquin trains in the City of Bakersfield.

In addition to passenger rail service, the Burlington Northern Santa Fe (BNSF freight rail corridor serves the City, with a double main line and lead tracks for industrial users. Existing major inter-modal cargo loading facilities in the region are located in the ports of Long Angeles and Long Beach. In the future, the Southern California Logistics Airport in the City will serve as a major hub for inter-modal cargo transfer and distribution.

5.15.1.3 Truck Routes

Commercial vehicles exceeding a maximum gross weight limit of 12,000 pounds must generally adhere to truck routes while traveling through the City. The six (6) current truck routes within the City are: (1) Air Expressway, (2) National Trails Highway/D Street, (3) Hesperia Road from Bear Valley Road to D Street, (4) Green Tree Boulevard from 7th Street to Hesperia Road, (5) Mariposa Road from Bear Valley Road to Green Tree Boulevard and, (6) Amargosa Road from Bear Valley Road to Palmdale Road, (7) Nisqualli Road from I-15 to Hesperia Road. Figure 2.5 in Appendix C shows the existing truck routes within the City.

5.15.1.4 Existing Traffic Conditions

The TSR is based on traffic counts completed in September-November 2005. Existing conditions were evaluated for 524 roadway segments and 42 freeway ramps. The quality of traffic flow is measured in terms of Levels of Service (LOS). The LOS measures the volume of traffic against the capacity of the roadway, known as a volume to capacity (V/C) ratio. Six LOS measures are defined by the letter designations A through F. LOS A represents the best operating conditions, and LOS F the worst. Each level of service represents a range of operating conditions and the driver's perception of those conditions. Table 5.15-1, below, summarizes these designations by conditions and V/C ratio.

Existing City of Victorville General Plan policies seek to maintain LOS C or better on all roadways. As shown in Table 5.15-2, the majority of the roadway segments within the City of

Victorville currently operate at acceptable levels of service. There are 252 roadway, 69% of those studied by the TSR, that currently operate at LOS A, and 305, 84% of those studied, that operate at LOS C or better.

The facilities with existing LOS F include nine roadway segments along US-395 and four Interstate 15 freeway ramps. The remaining eleven (11) LOS F locations are roadway segments along Air Base Road, Bear Valley Road, D Street, El Evado Road, Hesperia Road, La Paz Drive, Mariposa Road, National Trails Highway and Palmdale Road.

LOS	Traffic Flow Conditions	V/C Range
A	Free flow. Individual users are virtually unaffected by the presence of others in the traffic stream.	0.00 - 0.60
B	Stable flow, but the presence of other users in the traffic stream begins to be noticeable. Freedom to select desired speeds is relatively unaffected, but there is a slight decline in the freedom to maneuver within the traffic stream from LOS A.	0.61 - 0.70
C	Stable flow, but marks the beginning of the range of flow in which the operation of individual users becomes significantly affected by interactions with others in the traffic stream.	0.71 - 0.80
D	High-density, but stable, flow. Speed and freedom to maneuver are severely restricted, and the driver or pedestrian experiences a generally poor level of comfort and convenience. Small increases in traffic flow will generally cause operational problems at this level.	0.81 - to 0.90
E	Operating conditions at or near the capacity level. Freedom to maneuver within the traffic stream is extremely difficult. Operations at this level are usually unstable, because small increases in flow or minor perturbations within the traffic stream will cause breakdowns.	0.91 - 1.00
F	Level-of-Service F. Forced or breakdown flow. This condition exists wherever the amount of traffic approaching a point exceeds the amount which can traverse the point. Queues form behind such locations.	>1.00

Appendix A of the Transportation Study Report, which is included herein in Appendix C includes the full evaluation of roadway segment capacity, and Level of Service.

As shown in Table 5.15-2, the majority of the roadway segments within the City of Victorville operate at acceptable levels of service. The facilities with existing LOS F include nine roadway segments along US-395 and four Interstate 15 freeway ramps.

The remaining eleven (11) LOS F locations are roadway segments along Air Base Road, Bear Valley Road, D Street, El Evado Road, Hesperia Road, La Paz Drive, Mariposa Road, National Trails Highway and Palmdale Road. The specific roadway segments are listed in Appendix A of the Transportation Study Report in Appendix C herein.

Level of Service	Roadway Segments & Freeway Ramps	Percent
A	252	68
B	21	6
C	32	9
D	20	5
E	19	5
F	24	7
Total	368	100
Transportation Study Report, Appendix A (See Appendix C herein). 198 additional segments/ramps occur only in 2035.		

The TSR compiled manual turning movement traffic counts for both peak periods and evaluated level of service at 167 intersections. Table 5.15-3 summarizes the level of service for area intersections during each peak hour.

Level of Service	AM Peak	Percent	PM Peak	Percent
A	75	44	72	43
B	42	25	36	22
C	39	24	37	22
D	5	3	7	4
E	1	1	9	5
F	5	3	6	4
Total	167	100	167	100
Transportation Study Report, Appendix B (See Appendix C herein). Locations include Deficient Intersections, which are not counted below.				

A total of six (6) intersections (Table 5.15-4) currently operate at an unacceptable level of service during the AM Peak Hour and fifteen (15) operate at an unacceptable level during the PM Peak Hour. As indicated in Table 5.15-4, seven (7) of the intersections are controlled by Caltrans.

Table 5.15-4 Existing Unacceptable Level of Service at Intersections		
AM Peak Hour		
1	Ridgecrest Road at Bear Valley Road	LOS E
2	7 th Ave/Arrowhead Dr. at Nisqualli Road	LOS F
3	Cobalt Road at Dos Palmas Road	LOS F
4	I-15 SB Ramps at Palmdale Rd. (SR-18)*	LOS F
5	I-15 NB Ramps at Mojave Drive*	LOS F
6	Hesperia Rd./9 th St. at D Street*	LOS F
PM Peak Hour		
7	Jacaranda Avenue at Bear Valley Road	LOS E
8	Ridgecrest Road at Bear Valley Road	LOS E
9	5 th Avenue at Bear Valley Road	LOS E
10	7 th Avenue at Green Tree Boulevard	LOS E
11	Park Avenue at Palmdale Road (SR-18)	LOS E
12	Hesperia Road at Silica Drive	LOS E
13	11 th Street at D Street (SR-18)	LOS E
14	Fish Hatchery Road at Bear Valley Road	LOS F
15	3 rd Avenue at Nisqualli Road	LOS F
16	7 th Ave./Arrowhead Dr. at Nisqualli Rd.	LOS F
17	Burning Tree Dr. at Green Tree Blvd.	LOS F
18	I-15 SB Ramps at Palmdale Road (SR-18)*	LOS F
19	I-15 NB Ramps at Mojave Drive*	LOS F
20	I-15 SB Ramps at Mojave Drive*	LOS F
21	Hesperia Rd./9 th St. at D St. (SR-18)*	LOS F
Transportation Study Report, Appendix B (See Appendix C herein).		
* Caltrans location		

Currently, there are eight (8) intersections within the City as Deficient Intersections. These intersections include the following: (1) Fish Hatchery Road at Bear Valley Road, (2) Jacaranda Avenue at Bear Valley Road, (3) Ridgecrest Road at Bear Valley Road, (4) 5th Avenue at Bear Valley Road, (5) 3rd Avenue at Nisqualli Road, (6) 7th Avenue/Arrowhead Drive at Nisqualli Road, (7) Hesperia Road at Silica Drive and, (8) 11th Street at D Street.

Table 5.15-5 identifies the existing Level of Service (LOS) for each roadway segment for 2005. Level of service E roadways are identified in yellow highlight and level of service F in red highlight. The majority of the segments with unacceptable LOS occurs along Interstate 15 and Bear Valley Road, or occurs on roadway segments in built out areas of the City where the traffic volumes exceed the existing roadway capacity.

In addition to the current intersections with unacceptable service, three intersections in the AM Peak Hour and eight in the PM Peak Hour are “borderline” and perform at LOS D. These intersections have a very high chance of becoming deficient in the future. During the AM Peak

Hour, the intersections are: (1) 7th Street at Green Tree Boulevard, (2) Hesperia Road at Silica Drive and (3) US-395 at Seneca Road.

During the PM Peak Hour, the “borderline” intersections are: (1) 5th Avenue at Bear Valley Road, (2) Amargosa Road at Palmdale Road (SR-18), (3) Amargosa Road at Bear Valley Road, (4) Civic Drive at Roy Rogers Drive, (5) I-15 NB Ramp/Mariposa Road at Palmdale Road (SR-18), (6) Kentwood Boulevard at Palmdale Road (SR-18), (7) Mariposa Road at Bear Valley Road and, (8) Rodeo Drive at Hughes Drive.

**Table 5.15-5
PLANNING AREA ROADWAY SEGMENT LEVEL OF SERVICE
BY SEGMENT, CLASS OF ROADWAY, CAPACITY, ADT, LOS, V/C AND LOS,
EXISTING (2005) AND GENERAL PLAN BUILDOUT**

Roadway	From	To	2005								2035					
			Exist. Class.	Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
1st Ave	Nisqualli Rd	Silica Rd	C	2U	12,500		5,800	0.46	A		2U	12,500	6,382	6,400	0.51	A
1st Ave	Silica Rd	Jasmine St	C	2U	12,500		2,200	0.17	A		2U	12,500	2,374	2,400	0.19	A
2nd Ave	Silica Rd	Bear Valley Rd	A	4U	25,000	6,840	6,800	0.27	A		4U	25,000	6,877	6,900	0.28	A
3rd Ave	Green Tree Blvd	Ottawa St	C	2U	12,500		6,500	0.52	A	A	4D	37,500	7,366	7,400	0.20	A
3rd Ave	Ottawa St	Nisqualli Rd	C	2U	12,500	6,300	6,300	0.50	A	A	4D	37,500	6,931	6,900	0.18	A
3rd Ave	Nisqualli Rd	Silica Dr	C	2U	12,500	1,290	1,300	0.10	A	C	2D	18,800	8,326	8,300	0.44	A
3rd Ave	Silica Dr	Bear Valley Rd	C	2U	12,500		-	-	-	A	4D	37,500	5,881	5,900	0.16	A
5th Ave	Silica Dr	Bear Valley Rd	L	2U	10,000	1,860	1,900	0.19	A		2U	10,000	2,045	2,000	0.20	A
6th St	D St	C St	C	2U	12,500		600	0.05	A		2U	12,500	6,107	6,100	0.49	A
6th St	C St	B St	C	2U	12,500		1,300	0.10	A		2U	12,500	7,424	7,400	0.59	A
6th St	B St	A St	C	2U	12,500		900	0.07	A		2U	12,500	7,473	7,500	0.60	A
6th St	A St	Union St	C	2U	12,500		3,900	0.31	A		2U	12,500	3,417	3,400	0.27	A
6th St	Union St	Mojave Dr	C	2U	12,500	4,120	4,100	0.33	A		2U	12,500	4,871	4,900	0.39	A
7th Ave	Yates Rd	Ottawa St	C	2U	12,500		11,300	0.90	D	MA	4D	37,500	29,899	29,900	0.80	C
7th Ave	Ottawa St	Nisqualli Rd	C	2U	12,500		10,600	0.84	D	MA	4D	37,500	31,637	31,600	0.84	D
7th Ave	Nisqualli Rd	Silica Dr	C	2U	12,500		12,200	0.98	E	A	4D	37,500	26,632	26,600	0.71	C
7th Ave	Silica Dr	Lindero St	C	2U	12,500		14,000	1.12	F	A	4D	37,500	25,904	25,900	0.69	B
7th Ave	Lindero St	Bear Valley Rd	C	2D	12,500	12,080	12,100	0.97	E	A	4D	37,500	25,146	25,100	0.67	B
7th St	D St	C St	2A	4U	25,000		17,400	0.69	B	A	4D	37,500	43,903	43,900	1.17	F
7th St	C St	B St	2A	4U	25,000		19,700	0.79	C	A	4D	37,500	42,076	42,100	1.12	F
7th St	B St	A St	2A	4U	25,000		21,900	0.88	D	A	4D	37,500	41,252	41,300	1.10	F
7th St	A St	Forrest Ave	2A	4U	25,000		22,400	0.90	D	A	4D	37,500	35,864	35,900	0.96	E
7th St	Forrest Ave	Center St	MA	4D	37,500	19,830	19,800	0.53	A		4D	37,500	35,214	35,200	0.94	E
7th St	Center St	Union St	MA	4D	37,500		22,500	0.60	A		4D	37,500	29,808	29,800	0.79	C
7th St	Union St	Mojave Dr	MA	4D	37,500		26,300	0.70	B		4D	37,500	31,383	31,400	0.84	D
7th St	Mojave Dr	Victor St	MA	4D	37,500		19,700	0.53	A		4D	37,500	27,067	27,100	0.72	C
7th St	Victor St	Plaza Dr	MA	4D	37,500		24,300	0.65	B		4D	37,500	29,309	29,300	0.78	C
7th St	Plaza Dr	La Paz Dr	MA	4D	37,500		22,700	0.60	A		4D	37,500	32,186	32,200	0.86	D

**Table 5.15-5
PLANNING AREA ROADWAY SEGMENT LEVEL OF SERVICE
BY SEGMENT, CLASS OF ROADWAY, CAPACITY, ADT, LOS, V/C AND LOS,
EXISTING (2005) AND GENERAL PLAN BUILDOUT**

Roadway	From	To	2005								2035					
			Exist. Class.	Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
7th St	La Paz Dr	Lorene Dr	MA	4D	37,500		19,500	0.52	A		4D	37,500	34,180	34,200	0.91	E
7th St	Lorene Dr	Green Tree Blvd	MA	4D	37,500		21,300	0.57	A	SA2	6D	56,000	48,164	48,200	0.86	D
7th St	Mojave Dr	Palmdale Rd / Green Tree Blvd	MA	4D	37,500	24,600	24,600	0.66	B	SA2	6D	56,000	48,164	48,200	0.86	D
11th Ave	Winona St	Nisqualli Rd	C	2U	12,500	2,220	2,200	0.18	A		2U	12,500	2,446	2,400	0.20	A
11th Ave	Nisqualli Rd	Cypress Ave	C	2U	12,500	1,170	1,200	0.09	A	RA	4U	25,000	4,043	4,000	0.16	A
11th Ave	Cypress Ave	Lindero St	C	2U	12,500	1,890	1,900	0.15	A	RA	4U	25,000	4,452	4,500	0.18	A
11th Ave	Lindero St	Bear Valley Rd	C	2U	12,500		2,200	0.18	A	RA	4U	25,000	3,537	3,500	0.14	A
11th St	D St	B St	C	2U	12,500		2,800	0.23	A		2U	14,500	4,343	4,300	0.30	A
11th St	B St	Verde St	L	2U	10,000	3,500	3,500	0.35	A		2U	10,000	4,795	4,800	0.48	A
Adelanto Rd	La Paz Ave	Chamberlaine Way	C	2U	12,500		100	0.01	A	MA_SP	4U	37,500	12,797	12,800	0.34	A
Adelanto Rd	Chamberlaine Way	Bartlett Ave	C	2U	12,500		100	0.01	A	MA_SP	4U	37,500	11,316	11,300	0.30	A
Air Base Rd / Air Expressway Blvd	National Trails Hwy	Gas Line Rd	C	2U	12,500		11,000	0.88	D	MA	4D	37,500	15,403	15,400	0.41	A
Air Base Rd / Air Expressway Blvd	Gas Line Rd	Village Dr	C	2U	12,500		10,200	0.81	D	MA	4D	37,500	14,841	14,800	0.40	A
Air Base Rd / Air Expressway Blvd	Village Dr	Phantom East St	C	2U	12,500		18,800	1.50	F	MA	4D	37,500	34,238	34,200	0.91	E
Amargosa Rd	Village Dr	Tawney Ridge Ln	A	4D	37,500	6,630	6,600	0.18	A		4D	37,500	12,467	12,500	0.33	A
Amargosa Rd	Tawney Ridge Ln	Mojave Dr	A	4D	37,500	8,360	8,400	0.22	A		4D	37,500	16,718	16,700	0.45	A
Amargosa Rd	Mojave Dr	Roy Rogers Dr	A	4D	37,500	15,560	15,600	0.41	A		4D	37,500	20,384	20,400	0.54	A
Amargosa Rd	Roy Rogers Dr	Seneca Rd	A	4D	37,500		10,900	0.29	A		4D	37,500	22,414	22,400	0.60	A
Amargosa Rd	Seneca Rd	Civic Dr	A	4D	37,500		9,600	0.26	A		4D	37,500	26,996	27,000	0.72	C
Amargosa Rd	Civic Dr	Palmdale Rd	A	4D	37,500		9,700	0.26	A		4D	37,500	19,847	19,800	0.53	A
Amargosa Rd	Palmdale Rd	Dos Palmas Rd	A	4D	37,500		16,300	0.44	A		4D	37,500	21,685	21,700	0.58	A
Amargosa Rd	Dos Palmas Rd	Luna Rd	A	4D	37,500		12,900	0.34	A		4D	37,500	20,318	20,300	0.54	A
Amargosa Rd	Luna Rd	La Mesa Rd	A	4D	37,500		10,500	0.28	A		4D	37,500	23,472	23,500	0.63	B
Amargosa Rd	La Mesa Rd	King Ranch Rd	A	4D	37,500	17,830	17,800	0.48	A		4D	37,500	23,854	23,900	0.64	B

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BY SEGMENT, CLASS OF ROADWAY, CAPACITY, ADT, LOS, V/C AND LOS,
EXISTING (2005) AND GENERAL PLAN BUILDOUT**

Roadway	From	To	2005								2035					
			Exist. Class.	Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
Amargosa Rd	King Ranch Rd	Bear Valley Rd	A	4D	37,500	19,600	19,600	0.52	A		4D	37,500	23,372	23,400	0.62	B
Amargosa Rd	Bear Valley Rd	Christa Way	A	4D	37,500		11,800	0.32	A		4D	37,500	25,816	25,800	0.69	B
Amargosa Rd	Christa Way	California Aqueduct	C	2U	12,500	5,930	5,900	0.47	A	A	4D	37,500	16,656	16,700	0.44	A
Amethyst Rd	Rancho Rd	Hopland St	L	2U	10,000		-	-	-	A	4D	37,500	18,640	18,600	0.50	A
Amethyst Rd	Hopland St	Mojave Dr	L	2U	10,000		-	-	-	A	4D	37,500	19,511	19,500	0.52	A
Amethyst Rd	Mojave Dr	Quail Cove Pl	MA	3D	37,500	1,940	1,900	0.05	A	SA2	6D	56,000	37,054	37,100	0.66	B
Amethyst Rd	Quail Cove Pl	Hook Blvd	MA	3D	37,500	1,980	2,000	0.05	A	SA2	6D	56,000	38,548	38,500	0.69	B
Amethyst Rd	Hook Blvd	Woodpecker Rd	MA	3D	37,500	2,840	2,800	0.08	A	SA2	6D	56,000	42,324	42,300	0.76	C
Amethyst Rd	Woodpecker Rd	Seneca Rd	MA	3D	37,500	2,930	2,900	0.08	A	SA2	6D	56,000	42,568	42,600	0.76	C
Amethyst Rd	Seneca Rd	Begonia St	C	2U	12,500	2,440	2,400	0.20	A	SA2	6D	56,000	44,418	44,400	0.79	C
Amethyst Rd	Begonia St	Palmdale Rd	C	2U	12,500	2,470	2,500	0.20	A	SA2	6D	56,000	41,400	41,400	0.74	C
Amethyst Rd	La Mesa Rd	Northstar Ave	MA	4D	37,500	13,370	13,400	0.36	A	SA2	6D	56,000	41,247	41,200	0.74	C
Amethyst Rd	Northstar Ave	Glengarry Dr	A	4U	25,000	15,700	15,700	0.63	B	SA2	6D	56,000	42,302	42,300	0.76	C
Amethyst Rd	Glengarry Dr	Bear Valley Rd	A	4U	25,000	16,890	16,900	0.68	B	SA2	6D	56,000	44,324	44,300	0.79	C
Amethyst Rd	Bear Valley Rd	Sycamore St	A	4U	25,000		0	0.00	A	SA2	6D	56,000	41,654	41,700	0.74	C
Amethyst Rd	Sycamore St	Eucalyptus St / Christa Way	N				-	-	-	SA2	6D	56,000	39,686	39,700	0.71	C
Arlette Dr	Joshua St	Hook blvd	C	2U	12,500	2,780	2,800	0.22	A		2U	12,500	3,057	3,100	0.24	A
Ashley Glen Dr	Mojave Dr	Joshua St	C	2U	12,500		-	-	-		2U	12,500	3,398	3,400	0.27	A
Ashley Glen Dr	Joshua St	Hook Blvd	C	2U	12,500		2,200	0.18	A		2U	12,500	6,415	6,400	0.51	A
Avalon Ave	Fresno Dr	A St	L	2U	10,000	1,490	1,500	0.15	A	L	2U	10,000	1,640	1,600	0.16	A
Balsam Rd	Winona St	Nisqualli Rd	C	2U	12,500		-	-	-		2U	12,500	4,034	4,000	0.32	A
Balsam Rd	Nisqualli Rd	Bear Valley Rd	A	4U	25,000	8,210	8,200	0.33	A	MA	4D	37,500	16,576	16,600	0.44	A
Baldy Mesa Rd	Palmdale Rd	Luna Rd	L	2U	10,000		200	0.02	A	MA	4D	37,500	28,767	28,800	0.77	C
Baldy Mesa Rd	Luna Rd	La Mesa Rd	L	2U	10,000		200	0.02	A	MA	4D	37,500	29,749	29,700	0.79	C
Baldy Mesa Rd	La Mesa Rd	Bear Valley Rd	C	2U	12,500		200	0.02	A	MA	4D	37,500	28,326	28,300	0.76	C

**Table 5.15-5
PLANNING AREA ROADWAY SEGMENT LEVEL OF SERVICE
BY SEGMENT, CLASS OF ROADWAY, CAPACITY, ADT, LOS, V/C AND LOS,
EXISTING (2005) AND GENERAL PLAN BUILDOUT**

Roadway	From	To	2005								2035					
			Exist. Class.	Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
Baldy Mesa Rd	Bear Valley Rd	5th St	C	2U	12,500		1,700	0.13	A	MA	4D	37,500	23,549	23,500	0.63	B
Baldy Mesa Rd	5th St	Mesa Street	C	2U	12,500		1,700	0.14	A	MA	4D	37,500	24,071	24,100	0.64	B
Bear Valley Rd	Fish Hatchery Rd	Jacaranda Ave	SA	6D	56,000		47,700	0.85	D	MA	4D	37,500	70,517	70,500	1.88	F
Bear Valley Rd	Jacaranda Ave	Peach Ave	SA	6D	56,000		35,700	0.64	B	MA	4D	37,500	68,524	68,500	1.83	F
Bear Valley Rd	Peach Ave	Industrial Blvd	SA	6D	56,000		67,300	1.20	F	MA	4D	37,500	71,459	71,500	1.91	F
Bear Valley Rd	Industrial Blvd	Hesperia Rd	SA	6D	56,000		60,800	1.09	F	MA	4D	37,500	74,140	74,100	1.98	F
Bear Valley Rd	Hesperia Rd	2nd Ave	SA	6D	56,000	53,610	53,600	0.96	E		6D	56,000	58,458	58,500	1.04	F
Bear Valley Rd	2nd Ave	3rd Ave	SA	6D	56,000		45,500	0.81	D		6D	56,000	58,430	58,400	1.04	F
Bear Valley Rd	3rd Ave	7th Ave	SA	6D	56,000		42,600	0.76	C		6D	56,000	59,366	59,400	1.06	F
Bear Valley Rd	7th Ave	11th Ave	SA	6D	56,000		43,500	0.78	C		6D	56,000	57,109	57,100	1.02	F
Bear Valley Rd	11th Ave	Balsam Rd	SA	6D	56,000		41,800	0.75	C		6D	56,000	58,425	58,400	1.04	F
Bear Valley Rd	Balsam Rd	Locust Ave	SA	6D	56,000		41,100	0.73	C		6D	56,000	65,006	65,000	1.16	F
Bear Valley Rd	Locust Ave	Cottonwood Ave	SA	6D	56,000		55,500	0.99	E		6D	56,000	65,595	65,600	1.17	F
Bear Valley Rd	Mariposa Rd	I-15 NB Ramps	SA	6D	56,000	73,470	73,500	1.31	F		6D	56,000	85,095	85,100	1.52	F
Bear Valley Rd	I-15 SB Ramps	Amargosa Rd	SA	6D	56,000	53,320	53,300	0.95	E		6D	56,000	70,987	71,000	1.27	F
Bear Valley Rd	Amargosa Rd	Amethyst Rd	MA	4D	37,500	44,860	44,900	1.20	F	SA	6D	56,000	75,483	75,500	1.35	F
Bear Valley Rd	Topaz Rd	Eagle Ranch Pkwy/Mesa Linda St	MA	4D	37,500	18,730	18,700	0.50	A	SA	6D	56,000	58,913	58,900	1.05	F
Bear Valley Rd	Eagle Ranch Pkwy/Mesa Linda St	Cantina Dr	MA	4D	37,500	17,150	17,200	0.46	A	SA	6D	56,000	54,096	54,100	0.97	E
Bear Valley Rd	Cantina Dr	US-395	MA	4D	37,500	17,640	17,600	0.47	A	SA	6D	56,000	36,388	36,400	0.65	B
Bear Valley Rd	US-395	Mesa View Dr	C	2U	12,500	7,700	7,700	0.62	B	SA	6D	56,000	48,592	48,600	0.87	D
Bear Valley Rd	Mesa View Dr	Bellflower St	C	2U	12,500		3,200	0.25	A	SA	6D	56,000	46,660	46,700	0.83	D
Bear Valley Rd	Bellflower St	Monte Vista Rd	C	2U	12,500		3,100	0.25	A	SA	6D	56,000	40,623	40,600	0.73	C
Bear Valley Rd	Monte Vista Rd	Baldy Mesa Rd	C	2U	12,500		2,900	0.23	A	SA	6D	56,000	35,608	35,600	0.64	B

**Table 5.15-5
PLANNING AREA ROADWAY SEGMENT LEVEL OF SERVICE
BY SEGMENT, CLASS OF ROADWAY, CAPACITY, ADT, LOS, V/C AND LOS,
EXISTING (2005) AND GENERAL PLAN BUILDOUT**

Roadway	From	To	2005								2035					
			Exist. Class.	Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
Bear Valley Rd	Baldy Mesa Rd	White Rd	C	2U	12,500		1,100	0.09	A	SA	6D	56,000	38,481	38,500	0.69	B
Bellflower St	Palmdale Rd	Luna Rd	L	2U	10,000		-	-	-	SA2	6D	56,000	28,895	28,900	0.52	A
Bellflower St	Luna Rd	La Mesa Rd	L	2U	10,000		-	-	-	SA2	6D	56,000	30,512	30,500	0.54	A
Bellflower St	La Mesa Rd	Bear Valley Rd	L	2U	10,000		-	-	-	SA2	6D	56,000	33,684	33,700	0.60	A
Bellflower St	Bear Valley Rd	Sycamore St	L	2U	10,000		-	-	-	SA2	6D	56,000	38,298	38,300	0.68	B
Bellflower St	Sycamore St	Eucalyptus St	L	2	10,000					SA2	6D	56,000	39,553	39,600	0.71	C
Brucite Rd	Hopland St	Tawney Ridge Ln	L	2U	10,000		-	-	-	C	2U	12,500	1,221	1,200	0.10	A
Brucite Rd	Tawney Ridge Ln	Mojave Dr	L	2U	10,000		-	-	-	C	2U	12,500	726	700	0.06	A
Brucite Rd	Mojave Dr	Hook Blvd	L	2U	10,000		-	-	-	C	2U	12,500	5,681	5,700	0.45	A
Burning Tree Dr	Pebble Beach Dr	Green Tree Blvd	C	2U	12,500		2,900	0.23	A		2U	12,500	6,038	6,000	0.48	A
Cahuenga Rd	Palmdale Rd	Dos Palmas Rd	C	2U	12,500		100	0.00	A		2U	12,500	11,952	12,000	0.96	E
Cahuenga Rd	Dos Palmas Rd	Luna Rd	C	2U	12,500		500	0.04	A		2U	12,500	5,855	5,900	0.47	A
Cantina Dr	Holly Rd	Mojave Dr	N				-	-	-	C	2U	37,500	7,628	7,600	0.20	A
Cantina Dr	Mojave Dr	Seneca Rd	N				-	-	-	A	4D	37,500	11,327	11,300	0.30	A
Cantina Dr	Seneca Rd	Palmdale Rd	N				-	-	-	A	4D	37,500	18,324	18,300	0.49	A
Cantina Dr	Palmdale Rd	Dos Palmas Rd	N				-	-	-	A	4D	37,500	28,530	13,200	0.76	C
Cantina Dr	Dos Palmas Rd	Luna Rd	N				-	-	-	A	4D	37,500	29,534	12,000	0.79	C
Cantina Dr	Luna Rd	La Mesa Rd	N				-	-	-	A	4D	37,500	32,551	13,200	0.87	D
Cantina Dr	La Mesa Rd	Eagle Ranch Pkwy	C	2U	12,500		-	-	-		2U	12,500	34,007	13,800	2.72	F
Cantina Dr	Eagle Ranch Pkwy	Bear Valley Rd	C	2U	12,500	2,560	2,600	0.20	A		2U	12,500	17,719	14,000	1.42	F
Civic Dr	Mojave Dr	Roy Rogers Dr	C	2U	12,500		800	0.06	A		2U	12,500	6,961	7,000	0.56	A
Civic Dr	Roy Rogers Dr	Seneca Rd	A	4U	25,000	5,720	5,700	0.23	A		4U	25,000	9,138	9,100	0.37	A
Civic Dr	Seneca Rd	Park Ave	A	4U	25,000	4,440	4,400	0.18	A		4U	25,000	4,881	4,900	0.20	A
Civic Dr	Park Ave	Amargosa Rd	A	4U	25,000		300	0.01	A		4U	25,000	11,105	11,100	0.44	A

**Table 5.15-5
PLANNING AREA ROADWAY SEGMENT LEVEL OF SERVICE
BY SEGMENT, CLASS OF ROADWAY, CAPACITY, ADT, LOS, V/C AND LOS,
EXISTING (2005) AND GENERAL PLAN BUILDOUT**

Roadway	From	To	2005								2035					
			Exist. Class.	Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
Clovis St	Amargosa Rd	Village Dr	C	2U	12,500		900	0.07	A	L	2U	12,500	1,330	1,300	0.11	A
Clovis St	Village Dr	El Evado Rd	C	2U	12,500		1,900	0.15	A	L	2U	12,500	4,580	4,600	0.37	A
Clovis St	El Evado Rd	Cordova Rd	N				-	-	-	L	2U	12,500	545	500	0.04	A
Clovis St	Cordova Rd	Amethyst Rd	N				-	-	-	L	2U	12,500	1,135	1,100	0.09	A
Cobalt Rd	Hopland St	Mojave Dr	L	2U	10,000		-	-	-		2U	12,500	11,456	11,500	0.92	E
Cobalt Rd	Mojave Dr	Hook Blvd	L	2U	10,000		-	-	-		2U	12,500	17,381	17,400	1.39	F
Cobalt Rd	Hook Blvd	Seneca Rd	L	2U	10,000		-	-	-		2U	12,500	12,837	12,800	1.03	F
Cobalt Rd	Seneca Rd	Palmdale Rd	C	2U	12,500	970	1,000	0.08	A		2U	12,500	5,224	5,200	0.42	A
Cobalt Rd	Palmdale Rd	Dos Palmas Rd	C	2U	12,500	5,120	5,100	0.41	A	C	2U	12,500	10,420	10,400	0.83	D
Cobalt Rd	Dos Palmas Rd	Luna Rd	C	2U	12,500		3,100	0.25	A	C	2U	12,500	10,464	10,500	0.84	D
Cobalt Rd	La Mesa Rd	Northstar Ave	C	2U	12,500		2,400	0.19	A	C	2U	12,500	6,583	6,600	0.53	A
Cobalt Rd	Northstar Ave	Bear Valley Rd	C	2U	12,500	2,020	2,000	0.16	A	C	2U	12,500	4,640	4,600	0.37	A
Cobalt Rd	Bear Valley Rd	Sycamore St	C	2U	12,500		4,400	0.36	A	C	2U	12,500	4,649	4,600	0.37	A
Cobalt Rd	Sycamore St	Eucalyptus St	C	2U	12,500		-	-	-	C	2U	12,500	4,247	4,200	0.34	A
Cobalt Rd	Eucalyptus St/Mesa Street	Smoke Tree Road	N				-	-	-	C	2U	12,500	0	0	0.00	A
Condor Rd	Tawney Ridge Ln	Mojave Dr	C	2U	12,500	1,610	1,600	0.13	A	C	2U	12,500	3,067	3,100	0.25	A
Cordova Rd	Rancho Rd	Clovis St	N				-	-	-	C	2U	12,500	1,267	1,300	0.10	A
Cordova Rd	Clovis St	Hopland St	N				-	-	-	C	2U	12,500	1,820	1,800	0.15	A
Cordova Rd	Hopland St	Tawney Ridge Ln	C	2U	12,500		-	-	-	C	2U	12,500	1,705	1,700	0.14	A
Cordova Rd	Tawney Ridge Ln	Mojave Dr	C	2U	12,500		-	-	-	C	2U	12,500	764	800	0.06	A
Cottonwood Ave	Mariposa Rd	Bear Valley Rd	C	2U	12,500	8,240	8,200	0.66	B	C	2U	12,500	13,596	13,600	1.09	F
Cypress Ave	Yates Rd	Ottawa St	N				-	-	-	C	2U	12,500	1,190	1,200	0.10	A
Cypress Ave	Ottawa St	Nisqualli Rd	N				-	-	-	C	2U	12,500	2,678	2,700	0.21	A
Cypress Ave	Nisqualli Rd	9th Ave	C	2U	12,500		1,300	0.10	A	L	2U	10,000	3,268	3,300	0.33	A
Cypress Ave	9th Ave	11th St	C	2U	12,500		600	0.05	A	L	2U	10,000	1,533	1,500	0.15	A

**Table 5.15-5
PLANNING AREA ROADWAY SEGMENT LEVEL OF SERVICE
BY SEGMENT, CLASS OF ROADWAY, CAPACITY, ADT, LOS, V/C AND LOS,
EXISTING (2005) AND GENERAL PLAN BUILDOUT**

Roadway	From	To	Exist. Class.	2005							2035					
				Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
Cypress Ave	11th St	Bear Valley Rd	C	2U	12,500		100	0.01	A	L	2U	10,000	1,100	1,100	0.11	A
D St	11th St	Hesperia Rd	MA	4D	37,500	45,700	45,700	1.22	F	MA_SP	4D	37,500	52,473	52,500	1.40	F
D St	Hesperia Rd	7th St	MA	4D	37,500	42,130	42,100	1.12	F	MA_SP	4D	37,500	42,158	42,200	1.12	F
D St	7th St	6th St	MA	4D	37,500		29,700	0.79	C	MA_SP	4D	37,500	46,810	46,800	1.25	F
D St	6th St	Forrest Ave	MA	4D	37,500		28,400	0.76	C	MA_SP	4D	37,500	43,983	44,000	1.17	F
D St	Forrest Ave	3rd St	MA	4D	37,500		28,600	0.76	C	MA_SP	4D	37,500	44,625	44,600	1.19	F
D St	3rd St	2nd St	MA	4D	37,500		28,700	0.77	C	MA_SP	4D	37,500	44,829	44,800	1.20	F
D St	Sherman Way	I-15 NB Ramps	MA	4D	37,500	38,200	38,200	1.02	F	MA_SP	4D	37,500	45,610	45,600	1.22	F
Del Rey Dr	Forrest Ave	Mojave Dr	L	2U	10,000	2,970	3,000	0.30	A		2U	10,000	2,991	3,000	0.30	A
Del Rey Dr	Mojave Dr	7th St	L	2U	10,000		2,200	0.22	A		2U	10,000	7,370	7,400	0.74	C
Dos Palmas Rd	Park Ave	Amargosa Rd	C	2U	12,500		-	-	-		2U	12,500	2,423	2,400	0.19	A
Dos Palmas Rd	Amargosa Rd	Cahuenga Rd	C	2U	12,500		-	-	-		2U	12,500	4,714	4,700	0.38	A
Dos Palmas Rd	Cahuenga Rd	El Evado Rd	C	2U	12,500		-	-	-		2U	12,500	7,467	7,500	0.60	A
Dos Palmas Rd	El Evado Rd	Pacoima Rd	C	2U	12,500		-	-	-		2U	12,500	13,235	13,200	1.06	F
Dos Palmas Rd	Pacoima Rd	Amethyst Rd	L	2U	10,000		-	-	-	C	2U	12,500	13,712	13,700	1.10	F
Dos Palmas Rd	Amethyst Rd	Cobalt Rd	C	2U	12,500		-	-	-		2U	12,500	6,673	6,700	0.53	A
Dos Palmas Rd	Cobalt Rd	Topaz Rd	L	2U	10,000		-	-	-	C	2U	12,500	8,584	8,600	0.69	B
Dos Palmas Rd	Topaz Rd	Mesa Linda St	L	2U	10,000		-	-	-	C	2U	12,500	13,079	13,100	1.05	F
Dos Palmas Rd	Mesa Linda St	US-395	L	2U	10,000		-	-	-	C	2U	12,500	11,201	11,200	0.90	D
Dos Palmas Rd	US 395	Bellflower St	L	2U	10,000		-	-	-	C	2U	12,500	15,597	15,600	1.25	F
Dos Palmas Rd	Bellflower St	Monte Vista Rd	L	2U	10,000		-	-	-	C	2U	12,500	12,363	12,400	0.99	E
Dos Palmas Rd	Monte Vista Rd	Braceo St	L	2U	10,000		-	-	-	C	2U	12,500	11,440	11,400	0.92	E
Dos Palmas Rd	Braceo St	Baldy Mesa Rd	L	2U	10,000		-	-	-	C	2U	12,500	4,937	4,900	0.39	A
E St	Willow St	I-15 NB Ramps	L	2U	10,000	1,590	1,600	0.16	A		2U	10,000	3,592	3,600	0.36	A
East Trail	Mojave Dr	Reno Loop Rd	C	2U	12,500		2,600	0.20	A	A	4D	37,500	4,000	4,000	0.11	A
Eagle Ranch Pkwy	Cantina Dr	Mesa Linda St	MA	4D	37,500		-	-	-		4D	37,500	4,838	4,800	0.13	A
Eagle Ranch Pkwy	Mesa Linda St	Redrock Rd	MA	4D	37,500		2,100	0.06	A		4D	37,500	6,582	6,600	0.18	A
Eagle Ranch Pkwy	Redrock Rd	Bear Valley Rd	A	4D	25,000	3,870	3,900	0.15	A		4D	30,000	7,606	7,600	0.25	A

**Table 5.15-5
PLANNING AREA ROADWAY SEGMENT LEVEL OF SERVICE
BY SEGMENT, CLASS OF ROADWAY, CAPACITY, ADT, LOS, V/C AND LOS,
EXISTING (2005) AND GENERAL PLAN BUILDOUT**

Roadway	From	To	2005								2035					
			Exist. Class.	Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
El Evado Rd	Air Base Rd	Rancho Rd	N				-	-	-	8 L	8D	75,000	33,901	33,900	0.45	A
El Evado Rd	Rancho Rd	Clovis St	C	2U	12,500		-	-	-	8 L	8D	75,000	25,663	25,700	0.34	A
El Evado Rd	Clovis St	Hopland St	C	2U	12,500		1,900	0.15	A	8 L	8D	75,000	28,173	28,200	0.38	A
El Evado Rd	Hopland St	Tawney Ridge Ln	C	2U	12,500		2,700	0.21	A	8 L	8D	75,000	28,253	28,300	0.38	A
El Evado Rd	Tawney Ridge Ln	Mojave Dr	C	2U	12,500	4,240	4,200	0.34	A	SA2	6D	56,000	39,161	39,200	0.70	B
El Evado Rd	Mojave Dr	Hook Blvd	MA	4D	37,500		5,800	0.15	A	SA2	6D	56,000	46,210	46,200	0.83	D
El Evado Rd	Hook Blvd	Seneca Rd	MA	4D	37,500	13,880	13,900	0.37	A	SA2	6D	56,000	37,800	37,800	0.68	B
El Evado Rd	Seneca Rd	Begonia St	C	2U	12,500	13,380	13,400	1.07	F	SA2	6D	56,000	41,080	41,100	0.73	C
El Evado Rd	Begonia St	Palmdale Rd	C	2U	12,500	16,260	16,300	1.30	F	SA2	6D	56,000	44,230	44,200	0.79	C
El Evado Rd	Palmdale Rd	Dos Palmas Rd	C	2U	12,500		10,800	0.86	D	SA2	6D	56,000	31,937	31,900	0.57	A
El Evado Rd	Dos Palmas Rd	Luna Rd	C	2U	12,500	10,410	10,400	0.83	D	SA2	6D	56,000	31,592	31,600	0.56	A
El Evado Rd	Luna Rd	Manzano Rd	MA	4D	37,500	8,250	8,300	0.22	A	SA2	6D	56,000	35,008	35,000	0.63	B
El Evado Rd	Manzano Rd	La Mesa Rd	MA	4D	37,500	7,850	7,800	0.21	A	SA2	6D	56,000	35,161	35,200	0.63	B
El Evado Rd	La Mesa Rd	Northstar Ave	C	2D	12,500	4,670	4,700	0.37	A	MA	4D	37,500	5,136	5,100	0.14	A
Eucalyptus St	Amargosa Rd	Amethyst Rd	N				-	-	-	8 L	8D	75,000	81,149	81,100	1.08	F
Eucalyptus St	Amethyst Rd	Cobalt Rd	N				-	-	-	SA2	6D	56,000	43,161	43,200	0.77	C
Eucalyptus St	Cobalt Rd	Topaz Rd	C	2U	12,500		-	-	-	SA2	6D	56,000	44,150	44,200	0.79	C
Eucalyptus St	Topaz Rd	Mesa Linda St	C	2U	12,500		-	-	-	MA	4D	37,500	40,036	40,000	1.07	F
Eucalyptus St	Mesa Linda St	Cantina Dr	C	2U	12,500		-	-	-	MA	4D	37,500	34,222	34,200	0.91	E
Eucalyptus St	Cantina Dr	US-395	C	2U	12,500		-	-	-	MA	4D	37,500	30,743	30,700	0.82	D
Eucalyptus St	US-395	Pena Ave	N				-	-	-	SA2	6D	56,000	61,842	61,800	1.10	F
Eucalyptus St	Pena Ave	Mesa View Dr	N				-	-	-	SA2	6D	56,000	59,039	59,000	1.05	F
Eucalyptus St	Mesa View Dr	Bellflower St	N				-	-	-	SA2	6D	56,000	52,503	52,500	0.94	E
Forrest St	3rd Ave	Moore St	L	2U	10,000	1,410	1,400	0.14	A		2U	10,000	1,554	1,600	0.16	A
George Blvd	Phantom St	Nevada Ave	MA_SP	4U	37,500		300	0.01	A		4U	25,000	3,237	3,200	0.13	A
George Blvd	Nevada Ave	Air Exwy	C	2U	14,500	1,500	1,500	0.10	A	MA_SP	4U	35,000	10,433	10,400	0.30	A
Green Tree Blvd	7th St	St Andrews Dr	A	4U	25,000	25,610	25,600	1.02	F	SA2	6D	56,000	46,232	46,200	0.83	D

**Table 5.15-5
 PLANNING AREA ROADWAY SEGMENT LEVEL OF SERVICE
 BY SEGMENT, CLASS OF ROADWAY, CAPACITY, ADT, LOS, V/C AND LOS,
 EXISTING (2005) AND GENERAL PLAN BUILDOUT**

Roadway	From	To	2005								2035					
			Exist. Class.	Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
Green Tree Blvd	St Andrews Dr	Burning Tree Dr	A	4U	25,000		27,400	1.09	F	SA2	6D	56,000	45,402	45,400	0.81	D
Green Tree Blvd	Burning Tree Dr	Yates Rd	A	4U	25,000		25,900	1.04	F	SA2	6D	56,000	47,531	47,500	0.85	D
Green Tree Blvd	Yates Rd	Rodeo Dr	A	4U	25,000		17,000	0.68	B	SA2	6D	56,000	30,640	30,600	0.55	A
Green Tree Blvd	Rodeo Dr	Hesperia Rd	A	4D	25,000		12,800	0.51	A	SA2	6D	56,000	35,940	35,900	0.64	B
Green Tree Blvd	Hesperia Rd	Industrial Blvd	N				-	-	-	SA	6D	56,000	54,778	54,800	0.98	E
Green Tree Blvd	Industrial Blvd	Ridgecrest Rd	N				-	-	-	SA	6D	56,000	58,827	58,800	1.05	F
Hesperia Rd	D St	B St	C	2D	12,500	8,110	8,100	0.65	B		2D	12,500	10,181	10,200	0.81	D
Hesperia Rd	B St	Forrest Ave	C	2D	12,500		13,800	1.11	F		2D	12,500	15,267	15,300	1.22	F
Hesperia Rd	Forrest Ave	Rio Vista St	C	2D	12,500	13,480	13,500	1.08	F		2D	12,500	24,789	24,800	1.98	F
Hesperia Rd	Rio Vista St	Verde St	C	2D	12,500	13,710	13,700	1.10	F		2D	12,500	25,173	25,200	2.01	F
Hesperia Rd	Verde St	Center St	MA	4D	37,500	17,540	17,500	0.47	A		4D	37,500	26,764	26,800	0.71	C
Hesperia Rd	Center St	Seneca Rd	MA	4D	37,500		18,800	0.50	A	SA2	6D	56,000	36,463	36,500	0.65	B
Hesperia Rd	Seneca Rd	Hughes Rd	MA	4D	37,500		24,900	0.66	B	SA2	6D	56,000	55,682	55,700	0.99	E
Hesperia Rd	Hughes Rd	Green Tree Blvd	MA	4D	37,500	28,660	28,700	0.76	C	SA2	6D	56,000	54,434	54,400	0.97	E
Hesperia Rd	Green Tree Blvd	Ottawa St	MA	4D	37,500	30,410	30,400	0.81	D	SA	6D	56,000	42,461	42,500	0.76	C
Hesperia Rd	Ottawa St	Winona St	MA	4D	37,500	34,760	34,800	0.93	E		4D	37,500	43,334	43,300	1.16	F
Hesperia Rd	Winona St	Nisqualli Rd	MA	4D	37,500		37,200	0.99	E		4D	37,500	41,617	41,600	1.11	F
Hesperia Rd	Nisqualli Rd	Silica Rd	MA	4D	37,500	41,460	41,500	1.11	F	SA2	6D	56,000	49,724	49,700	0.89	D
Hesperia Rd	Silica Rd	Jasmine St	MA	4D	37,500		39,400	1.05	F	SA2	6D	56,000	29,857	29,900	0.53	A
Hesperia Rd	Jasmine St	Bear Valley Rd	MA	4D	37,500	27,140	27,100	0.72	C	SA2	6D	56,000	29,678	29,700	0.53	A
Holly Rd	US-395	Mesa Linda Ave	L	2U	10,000		-	-	-	A	4D	37,500	16,214	16,200	0.43	A
Holly Rd	Mesa Linda Ave	Topaz Rd	L	2U	10,000		-	-	-	A	4D	37,500	14,900	14,900	0.40	A
Hopland St	Topaz Rd	Cobalt Rd	L	2U	10,000		-	-	-	A	4D	37,500	20,093	20,100	0.54	A
Hopland St	Cobalt Rd	Amethyst Rd	C	2U	12,500		-	-	-	A	4D	37,500	19,890	19,900	0.53	A
Hopland St	Amethyst Rd	El Evado Rd	C	2U	12,500		-	-	-		2U	12,500	9,679	9,700	0.77	C
Hopland St	El Evado Rd	Llanada Ave	C	2U	12,500		800	0.07	A		2U	12,500	7,272	7,300	0.58	A

**Table 5.15-5
 PLANNING AREA ROADWAY SEGMENT LEVEL OF SERVICE
 BY SEGMENT, CLASS OF ROADWAY, CAPACITY, ADT, LOS, V/C AND LOS,
 EXISTING (2005) AND GENERAL PLAN BUILDOUT**

Roadway	From	To	2005								2035					
			Exist. Class.	Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
Hook Blvd	Amargosa Rd	Arlette Dr	A	4D	37,500	17,610	17,600	0.47	A		4D	37,500	24,247	24,200	0.65	B
Hook Blvd	Arlette Dr	Ashley Glen Dr	A	4D	37,500		11,400	0.30	A		4D	37,500	26,951	27,000	0.72	C
Hook Blvd	Ashley Glen Dr	El Evado Rd	A	4D	37,500	17,150	17,200	0.46	A		4D	37,500	24,893	24,900	0.66	B
Hook Blvd	El Evado Rd	Reno Loop Rd East	A	4D	37,500		8,100	0.22	A		4D	37,500	15,686	15,700	0.42	A
Hook Blvd	Reno Loop Rd East	Reno Loop Rd West	A	4D	37,500	6,190	6,200	0.16	A		4D	37,500	18,558	18,600	0.49	A
Hook Blvd	Reno Loop Rd West	Amethyst Rd	A	4D	37,500	2,610	2,600	0.07	A		4D	37,500	17,618	17,600	0.47	A
Hook Blvd	Amethyst Rd	Brucite Rd	C	2U	12,500	640	600	0.05	A		2U	12,500	13,405	13,400	1.07	F
Hook Blvd	Brucite Rd	Cobalt Rd	C	2U	12,500		-	-	-		2U	12,500	18,800	18,800	1.50	F
Hughes Rd	La Paz Dr	Rodeo Dr	C	2U	12,500	1,270	1,300	0.10	A		2U	12,500	3,655	3,700	0.29	A
Hughes Rd	Rodeo Dr	Hesperia Rd	C	2U	12,500	1,760	1,800	0.14	A		2U	12,500	1,993	2,000	0.16	A
Industrial Blvd	Seneca Rd	Green Tree Blvd	N				-	-	-	A	4D	37,500	4,670	4,700	0.12	A
Industrial Blvd	Silica Rd	Bear Valley Rd	A	4D	37,500	21,780	21,800	0.58	A		4D	30,000	24,569	24,600	0.82	D
Jeraldo Dr	Mojave Dr	Joshua St	C	2U	12,500		800	0.06	A		2U	12,500	849	800	0.07	A
Jasmine St	Industrial Blvd	Hesperia Rd	A	4U	25,000		10,300	0.41	A		4U	25,000	11,288	11,300	0.45	A
Jasmine St	Hesperia Rd	1st Ave	A	4U	25,000		6,000	0.24	A		4U	25,000	6,601	6,600	0.26	A
Jasmine St	1st Ave	2nd Ave	A	4U	25,000		4,600	0.18	A		4U	25,000	5,052	5,100	0.20	A
Karen Dr	Hook Blvd	Seneca Rd	N				-	-	-	C	2U	12,500	4,096	4,100	0.33	A
Kentwood Blvd	Civic Dr	Palmdale Rd	MA	4D	37,500	10,390	10,400	0.28	A	A	4D	37,500	16,089	16,100	0.43	A
La Mesa Rd	Amargosa Rd	El Evado Rd	A	4U	25,000	6,890	6,900	0.28	A	5D	5D	46,875	50,725	50,700	1.08	F
La Mesa Rd	El Evado Rd	Petaluma Rd	A	4U	25,000	7,750	7,700	0.31	A	A	4D	37,500	24,849	24,800	0.66	B
La Mesa Rd	Petaluma Rd	Pacoima Rd	A	4U	25,000	7,580	7,600	0.30	A	A	4D	37,500	24,761	24,800	0.66	B
La Mesa Rd	Pacoima Rd	Triple Tree St	A	4U	25,000	8,190	8,200	0.33	A	A	4D	37,500	26,592	26,600	0.71	C
La Mesa Rd	Triple Tree St	Amethyst Rd	A	4U	25,000	7,860	7,900	0.31	A	A	4D	37,500	26,731	26,700	0.71	C
La Mesa Rd	Amethyst Rd	Cobalt Rd	A	4U	25,000		2,400	0.10	A		4U	25,000	24,003	24,000	0.96	E
La Mesa Rd	Cobalt Rd	Topaz Rd	A	4D	37,500	5,170	5,200	0.14	A		4D	37,500	23,411	23,400	0.62	B
La Mesa Rd	Topaz Rd	Blair St	A	4D	37,500	4,980	5,000	0.13	A		4D	37,500	24,003	24,000	0.64	B

**Table 5.15-5
PLANNING AREA ROADWAY SEGMENT LEVEL OF SERVICE
BY SEGMENT, CLASS OF ROADWAY, CAPACITY, ADT, LOS, V/C AND LOS,
EXISTING (2005) AND GENERAL PLAN BUILDOUT**

Roadway	From	To	2005								2035					
			Exist. Class.	Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
La Mesa Rd	Blair St	Mesa Linda St	A	4D	37,500	2,780	2,800	0.07	A		4D	37,500	21,279	21,300	0.57	A
La Mesa Rd	Mesa Linda St	Cantina Dr	L	2U	10,000		-	-	-	RA	4U	25,000	15,815	15,800	0.63	B
La Mesa Rd	Cantina Dr	US 395	N				-	-	-	MA	4D	37,500	23,047	23,000	0.61	B
La Mesa Rd	US 395	Pana Rd	N				-	-	-	MA	4D	37,500	25,335	25,300	0.68	B
La Mesa Rd	Pana Rd	Mesa View Dr	L	2U	10,000		-	-	-	MA	4D	37,500	24,312	24,300	0.65	B
La Mesa Rd	Mesa View Dr	Bellflower St	L	2U	10,000		-	-	-	RA	4U	25,000	23,582	23,600	0.94	E
La Mesa Rd	Bellflower St	Verbena Rd	L	2U	10,000		-	-	-	RA	4U	25,000	28,703	28,700	1.15	F
La Mesa Rd	Verbena Rd	Monte Vista Rd	L	2U	10,000		-	-	-	RA	4U	25,000	24,073	24,100	0.96	E
La Mesa Rd	Monte Vista Rd	Braceo St	L	2U	10,000		-	-	-	RA	4U	25,000	9,670	9,700	0.39	A
La Mesa Rd	Braceo St	Baldy Mesa Rd	L	2U	10,000		-	-	-	RA	4U	25,000	12,515	12,500	0.50	A
La Mesa Rd	Baldy Mesa Rd	White Rd	L	2U	10,000		-	-	-	RA	4U	25,000	7,267	7,300	0.29	A
La Paz Dr	Forrest Ave	Mojave Dr	C	2U	12,500	5,280	5,300	0.42	A	L	2U	12,500	5,807	5,800	0.46	A
La Paz Dr	Mojave Dr	Redondo Dr	C	2U	12,500		6,600	0.53	A		2U	12,500	9,871	9,900	0.79	C
La Paz Dr	Redondo Dr	Plaza Dr	C	2U	12,500		9,400	0.75	C		2U	12,500	9,871	9,900	0.79	C
La Paz Dr	Plaza Dr	Roy Rogers Dr	A	4D	37,500	8,970	9,000	0.24	A		4D	37,500	9,871	9,900	0.26	A
La Paz Dr	I-15 NB Ramps	Valley Center Dr	A	4D	37,500	30,600	30,600	0.82	D	5D	5D	46,875	41,941	41,900	0.89	D
La Paz Dr	Valley Center Dr	7th St	A	4D	37,500		10,100	0.27	A		4D	37,500	41,701	41,700	1.11	F
La Paz Dr	7th St	Seneca Rd	A	4U	25,000		9,500	0.38	A		4U	25,000	26,155	26,200	1.05	F
La Paz Dr	Seneca Rd	Lorene Dr	C	2U	12,500		3,800	0.30	A	L	2U	12,500	11,905	11,900	0.95	E
La Paz Dr	Lorene Dr	Hughes Rd	C	2U	12,500		3,600	0.28	A	L	2U	12,500	8,921	8,900	0.71	C
La Paz Dr	Hughes Rd	Pebble Beach Dr	C	2U	12,500		1,800	0.14	A	L	2U	12,500	4,812	4,800	0.38	A
Lindero St	7th Ave	9th Ave	C	2U	12,500		-	-	-	L	2U	10,000	2,437	2,400	0.24	A
Lindero St	9th Ave	11th St	C	2U	12,500		-	-	-	L	2U	10,000	1,748	1,700	0.17	A
Lindero St	11th St	Cypress Ave	C	2U	12,500		-	-	-	L	2U	10,000	1,716	1,700	0.17	A
Lindero St	Cypress Ave	Balsam Rd	C	2U	12,500		-	-	-	L	2U	10,000	2,854	2,900	0.29	A
Llanada Ave	Amargosa Rd	Village Dr	C	2U	12,500		2,800	0.23	A	L	2U	10,000	3,119	3,100	0.31	A

**Table 5.15-5
PLANNING AREA ROADWAY SEGMENT LEVEL OF SERVICE
BY SEGMENT, CLASS OF ROADWAY, CAPACITY, ADT, LOS, V/C AND LOS,
EXISTING (2005) AND GENERAL PLAN BUILDOUT**

Roadway	From	To	2005								2035					
			Exist. Class.	Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
Llanada Ave	Village Dr	Hopland St	C	2U	12,500		1,100	0.09	A		2U	12,500	3,917	3,900	0.31	A
Locust Ave	Pahute Rd	Bear Valley Rd	C	2U	12,500		-	-	-		2U	12,500	10,038	10,000	0.80	C
Luna Rd	Amargosa Rd	Cahuenga Rd	C	2U	12,500		1,700	0.14	A		2U	12,500	6,674	6,700	0.53	A
Luna Rd	Cahuenga Rd	El Evado Rd	C	2U	12,500	3,580	3,600	0.29	A		2U	12,500	6,228	6,200	0.50	A
Luna Rd	El Evado Rd	Pacoima Rd	C	2U	12,500	5,230	5,200	0.42	A		2U	12,500	6,128	6,100	0.49	A
Luna Rd	Pacoima Rd	Amethyst Rd	C	2U	12,500	5,120	5,100	0.41	A		2U	12,500	6,243	6,200	0.50	A
Luna Rd	Amethyst Rd	Cobalt Rd	C	2U	12,500	6,020	6,000	0.48	A		2U	12,500	12,380	12,400	0.99	E
Luna Rd	Cobalt Rd	Topaz Rd	C	2U	12,500	5,880	5,900	0.47	A		2U	12,500	11,419	11,400	0.91	E
Luna Rd	Topaz Rd	Mesa Linda St	C	2U	12,500		2,200	0.18	A		2U	12,500	10,608	10,600	0.85	D
Luna Rd	Mesa Linda St	US 395	L	2U	10,000	5,120	5,100	0.51	A		2U	10,000	13,944	13,900	1.39	F
Luna Rd	US 395	Mesa View Dr	N				-	-	-	C	2U	12,500	15,461	15,500	1.24	F
Luna Rd	Mesa View Dr	Bellflower St	N				-	-	-	C	2U	12,500	10,669	10,700	0.85	D
Luna Rd	Bellflower St	Monte Vista Rd	N				-	-	-	C	2U	12,500	12,960	13,000	1.04	F
Luna Rd	Monte Vista Rd	Braceo St	N				-	-	-	C	2U	12,500	11,360	11,400	0.91	E
Luna Rd	Braceo St	Baldy Mesa Rd	N				-	-	-	C	2U	12,500	14,849	14,800	1.19	F
Mall Blvd	Petaluma Rd	Bear Valley Rd	A	4D	37,500	12,760	12,800	0.34	A		4D	37,500	14,034	14,000	0.37	A
Mariposa Rd	I-15 NB Off-ramp	Kingswood Dr	C	2D	12,500	19,460	19,500	1.56	F		2D	18,800	21,406	21,400	1.14	F
Mariposa Rd	Kingswood Dr	Yates Rd	C	2D	12,500	20,050	20,000	1.60	F	?	4D	37,500	22,051	22,100	0.59	A
Mariposa Rd	Yates Rd	Nisqualli Rd	C	2D	12,500	19,610	19,600	1.57	F	?	4D	37,500	25,690	25,700	0.69	B
Mariposa Rd	Nisqualli Rd	Bear Valley Rd	A	4D	37,500	15,770	15,800	0.42	A		4D	37,500	17,909	17,900	0.48	A
Mesa Linda St	Holly Rd	Cactus Rd	L	2U	10,000		-	-	-	C	2U	12,500	1,807	1,800	0.14	A
Mesa Linda St	Cactus Rd	Mojave Dr	L	2U	10,000		-	-	-	C	2U	12,500	4,942	4,900	0.40	A
Mesa Linda St	Mojave Dr	Hook blvd	C	2U	12,500		-	-	-		2U	12,500	5,190	5,200	0.42	A
Mesa Linda St	Hook blvd	Seneca Rd	L	2U	10,000		-	-	-	C	2U	12,500	6,782	6,800	0.54	A
Mesa Linda St	Seneca Rd	Palmdale Rd	N				-	-	-	C	2U	12,500	10,098	10,100	0.81	D
Mesa Linda St	Palmdale Rd	Dos Palmas Rd	N				-	-	-	C	2U	12,500	4,630	4,600	0.37	A
Mesa Linda St	Dos Palmas	Luna Rd	C	2U	12,500		-	-	-		2U	12,500	5,729	5,700	0.46	A

**Table 5.15-5
PLANNING AREA ROADWAY SEGMENT LEVEL OF SERVICE
BY SEGMENT, CLASS OF ROADWAY, CAPACITY, ADT, LOS, V/C AND LOS,
EXISTING (2005) AND GENERAL PLAN BUILDOUT**

Roadway	From	To	2005								2035						
			Exist. Class.	Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS	
	Rd																
Mesa Linda St	Luna Rd	La Mesa Rd	C	2U	12,500		-	-	-			2U	12,500	4,954	5,000	0.40	A
Mesa Linda St	La Mesa Rd	Eagle Ranch Pkwy	A	4U	25,000	2,330	2,300	0.09	A			4U	25,000	8,190	8,200	0.33	A
Mesa Linda St	Bear Valley Rd	Sequoia St	L	2U	10,000	1,320	1,300	0.13	A	A		4D	37,500	15,873	15,900	0.42	A
Mesa Linda St	Sequoia St	Sycamore St	N				-	-	-	C		2U	12,500	8,206	8,200	0.66	B
Mesa Linda St	Sycamore St	Eucalyptus St	N				-	-	-	C		2U	12,500	12,694	12,700	1.02	F
Mesa Linda St	Eucalyptus St	Verano St	N				-	-	-	C		2U	12,500	12,363	12,400	0.99	E
Mesa Linda St	Verano St	Mesa St	N				-	-	-	C		2U	12,500	5,164	5,200	0.41	A
Mesa View Dr	La Mesa Rd	Olivine Rd	L	2U	10,000		-	-	-	C		2U	12,500	3,027	3,000	0.24	A
Mesa View Dr	Olivine Rd	Bear Valley Rd	L	2U	10,000		-	-	-	C		2U	12,500	2,352	2,400	0.19	A
Mesa View Dr	Bear Valley Rd	Sycamore St	L	2U	10,000		-	-	-	C		2U	12,500	8,650	8,600	0.69	B
Mesa View Dr	Sycamore St	Eucalyptus St	L	2U	10,000		-	-	-	C		2U	12,500	8,012	8,000	0.64	B
Mesa St	Amargosa Rd	Topaz Rd	L	2U	10,000		-	-	-	C		2U	12,500	9,639	9,600	0.77	C
Mesa St	Topaz Rd	Eagle Ranch Pkwy	L	2U	10,000		-	-	-	C		2U	12,500	8,195	8,200	0.66	B
Mesa St	Eagle Ranch Pkwy	US-395	L	2U	10,000		-	-	-	C		2U	12,500	4,163	4,200	0.33	A
Mesa St	US-395	Pena Ave	L	2U	10,000		-	-	-	C		2U	12,500	12,285	12,300	0.98	E
Mojave Dr	Victor St	7th St	C	2U	12,500		-	-	-			2U	12,500	4,911	4,900	0.39	A
Mojave Dr	7th St	6th St	A	4U	25,000	11,310	11,300	0.45	A			4U	25,000	12,864	12,900	0.51	A
Mojave Dr	6th St	Del Rey Dr	A	4U	25,000	14,850	14,900	0.59	A			4U	25,000	17,154	17,200	0.69	B
Mojave Dr	Del Rey Dr	La Paz Dr	A	4U	25,000		16,900	0.68	B			4U	25,000	31,692	31,700	1.27	F
Mojave Dr	La Paz Dr	I-15 NB Ramps	A	4U	25,000	23,220	23,200	0.93	E	SA2		6D	56,000	35,398	35,400	0.63	B
Mojave Dr	I-15 SB Ramps	Village Dr	A	4D	37,500	28,690	28,700	0.77	C	SA2		6D	56,000	56,209	56,200	1.00	E
Mojave Dr	Village Dr	Amargosa Rd	A	4D	37,500		9,900	0.26	A	SA		6D	56,000	41,209	41,200	0.74	C
Mojave Dr	Amargosa Rd	Jeraldo Dr	A	4D	37,500		9,400	0.25	A			4D	37,500	24,655	24,700	0.66	B
Mojave Dr	Jeraldo Dr	Ashley Glen Dr	A	4D	37,500		7,900	0.21	A			4D	37,500	25,223	25,200	0.67	B
Mojave Dr	Ashley Glen Dr	El Evado Rd	A	4D	37,500		7,000	0.19	A			4D	37,500	26,605	26,600	0.71	C

**Table 5.15-5
 PLANNING AREA ROADWAY SEGMENT LEVEL OF SERVICE
 BY SEGMENT, CLASS OF ROADWAY, CAPACITY, ADT, LOS, V/C AND LOS,
 EXISTING (2005) AND GENERAL PLAN BUILDOUT**

Roadway	From	To	2005								2035					
			Exist. Class.	Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
Mojave Dr	El Evado Rd	East Trail	A	4D	37,500		8,000	0.21	A		4D	37,500	28,954	29,000	0.77	C
Mojave Dr	East Trail	Rocky Knoll Way	A	4D	37,500		5,700	0.15	A		4D	37,500	27,320	27,300	0.73	C
Mojave Dr	Rocky Knoll Way	West Trail	A	4D	37,500		5,700	0.15	A		4D	37,500	26,626	26,600	0.71	C
Mojave Dr	West Trail	Amethyst Rd	A	4D	37,500	12,360	12,400	0.33	A	SA	6D	56,000	28,894	28,900	0.52	A
Mojave Dr	Amethyst Rd	Brucite Rd	A	4D	37,500	11,270	11,300	0.30	A	SA	6D	56,000	27,833	27,800	0.50	A
Mojave Dr	Brucite Rd	Cobalt Rd	A	4D	37,500		5,700	0.15	A		4D	37,500	31,500	31,500	0.84	D
Mojave Dr	Cobalt Rd	Topaz Rd	A	4D	37,500		5,900	0.16	A		4D	37,500	28,695	28,700	0.77	C
Mojave Dr	Topaz Rd	Mesa Linda Ave	A	4D	37,500		5,900	0.16	A		4D	37,500	29,443	29,400	0.79	C
Mojave Dr	Mesa Linda Ave	US 395	A	4D	37,500	13,340	13,300	0.36	A	SA	6D	56,000	28,265	28,300	0.50	A
Monte Vista Rd (Aster Rd)	Palmdale Rd	Dos Palmas Rd	L	2U	10,000		-	-	-	A	4D	37,500	7,157	7,200	0.19	A
Monte Vista Rd (Aster Rd)	Dos Palmas Rd	Luna Rd	L	2U	10,000		-	-	-	A	4D	37,500	10,117	10,100	0.27	A
Monte Vista Rd (Aster Rd)	Luna Rd	La Mesa Rd	L	2U	10,000		-	-	-	A	4D	37,500	4,419	4,400	0.12	A
Monte Vista Rd (Aster Rd)	La Mesa Rd	Olivine Rd	L	2U	10,000		-	-	-	A	4D	37,500	12,655	12,700	0.34	A
Monte Vista Rd (Aster Rd)	Olivine Rd	Bear Valley Rd	L	2U	10,000		-	-	-	A	4D	37,500	12,136	12,100	0.32	A
Monte Vista Rd (Aster Rd)	Bear Valley Rd	Sycamore St	L	2U	10,000		-	-	-	A	4D	37,500	9,871	9,900	0.26	A
National Trails Hwy	n/o Turner Rd	Turner Rd	C	2U	12,500		4,400	0.35	A		2U	12,500	4,872	4,900	0.39	A
National Trails Hwy	Turner Rd	Air Expwy	C	2U	12,500	11,100	11,100	0.89	D		2U	12,500	12,209	12,200	0.98	E
National Trails Hwy	Air Expwy	Rancho Rd	C	2U	12,500		13,100	1.05	F		2U	12,500	20,022	20,000	1.60	F
National Trails Hwy	Rancho Rd	I-15 SB Ramps	C	2U	12,500	14,910	14,900	1.19	F		2U	12,500	26,007	26,000	2.08	F
Nevada Ave	Phantom West St	George Blvd	C	2U	12,500		-	-	-	MA_SP	4U	25,000	2,810	2,800	0.11	A
Nisqualli Rd	Hesperia Rd	1st Ave	C	2U	12,500	11,930	11,900	0.95	E	A	4D	37,500	18,669	18,700	0.50	A
Nisqualli Rd	1st Ave	3rd Ave	C	2U	12,500		11,200	0.90	D	A	4D	37,500	13,879	13,900	0.37	A
Nisqualli Rd	3rd Ave	Arrowhead Dr	C	2U	12,500	9,350	9,300	0.75	C	A	4D	37,500	16,834	16,800	0.45	A

**Table 5.15-5
 PLANNING AREA ROADWAY SEGMENT LEVEL OF SERVICE
 BY SEGMENT, CLASS OF ROADWAY, CAPACITY, ADT, LOS, V/C AND LOS,
 EXISTING (2005) AND GENERAL PLAN BUILDOUT**

Roadway	From	To	2005								2035					
			Exist. Class.	Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
Nisqualli Rd	Arrowhead Dr	Cypress Ave	C	2U	12,500	9,950	10,000	0.80	C	A	4D	37,500	21,785	21,800	0.58	A
Nisqualli Rd	Cypress Ave	11th Ave	C	2U	12,500		9,700	0.77	C	A	4D	37,500	24,760	24,800	0.66	B
Nisqualli Rd	11th Ave	Balsam Rd	C	2U	12,500		11,000	0.88	D	A	4D	37,500	27,959	28,000	0.75	C
Nisqualli Rd	Balsam Rd	Mariposa Rd	A	4U	25,000		12,700	0.51	A	SA	6D	56,000	40,166	40,200	0.72	C
Nisqualli Rd	11th Ave	Mariposa Rd	A	4U	25,000	11,200	11,200	0.45	A		4U	25,000	27,959	28,000	1.12	F
Northstar Ave	El Evado Rd	Petaluma Rd	A	4U	25,000		4,400	0.18	A		4U	25,000	3,452	3,500	0.14	A
Northstar Ave	Petaluma Rd	Pacoima Rd	A	4U	25,000		2,200	0.09	A		4U	25,000	10,702	10,700	0.43	A
Northstar Ave	Pacoima Rd	Amethyst Rd	C	2U	12,500	3,140	3,100	0.25	A		2U	14,500	5,071	5,100	0.35	A
Northstar Ave	Amethyst Rd	Cobalt Rd	C	2U	12,500	2,780	2,800	0.22	A		2U	14,500	3,738	3,700	0.26	A
Northstar Ave	Cobalt Rd	High Desert Rd	C	2U	12,500		-	-	-		2U	12,500	2,506	2,500	0.20	A
Olivine Rd	Cantina Dr	US 395	N				-	-	-	C	2U	12,500	22,257	22,300	1.78	F
Olivine Rd	US 395	Pena Rd	N				-	-	-	C	2U	12,500	4,731	4,700	0.38	A
Olivine Rd	Pena Rd	Mesa View Dr	N				-	-	-	C	2U	12,500	3,413	3,400	0.27	A
Olivine Rd	Mesa View Dr	Bellflower St	N				-	-	-	C	2U	12,500	2,724	2,700	0.22	A
Olivine Rd	Bellflower St	Monte Vista Rd	N				-	-	-	C	2U	12,500	3,804	3,800	0.30	A
Olivine Rd	Monte Vista Rd	Baldy Mesa Rd	N				-	-	-	C	2U	12,500	5,799	5,800	0.46	A
Olivine Rd	Baldy Mesa Rd	Beaver Ave	N				-	-	-	C	2U	12,500	15,269	15,300	1.22	F
Ottawa St	Hesperia Rd	1st Ave	C	2U	12,500	360	400	0.03	A		2U	12,500	18,961	19,000	1.52	F
Ottawa St	1st Ave	3rd Ave	C	2U	12,500		500	0.04	A		2U	12,500	17,672	17,700	1.41	F
Ottawa St	3rd Ave	Arrowhead Dr	N				-	-	-	C	2U	12,500	19,453	19,500	1.56	F
Ottawa St	Arrowhead Dr	Cypress Ave	N				-	-	-	C	2U	12,500	15,815	15,800	1.27	F
Ottawa St	Cypress Ave	Mariposa Rd	N				-	-	-	C	2U	12,500	16,443	16,400	1.32	F
Pacoima Rd	Seneca Rd	Palmdale Rd	N				-	-	-	C	2U	12,500	2,848	2,800	0.23	A
Pacoima Rd	Palmdale Rd	Dos Palmas Rd	L	2U	10,000		-	-	-	C	2U	12,500	4,416	4,400	0.35	A
Pacoima Rd	Dos Palmas Rd	Luna Rd	C	2U	12,500		-	-	-		2U	12,500	3,968	4,000	0.32	A
Pacoima Rd	Luna Rd	La Mesa Rd	C	2D	12,500	3,180	3,200	0.25	A		2D	12,500	8,900	8,900	0.71	C

**Table 5.15-5
PLANNING AREA ROADWAY SEGMENT LEVEL OF SERVICE
BY SEGMENT, CLASS OF ROADWAY, CAPACITY, ADT, LOS, V/C AND LOS,
EXISTING (2005) AND GENERAL PLAN BUILDOUT**

Roadway	From	To	2005								2035					
			Exist. Class.	Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
Pacoima Rd	La Mesa Rd	Northstar Ave	C	2U	12,500	3,840	3,800	0.31	A		2U	12,500	12,982	13,000	1.04	F
Pacoima Rd	Northstar Ave	Bear Valley Rd	C	2U	12,500	3,630	3,600	0.29	A		2U	12,500	8,360	8,400	0.67	B
Pahute Rd	Spring Valley Pkwy	Tamarisk Rd	C	2U	12,500		-	-	-		2U	12,500	15,593	15,600	1.25	F
Pahute Rd	Tamarisk Rd	Ridgecrest Rd	C	2U	12,500		-	-	-		2U	12,500	15,661	15,700	1.25	F
Pahute Rd	Cottonwood Ave	Balsam Rd	N				-	-	-	C	2U	12,500	11,382	11,400	0.91	E
Palmdale Rd (SR-18) /7th St	Green Tree Blvd	Mariposa Rd	MA	4D	37,500	41,950	41,900	1.12	F	SA	6D	56,000	77,600	77,600	1.39	F
Palmdale Rd (SR-18)	I-15 SB Ramps	Amargosa Rd	MA	4D	37,500	54,700	54,700	1.46	F	SA	6D	56,000	81,393	81,400	1.45	F
Palmdale Rd (SR-18)	Amargosa Rd	Cahuenga Rd	MA	4D	37,500	33,640	33,600	0.90	D	SA	6D	56,000	61,526	61,500	1.10	F
Palmdale Rd (SR-18)	Cahuenga Rd	El Evado Rd	MA	4D	37,500		24,700	0.66	B	SA	6D	56,000	59,038	59,000	1.05	F
Palmdale Rd (SR-18)	El Evado Rd	Pacoima Rd	MA	4D	37,500		14,600	0.39	A	SA	6D	56,000	51,058	51,100	0.91	E
Palmdale Rd (SR-18)	Pacoima Rd	Amethyst Rd	MA	4D	37,500	27,020	27,000	0.72	C	SA	6D	56,000	45,784	45,800	0.82	D
Palmdale Rd (SR-18)	Amethyst Rd	Cobalt Rd	MA	4D	37,500		14,800	0.39	A	SA	6D	56,000	41,814	41,800	0.75	C
Palmdale Rd (SR-18)	Cobalt Rd	Topaz Rd	MA	4D	37,500		13,700	0.36	A	SA	6D	56,000	44,594	44,600	0.80	C
Palmdale Rd (SR-18)	Topaz Rd	Mesa Linda Ave	MA	4D	37,500		13,700	0.37	A	SA	6D	56,000	48,106	48,100	0.86	D
Palmdale Rd (SR-18)	Mesa Linda Ave	Cantina Dr	MA	4D	37,500		13,700	0.36	A	SA	6D	56,000	38,425	38,400	0.69	B
Palmdale Rd (SR-18)	Cantina Dr	US 395	MA	4D	37,500	18,960	19,000	0.51	A	SA	6D	56,000	31,842	31,800	0.57	A
Palmdale Rd (SR-18)	US 395	Pana Rd	MA	4D	37,500	15,980	16,000	0.43	A	SA	6D	56,000	39,757	39,800	0.71	C
Palmdale Rd (SR-18)	Pana Rd	Mesa View Dr	MA	4D	37,500		10,400	0.28	A	SA	6D	56,000	39,761	39,800	0.71	C
Palmdale Rd (SR-18)	Mesa View Dr	Bellflower St	C	2U	12,500		10,300	0.82	D	SA	6D	56,000	37,423	37,400	0.67	B
Palmdale Rd (SR-18)	Bellflower St	Verbena Rd	C	2U	12,500		8,900	0.72	C	SA	6D	56,000	34,380	34,400	0.61	B
Palmdale Rd (SR-18)	Verbena Rd	Monte Vista Rd	C	2U	12,500		6,800	0.54	A	SA	6D	56,000	34,342	34,300	0.61	B
Palmdale Rd (SR-18)	Monte Vista Rd	Baldy Mesa Rd	C	2U	12,500	11,010	11,000	0.88	D	SA	6D	56,000	29,383	29,400	0.52	A
Palmdale Rd (SR-18)	Baldy Mesa Rd	White Rd	C	2U	12,500		7,200	0.57	A	SA	6D	56,000	43,999	44,000	0.79	C
Pena Ave	Bear Valley Rd	Sycamore St	N				-	-	-	C	2U	12,500	7,271	7,300	0.58	A

**Table 5.15-5
PLANNING AREA ROADWAY SEGMENT LEVEL OF SERVICE
BY SEGMENT, CLASS OF ROADWAY, CAPACITY, ADT, LOS, V/C AND LOS,
EXISTING (2005) AND GENERAL PLAN BUILDOUT**

Roadway	From	To	2005								2035					
			Exist. Class.	Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
Pena Ave	Sycamore St	Eucalyptus St	N				-	-	-	C	2U	12,500	6,250	6,200	0.50	A
Pebble Beach Dr	La Paz Dr	Rodeo Dr	C	2U	12,500		1,000	0.08	A	L	2U	10,000	2,847	2,800	0.28	A
Perimeter Rd	n/o Phantom East St	Phantom East St	L	2U	10,000		-	-	-	SA_SP	6U	50,000	28,651	28,700	0.57	A
Phantom East St	Shay Rd	Turner Rd	A	4D	37,500		700	0.02	A	SA_SP	6U	50,000	62,120	62,100	1.24	F
Phantom East St	Turner Rd	Air Expwy	A	4D	37,500	1,050	1,100	0.03	A	SA_SP	6U	50,000	68,481	68,500	1.37	F
Phantom West St	George Blvd	Sabre Blvd	A	4U	25,000		2,600	0.11	A	SA_SP	6U	50,000	21,250	21,200	0.42	A
Phantom West St	Sabre Blvd	Mustang St	A	4U	25,000		2,600	0.11	A	SA_SP	6U	50,000	21,023	21,000	0.42	A
Phantom West St	Mustang St	Air Expwy	A	4U	25,000	2,410	2,400	0.10	A	SA_SP	6U	50,000	21,023	21,000	0.42	A
Rancho Rd	Ranch Rd	Gas Line Rd	L	2U	10,000		-	-	-	A	4D	30,000	5,810	5,800	0.19	A
Rancho Rd	Gas Line Rd	Village Dr	L	2U	10,000		-	-	-	A	4D	30,000	4,990	5,000	0.17	A
Rancho Rd	Village Dr	El Evado Rd	C	2U	12,500		-	-	-	A	4D	30,000	9,119	9,100	0.30	A
Rancho Rd	El Evado Rd	Amethyst Rd	L	2U	10,000		-	-	-	C	2D	18,800	8,145	8,100	0.43	A
Redrock Rd	Topaz Rd	Eagle Ranch Pkwy	C	2U	12,500	2,580	2,600	0.21	A		2U	12,500	7,288	7,300	0.58	A
Reno Loop East	E Trail	Hook blvd	C	2U	12,500	3,450	3,500	0.28	A		2U	12,500	3,807	3,800	0.30	A
Reno Loop East	Hook blvd	S Trail	C	2U	12,500	1,240	1,200	0.10	A		2U	12,500	5,055	5,100	0.40	A
Reno Loop West	W Trail	Hook blvd	C	2U	12,500	2,200	2,200	0.18	A		2U	12,500	4,258	4,300	0.34	A
Reno Loop West	Hook blvd	S Trail	C	2U	12,500	900	900	0.07	A		2U	12,500	953	1,000	0.08	A
Ridgecrest Rd	Green Tree Blvd	Pahute Rd	A	4D	37,500		6,700	0.18	A		4D	37,500	30,094	30,100	0.80	C
Ridgecrest Rd	Pahute Rd	Bear Valley Rd	A	4D	37,500	11,470	11,500	0.31	A		4D	37,500	15,157	15,200	0.40	A
Rodeo Dr	Victor St	Seneca Rd	C	2U	12,500	4,860	4,900	0.39	A	L	2U	10,000	8,124	8,100	0.81	D
Rodeo Dr	Seneca Rd	Lorene Dr	C	2U	12,500	6,600	6,600	0.53	A		2U	12,500	10,416	10,400	0.83	D
Rodeo Dr	Lorene Dr	Hughes Rd	C	2U	12,500	7,090	7,100	0.57	A		2U	12,500	11,163	11,200	0.89	D
Rodeo Dr	Hughes Rd	Pebble Beach Dr	C	2U	12,500	7,370	7,400	0.59	A		2U	12,500	12,014	12,000	0.96	E
Rodeo Dr	Pebble Beach Dr	Green Tree Blvd	C	2U	12,500		4,000	0.32	A		2U	12,500	8,256	8,300	0.66	B
Roy Rogers Dr	I-15 NB Ramps	I-15 SB Ramps	5D	5D	56,000	31,500	30,600	0.55	A	SA2	6D	56,000	45,610	45,600	0.81	D
Roy Rogers Dr	I-15 SB	Civic Dr	5D	5D	56,000	30,580	30,600	0.55	A	SA	6D	56,000	42,794	42,800	0.76	C

**Table 5.15-5
PLANNING AREA ROADWAY SEGMENT LEVEL OF SERVICE
BY SEGMENT, CLASS OF ROADWAY, CAPACITY, ADT, LOS, V/C AND LOS,
EXISTING (2005) AND GENERAL PLAN BUILDOUT**

Roadway	From	To	2005								2035					
			Exist. Class.	Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
	Ramps															
Roy Rogers Dr	Civic Dr	Amargosa Rd	5D	5D	56,000		18,200	0.32	A	SA	6D	56,000	37,184	37,200	0.66	B
Seneca Rd	Industrial Blvd	Hesperia Rd	A	4U	25,000		-	-	-		4U	25,000	3,886	3,900	0.16	A
Seneca Rd	Hesperia Rd	Rodeo Dr	A	4U	25,000	7,780	7,800	0.31	A		4U	25,000	21,098	21,100	0.84	D
Seneca Rd	Rodeo Dr	La Paz Dr	A	4U	25,000	6,640	6,600	0.27	A		4U	25,000	22,867	22,900	0.91	E
Seneca Rd	Civic Dr	Amargosa Rd	A	4D	37,500	2,420	2,400	0.06	A		4D	30,000	2,663	2,700	0.09	A
Seneca Rd	Amargosa Rd	Borego Rd	C	2U	12,500		4,100	0.33	A		2U	12,500	11,416	11,400	0.91	E
Seneca Rd	Borego Rd	Cahuenga Rd	C	2U	12,500		3,600	0.29	A		2U	12,500	15,954	16,000	1.28	F
Seneca Rd	Cahuenga Rd	El Evado Rd	C	2U	12,500	2,620	2,600	0.21	A		2U	12,500	17,901	17,900	1.43	F
Seneca Rd	El Evado Rd	S Trail	C	2U	12,500	2,870	2,900	0.23	A		2U	12,500	17,596	17,600	1.41	F
Seneca Rd	S Trail	Amethyst Rd	C	2U	12,500		200	0.02	A		2U	12,500	18,537	18,500	1.48	F
Seneca Rd	Amethyst Rd	Cobalt Rd	C	2U	12,500		900	0.08	A		2U	12,500	16,482	16,500	1.32	F
Seneca Rd	Cobalt Rd	Topaz Rd	L	2U	10,000		-	-	-		2U	10,000	17,012	17,000	1.70	F
Seneca Rd	Topaz Rd	Mesa Linda Ave	L	2U	10,000		-	-	-		2U	10,000	18,103	18,100	1.81	F
Seneca Rd	Mesa Linda Ave	US 395	L	2U	10,000		-	-	-		2U	10,000	17,864	17,900	1.79	F
Silica Rd	Industrial Blvd	Hesperia Rd	A	4D	37,500		3,200	0.08	A		4D	30,000	13,786	13,800	0.46	A
Silica Rd	Hesperia Rd	2nd Ave	C	2U	12,500		3,200	0.26	A		2U	12,500	8,144	8,100	0.65	B
Silica Rd	2nd Ave	3rd Ave	N				-	-	-	C	2U	12,500	8,859	8,900	0.71	C
Silica Rd	3rd Ave	7th Ave	C	2U	12,500		-	-	-		2U	12,500	5,662	5,700	0.45	A
Spring Valley Pkwy	Driftwood Dr	Country Club Dr	C	2D	12,500		-	-	-	L	2U	12,500	12,156	12,200	0.97	E
Spring Valley Pkwy	Country Club Dr	Pahute Rd	C	2D	12,500		6,100	0.49	A	L	2U	12,500	7,661	7,700	0.61	B
Spring Valley Pkwy	Pahute Rd	Bear Valley Rd	C	2D	12,500	12,970	13,000	1.04	F	A	4D	37,500	21,886	21,900	0.58	A
Smoketree Rd	Amargosa Rd	Topaz Rd	N				-	-	-	A	4D	37,500	40,954	41,000	1.09	F
Smoketree Rd	Topaz Rd	Mesa Linda St	N				-	-	-	A	4D	37,500	16,576	16,600	0.44	A
Stoddard Wells Rd	Dante St	I-15 SB Ramps	A	4D	37,500	3,180	3,200	0.08	A	A	4D	37,500	46,363	46,400	1.24	F
Stoddard Wells Rd	I-15 NB Ramps	Happy Trails Hwy	C	2U	12,500		1,500	0.12	A	A	4D	30,000	19,435	19,400	0.65	B
Sycamore St	Amargosa Rd	Amethyst Rd	L	2U	10,000		-	-	-	C	2U	12,500	4,346	4,300	0.35	A

**Table 5.15-5
PLANNING AREA ROADWAY SEGMENT LEVEL OF SERVICE
BY SEGMENT, CLASS OF ROADWAY, CAPACITY, ADT, LOS, V/C AND LOS,
EXISTING (2005) AND GENERAL PLAN BUILDOUT**

Roadway	From	To	2005								2035					
			Exist. Class.	Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
Sycamore St	Amethyst Rd	Cobalt Rd	C	2U	12,500		-	-	-		2U	12,500	6,529	6,500	0.52	A
Sycamore St	Cobalt Rd	Topaz Rd	C	2U	12,500		2,200	0.18	A		2U	12,500	6,865	6,900	0.55	A
Sycamore St	Topaz Rd	Mesa Linda St	C	2U	12,500		800	0.07	A		2U	12,500	6,778	6,800	0.54	A
Sycamore St	Mesa Linda St	US 395	C	2U	12,500		1,000	0.08	A		2U	12,500	16,443	16,400	1.32	F
Sycamore St	US 395	Pana Rd	N				-	-	-	C	2U	12,500	18,992	19,000	1.52	F
Sycamore St	Pana Rd	Mesa View Dr	N				-	-	-	C	2U	12,500	9,431	9,400	0.75	C
Sycamore St	Mesa View Dr	Bellflower St	N				-	-	-	C	2U	12,500	10,011	10,000	0.80	C
Sycamore St	Bellflower St	Verbena Rd	N				-	-	-	C	2U	12,500	6,872	6,900	0.55	A
Sycamore St	Verbena Rd	Monte Vista Rd	N				-	-	-	C	2U	12,500	10,519	10,500	0.84	D
Tawney Ridge Ln	Puesta Del Sol Dr	Sueno Ln	C	2U	12,500		300	0.02	A		2U	12,500	3,902	3,900	0.31	A
Tawney Ridge Ln	Sueno Ln	Village Dr	C	2U	12,500	2,990	3,000	0.24	A		2U	12,500	3,724	3,700	0.30	A
Tawney Ridge Ln	Village Dr	Condor Rd	C	2U	12,500	920	900	0.07	A		2U	12,500	2,594	2,600	0.21	A
Tawney Ridge Ln	Condor Rd	Amargosa Rd	C	2U	12,500		300	0.02	A		2U	12,500	2,662	2,700	0.21	A
Tawney Ridge Ln	Amargosa Rd	Ferndale Rd	L	2U	10,000		-	-	-	C	2U	12,500	5,713	5,700	0.46	A
Tawney Ridge Ln	Ferndale Rd	Cahuenga Rd	L	2U	10,000		-	-	-	C	2U	12,500	5,053	5,100	0.40	A
Tawney Ridge Ln	Cahuenga Rd	El Evado Rd	L	2U	10,000		-	-	-	C	2U	12,500	2,353	2,400	0.19	A
Tawney Ridge Ln	El Evado Rd	Cordova Rd	L	2U	10,000		-	-	-	C	2U	12,500	2,706	2,700	0.22	A
Tawney Ridge Ln	Cordova Rd	Amethyst Rd	N				-	-	-	C	2U	12,500	2,237	2,200	0.18	A
Tawney Ridge Ln	Amethyst Rd	Cobalt Rd	N				-	-	-	C	2U	12,500	5,645	5,600	0.45	A
Tawney Ridge Ln	Cobalt Rd	Topaz Rd	N				-	-	-	C	2U	12,500	1,684	1,700	0.13	A
Tawney Ridge Ln	Topaz Rd	Mesa Linda Ave	N				-	-	-	C	2U	12,500	5,974	6,000	0.48	A
Tawney Ridge Ln	Mesa Linda Ave	Us 395	N				-	-	-	C	2U	12,500	7,504	7,500	0.60	A
Topaz Rd	Holly Rd	Cactus Rd	N				-	-	-	A	4D	37,500	11,456	11,500	0.31	A
Topaz Rd	Cactus Rd	Mojave Dr	N				-	-	-	A	4D	37,500	17,381	17,400	0.46	A
Topaz Rd	Mojave Dr	Hook blvd	N				-	-	-	A	4D	37,500	12,837	12,800	0.34	A
Topaz Rd	Hook blvd	Seneca Rd	N				-	-	-	A	4D	37,500	15,584	15,600	0.42	A
Topaz Rd	Seneca Rd	Palmdale Rd	N				-	-	-	A	4D	37,500	13,920	13,900	0.37	A

**Table 5.15-5
PLANNING AREA ROADWAY SEGMENT LEVEL OF SERVICE
BY SEGMENT, CLASS OF ROADWAY, CAPACITY, ADT, LOS, V/C AND LOS,
EXISTING (2005) AND GENERAL PLAN BUILDOUT**

Roadway	From	To	Exist. Class.	2005							2035					
				Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
Topaz Rd	Palmdale Rd	Dos Palmas Rd	N				-	-	-	A	4D	37,500	15,632	15,600	0.42	A
Topaz Rd	Dos Palmas Rd	Luna Rd	N				-	-	-	A	4D	37,500	14,445	14,400	0.39	A
Topaz Rd	Luna Rd	La Mesa Rd	A	4U	25,000	2,000	2,000	0.08	A	A	4D	37,500	10,436	10,400	0.28	A
Topaz Rd	La Mesa Rd	Redrock Rd	A	4D	37,500	3,730	3,700	0.10	A		4D	37,500	13,183	13,200	0.35	A
Topaz Rd	Redrock Rd	San Miguel St	A	4D	37,500	4,480	4,500	0.12	A		4D	37,500	14,859	14,900	0.40	A
Topaz Rd	San Miguel St	Bear Valley Rd	C	2U	12,500	4,480	4,500	0.36	A	A	4D	37,500	16,366	16,400	0.44	A
Topaz Rd	Bear Valley Rd	Sycamore St	N				-	-	-	A	4D	37,500	17,482	17,500	0.47	A
Topaz Rd	Sycamore St	Eucalyptus St	C	2U	12,500		-	-	-	A	4D	37,500	19,866	19,900	0.53	A
Topaz Rd	Eucalyptus St	Verano St	N				-	-	-	A	4D	37,500	17,589	17,600	0.47	A
Topaz Rd	Verano St	Smoketree Rd	N				-	-	-	A	4D	37,500	24,396	24,400	0.65	B
Turner Rd	National Trails Hwy	Air Expwy	L	2U	10,000		-	-	-	C	2U	12,500	950	1,000	0.08	A
Verde St	11th St	Hesperia Rd	L	2U	10,000	4,410	4,400	0.44	A		2U	10,000	5,558	5,600	0.56	A
Verde St	Hesperia Rd	Mojave St	L	2U	10,000	6,400	6,400	0.64	B		2U	10,000	7,037	7,000	0.70	B
Verbena Rd	Palmdale Rd	Dos Palmas Rd	N				-	-	-	C	2U	12,500	3,801	3,800	0.30	A
Verbena Rd	Dos Palmas Rd	Luna Rd	N				-	-	-	C	2U	12,500	4,587	4,600	0.37	A
Verbena Rd	Luna Rd	Olivine Rd	L	2U	10,000		-	-	-	C	2U	12,500	2,972	3,000	0.24	A
Verbena Rd	Olivine Rd	Bear Valley Rd	L	2U	10,000		-	-	-	C	2U	12,500	2,475	2,500	0.20	A
Verbena Rd	Bear Valley Rd	Sycamore St	L	2U	10,000		-	-	-	C	2U	12,500	2,307	2,300	0.18	A
Victor St	Mojave Dr	Rodeo Dr	C	2U	12,500		1,100	0.08	A	L	2U	10,000	2,243	2,200	0.22	A
Victor St	Rodeo Dr	Corta Dr	C	2U	12,500		2,800	0.22	A	L	2U	10,000	6,499	6,500	0.65	B
Victor St	Corta Dr	7th St	C	2U	12,500		3,300	0.27	A	L	2U	10,000	7,829	7,800	0.78	C
Village Dr	Mojave Dr	Calgo Ln	A	4U	25,000	13,060	13,100	0.52	A		4U	25,000	23,596	23,600	0.94	E
Village Dr	Calgo Ln	Tawney Ridge Ln	A	4U	25,000	10,940	10,900	0.44	A		4U	25,000	20,332	20,300	0.81	D
Village Dr	Tawney Ridge Ln	Puesta Del Sol Dr	A	4U	25,000	7,730	7,700	0.31	A		4U	25,000	16,524	16,500	0.66	B
Village Dr	Puesta Del	Amargosa Rd	A	4U	25,000	7,760	7,800	0.31	A		4U	25,000	20,044	20,000	0.80	C

**Table 5.15-5
PLANNING AREA ROADWAY SEGMENT LEVEL OF SERVICE
BY SEGMENT, CLASS OF ROADWAY, CAPACITY, ADT, LOS, V/C AND LOS,
EXISTING (2005) AND GENERAL PLAN BUILDOUT**

Roadway	From	To	2005								2035					
			Exist. Class.	Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
	Sol Dr															
Village Dr	Amargosa Rd	Clovis St	A	4U	25,000	11,520	11,500	0.46	A		4U	25,000	26,130	26,100	1.05	F
Village Dr	Clovis St	Rancho Rd	A	4U	25,000		9,600	0.38	A		4U	25,000	21,698	21,700	0.87	D
Village Dr	Rancho Rd	Air Base Rd	A	4U	25,000		9,100	0.37	A		4U	25,000	23,130	23,100	0.93	E
Wash Road South	Bear Valley Rd	Amargosa Rd	N				-	-	-	C	2U	12,500	0	0	0.00	A
West Trail	Mojave Dr	Reno Loop Rd	C	2U	12,500		1,100	0.09	A		2U	12,500	2,358	2,400	0.19	A
White Rd	Palmdale Rd	Luna Rd	L	2U	10,000		-	-	-	A	4D	37,500	767	800	0.02	A
White Rd	Luna Rd	La Mesa Rd	L	2U	10,000		-	-	-	A	4D	37,500	2,371	2,400	0.06	A
White Rd	La Mesa Rd	Bear Valley Rd	L	2U	10,000		-	-	-	A	4D	37,500	1,972	2,000	0.05	A
Yates Rd	Arrowhead Dr	Mariposa Rd	C	2U	12,500	2,940	2,900	0.24	A		2U	12,500	11,669	11,700	0.93	E
State Facilities																
US-395	Cactus Rd	Mojave Dr	C	2D	12,500	23,630	23,600	1.89	F	SA	6D	56,000	39,532	39,500	0.71	C
US-395	Mojave Dr	Hook blvd	C	2D	12,500		17,100	1.37	F	SA	6D	56,000	45,683	45,700	0.82	D
US-395	Hook blvd	Seneca Rd	C	2D	12,500		17,100	1.37	F	SA	6D	56,000	46,987	47,000	0.84	D
US-395	Seneca Rd	Palmdale Rd	C	2D	12,500	27,310	27,300	2.18	F	SA	6D	56,000	32,556	32,600	0.58	A
US-395	Palmdale Rd	Dos Palmas Rd	C	4D	12,500		18,700	1.49	F	SA	6D	56,000	37,307	52,800	0.67	B
US-395	Dos Palmas Rd	Luna Rd	C	4D	12,500		18,200	1.45	F	SA	6D	56,000	30,241	48,000	0.54	A
US-395	Luna Rd	La Mesa Rd	C	2D	12,500		17,500	1.40	F	SA	6D	56,000	33,154	52,800	0.59	A
US-395	La Mesa Rd	Olivine Rd	C	2D	12,500		17,500	1.40	F	SA	6D	56,000	34,802	55,200	0.62	B
US-395	Olivine Rd	Bear Valley Rd	C	2D	12,500	28,450	28,500	2.28	F	SA	6D	56,000	52,448	56,000	0.94	E
US-395	Bear Valley Rd	Sycamore St	A	4D	25,000		19,500	0.78	C	SA	6D	56,000	58,924	58,900	1.05	F
US-395	Sycamore St	Eucalyptus St	A	4D	25,000		19,900	0.80	C	SA	6D	56,000	49,732	49,700	0.89	D
US-395	Eucalyptus St	Mesa St	A	4D	25,000		20,300	0.81	D	SA	6D	56,000	76,788	76,800	1.37	F
US-395	Mesa St	California Aqueduct	A	2D	25,000	24,310	24,300	0.97	E	SA	6D	56,000	83,128	83,100	1.48	F
I-15 SB	High Desert Corridor	Stoddard Wells Rd		2F	37,000	29,000	29,000	0.78	C		2F	37,000	80,664	80,700	2.18	F

**Table 5.15-5
PLANNING AREA ROADWAY SEGMENT LEVEL OF SERVICE
BY SEGMENT, CLASS OF ROADWAY, CAPACITY, ADT, LOS, V/C AND LOS,
EXISTING (2005) AND GENERAL PLAN BUILDOUT**

Roadway	From	To	Exist. Class.	2005							2035					
				Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
I-15 NB	High Desert Corridor	Stoddard Wells Rd		2F	37,000	29,000	29,000	0.78	C		2F	37,000	82,685	82,700	2.23	F
I-15 SB	Stoddard Wells Rd	National Trails Hwy		2F	37,000	30,000	30,000	0.81	D		2F	37,000	98,783	98,800	2.67	F
I-15 NB	Stoddard Wells Rd	National Trails Hwy		2F	37,000	30,000	30,000	0.81	D		2F	37,000	98,930	98,900	2.67	F
I-15 SB	National Trails Hwy	Mojave Dr		3F	60,500	36,500	36,500	0.60	A		3F	60,500	100,019	100,000	1.65	F
I-15 NB	National Trails Hwy	Mojave Dr		3F	60,500	36,500	36,500	0.60	A		3F	60,500	100,059	100,100	1.65	F
I-15 SB	Mojave Dr	Roy Rogers Dr / La Paz Dr		3F	60,500	42,500	42,500	0.70	B		3F	60,500	108,710	108,700	1.80	F
I-15 NB	Mojave Dr	Roy Rogers Dr / La Paz Dr		3F	60,500	42,500	42,500	0.70	B		3F	60,500	106,083	106,100	1.75	F
I-15 SB	Roy Rogers Dr / La Paz Dr	Palmdale Rd		3F	60,500	43,500	43,500	0.72	C		3F	60,500	107,500	107,500	1.78	F
I-15 NB	Roy Rogers Dr / La Paz Dr	Palmdale Rd		3F	60,500	43,500	43,500	0.72	C		3F	60,500	105,136	105,100	1.74	F
I-15 SB	Palmdale Rd	La Mesa Rd / Nisqualli Rd		3F	60,500	43,000	43,000	0.71	C		3F	60,500	93,408	93,400	1.54	F
I-15 NB	Palmdale Rd	La Mesa Rd / Nisqualli Rd		3F	60,500	43,000	43,000	0.71	C		3F	60,500	97,993	98,000	1.62	F
I-15 SB	La Mesa Rd / Nisqualli Rd	Bear Valley Rd		3F	60,500	43,000	43,000	0.71	C		3F	60,500	99,245	99,200	1.64	F
I-15 NB	La Mesa Rd / Nisqualli Rd	Bear Valley Rd		3F	60,500	43,000	43,000	0.71	C		3F	60,500	101,231	101,200	1.67	F
I-15 SB	Bear Valley Rd	Eucalyptus St		3F	60,500	50,500	50,500	0.83	D		3F	60,500	95,071	95,100	1.57	F
I-15 NB	Bear Valley Rd	Eucalyptus St		3F	60,500	50,500	50,500	0.83	D		3F	60,500	103,126	103,100	1.70	F
I-15 SB	Eucalyptus St	Mojave St		3F	60,500	50,500	50,500	0.83	D		3F	60,500	110,653	110,700	1.83	F
I-15 NB	Eucalyptus St	Mojave St		3F	60,500	50,500	50,500	0.83	D		3F	60,500	107,389	107,400	1.78	F
Ramps																
I-15 NB on-ramp from Stoddard Wells Rd				Direct	12,000	780	800	0.07	A		Direct	12,000	3,577	3,600	0.30	A

**Table 5.15-5
 PLANNING AREA ROADWAY SEGMENT LEVEL OF SERVICE
 BY SEGMENT, CLASS OF ROADWAY, CAPACITY, ADT, LOS, V/C AND LOS,
 EXISTING (2005) AND GENERAL PLAN BUILDOUT**

Roadway	From	To	2005								2035					
			Exist. Class.	Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
I-15 NB off-ramp to Stoddard Wells Rd				Direct	12,000	1,300	1,300	0.11	A		Direct	12,000	19,342	19,300	1.61	F
I-15 SB on-ramp from Stoddard Wells Rd				Direct	12,000	1,950	2,000	0.16	A		Direct	12,000	21,859	21,900	1.82	F
I-15 SB off-ramp to Stoddard Wells Rd				Direct	12,000	1,000	1,000	0.08	A		Direct	12,000	3,791	3,800	0.32	A
I-15 NB on-ramp from E St				Direct	12,000	370	400	0.03	A		Loop	12,000	1,668	1,700	0.14	A
I-15 NB off-ramp to E St				Loop	8,000	1,140	1,100	0.14	A		Loop	8,000	1,337	1,300	0.17	A
I-15 SB on-ramp from E St				Loop	8,000	1,330	1,300	0.17	A		Loop	8,000	1,538	1,500	0.19	A
I-15 SB off-ramp to E St				Direct	12,000	310	300	0.03	A		Direct	12,000	1,255	1,300	0.10	A
I-15 NB on-ramp from National Trails Hwy				Loop	8,000	1,900	1,900	0.24	A		Loop	8,000	3,446	3,400	0.43	A
I-15 NB off-ramp to National Trails Hwy				Direct	12,000	12,550	12,500	1.05	F		Direct	12,000	13,801	13,800	1.15	F
I-15 SB on-ramp from National Trails Hwy				Direct	12,000	14,240	14,200	1.19	F		Direct	12,000	15,665	15,700	1.31	F
I-15 SB off-ramp to National Trails Hwy				Loop	8,000	1,910	1,900	0.24	A		Loop	8,000	4,489	4,500	0.56	A
I-15 NB on-ramp from Mojave Dr				Direct	12,000	2,980	3,000	0.25	A		Direct	12,000	10,351	10,400	0.86	D
I-15 NB off-ramp to Mojave Dr				Direct	12,000	4,400	4,400	0.37	A		Direct	12,000	11,796	11,800	0.98	E
I-15 SB on-ramp from Mojave Dr				Direct	12,000	5,400	5,400	0.45	A		Direct	12,000	13,161	13,200	1.10	F
I-15 SB off-ramp to Mojave Dr				Direct	12,000	2,800	2,800	0.23	A		Direct	12,000	7,876	7,900	0.66	B
I-15 NB on-ramps from Roy Rogers Dr				Loop	8,000	3,860	3,900	0.48	A		Loop	8,000	5,583	5,600	0.70	B
I-15 NB off-ramps to Roy Rogers Dr				Direct	12,000	6,540	6,500	0.54	A		Direct	12,000	7,190	7,200	0.60	A
I-15 SB on-ramps from Roy Rogers Dr				Direct	12,000	5,300	5,300	0.44	A		Direct	12,000	6,187	6,200	0.52	A

**Table 5.15-5
PLANNING AREA ROADWAY SEGMENT LEVEL OF SERVICE
BY SEGMENT, CLASS OF ROADWAY, CAPACITY, ADT, LOS, V/C AND LOS,
EXISTING (2005) AND GENERAL PLAN BUILDOUT**

Roadway	From	To	2005								2035					
			Exist. Class.	Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
I-15 SB off-ramps to Roy Rogers Dr				Loop	8,000	4,850	4,900	0.61	B		Loop	8,000	7,948	7,900	0.99	E
I-15 NB Direct on-ramp from 7th St				Direct	12,000	3,420	3,400	0.29	A		Direct	12,000	14,776	14,800	1.23	F
I-15 NB Loop on-ramp from EB Palmdale Rd				Loop	8,000	4,530	4,500	0.57	A		Loop	8,000	9,294	9,300	1.16	F
I-15 SB Loop on-ramp from WB 7th St				Loop	8,000	4,830	4,800	0.60	A		Loop	8,000	16,548	16,500	2.07	F
I-15 SB Direct on-ramp from Palmdale Rd				Direct	12,000	3,850	3,900	0.32	A		Direct	12,000	4,235	4,200	0.35	A
I-15 SB off-ramp to Palmdale Rd				Direct	12,000	4,830	4,800	0.40	A		Direct	12,000	16,548	16,500	1.38	F
I-15 NB off-ramp to Mariposa Rd				Direct	12,000	6,420	6,400	0.54	A		Direct	12,000	13,137	13,100	1.09	F
I-15 NB on-ramp from Nisqualli Rd				N			-	-	-		Direct	12,000	18,526	18,500	1.54	F
I-15 NB off-ramp to Nisqualli Rd				N			-	-	-		Direct	12,000	24,524	24,500	2.04	F
I-15 SB on-ramp from Amargosa Rd				N			-	-	-		Direct	12,000	22,401	22,400	1.87	F
I-15 SB off-ramp to Amargosa Rd				N			-	-	-		Direct	12,000	19,325	19,300	1.61	F
I-15 NB on-ramp from Bear Valley Rd				Direct	12,000	8,950	8,900	0.75	C		Direct	12,000	14,812	14,800	1.23	F
I-15 NB off-ramp to Bear Valley Rd				Direct	12,000	16,900	16,900	1.41	F		Direct	12,000	17,154	17,200	1.43	F
I-15 SB off-ramp to Bear Valley Rd				Direct	12,000	10,240	10,200	0.85	D		Direct	12,000	19,205	19,200	1.60	F
I-15 SB on-ramp from WB Bear Valley Rd				Loop	8,000	10,090	10,100	1.26	F		Loop	8,000	11,099	11,100	1.39	F
I-15 SB on-ramp from EB Bear Valley Rd				Direct	12,000	6,410	6,400	0.53	A		Direct	12,000	7,048	7,000	0.59	A
I-15 NB on-ramp from Eucalyptus St				N			-	-	-		Direct	12,000	16,192	16,200	1.35	F
I-15 NB off-ramp to Eucalyptus St				N			-	-	-		Direct	12,000	20,455	20,500	1.70	F

**Table 5.15-5
PLANNING AREA ROADWAY SEGMENT LEVEL OF SERVICE
BY SEGMENT, CLASS OF ROADWAY, CAPACITY, ADT, LOS, V/C AND LOS,
EXISTING (2005) AND GENERAL PLAN BUILDOUT**

Roadway	From	To	2005								2035						
			Exist. Class.	Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS	
I-15 SB on-ramp from Eucalyptus St				N				-	-	-		Direct	12,000	15,582	15,600	1.30	F
I-15 NB on-ramp from Mojave St				N				-	-	-		Direct	12,000	6,442	6,400	0.54	A
I-15 NB off-ramp to Mojave St				N				-	-	-		Direct	12,000	16,758	16,800	1.40	F
I-15 SB on-ramp from Mojave St				N				-	-	-		Direct	12,000	20,642	20,600	1.72	F
I-15 SB off-ramp to Mojave St				N				-	-	-		Direct	12,000	15,787	15,800	1.32	F

Roadway Classifications

8 L	Eight Lane Facility /Arterial	8D
SA	Super Arterial	6D
SA_SP	Super Arterial (SCLA Specific Plan)	6U
SA 2	Super Arterial Modified (reduced RW)	6D
MA	Major Arterial	4D
MA_SP	Major Arterial (SCLA Specific Plan)	4U
RA	Residential Arterial	4U
A	Arterial	4D / 4U
2A	Secondary Arterial	4U
C	Collector	2D / 2U
L	Local	2U
N	New Facilities	

5.15.1.6 Congestion Management Program

The San Bernardino *County Congestion Management Program* monitors traffic levels in the County based on traffic volumes at roadway intersections. The *Congestion Management Program (CMP)* was created statewide as a result of Proposition 111¹ and has been implemented locally by the San Bernardino County Metropolitan Transportation Authority (SBCMTA). The CMP for San Bernardino County requires that the traffic impact of individual development projects of potentially regional significance be analyzed. A project is classified by the CMP as regionally significant if it would increase traffic at a CMP intersection by 50 or more two-way trips during either AM or PM peak² hours.

A CMP traffic impact analysis is required if a project will add 150 or more trips to the freeway mainline location in either direction, during the AM or PM weekday peak hour. Analysis is also required at all CMP intersections stated in the CMP to which the project will add 50 or more peak hour trips. The traffic impact analysis must be submitted to Caltrans for review and comment. Since the City complies with the Nexus Study requirements included in the CMP, traffic studies are not required to be reviewed by SANBAG.

Roadways within the City of Victorville included in the SANBAG Congestion Management Program (CMP) include Interstate 15, US-395, SR-18 (D Street and Palmdale Road and Bear Valley Road (Amargosa Road to east). CMP segments designated with LOS F (2005) include Bear Valley Road from Hesperia Road to Amargosa Road, US-395 from Cactus Road to Bear Valley Road and SR-18 between Interstate 15 and Stoddard Wells Road.

The following CMP seven (7) intersections are required to be monitored by the City of Victorville for LOS analysis and the report submitted to SANBAG. The 2005 LOS (AM/PM) is: (1) Bear Valley Road/Amargosa Road (LOS C/D), (2) Bear Valley Road/Mariposa Road (C/D), (3) Bear Valley Road/Cottonwood Avenue (LOS C/C), (4) Bear Valley Road/7th Avenue (LOS D/C), (5) Bear Valley Road/Hesperia Road (LOS C/C), (6) Bear Valley Road/I Avenue-Tamarisk Road (LOS C/C) and Palmdale Road/Mariposa Road (LOS C/D).

Traffic increases that would cause an intersection to operate at level of service (LOS) F during peak periods are considered unacceptable by the CMP. LOS F equates to a volume/capacity ratio greater than 1.00, and indicates that the roadway is operating beyond its capacity level, and that travel speeds are reduced to an unacceptable level.

¹ Passed by California voters in 1990, Proposition 111 added nine cents per gallon to the state fuel tax to fund local, regional and state transportation projects and services. It also required urban counties to designate a congestion management agency, whose primary responsibility is to coordinate transportation planning, funding and other activities in a congestion management program.

² Peak hour is the daily period(s) when traffic volumes are typically at their highest. On weekdays, morning (AM) peak hour is the period from 7 AM to 8:45 AM, and afternoon/evening (PM) peak hour is the period from 4:00 PM to 5:45 PM. On weekends, peak hour is the Saturday period from 11:00 AM to 2:45 PM.

5.15.2 Thresholds of Significance

Significant impacts relative to transportation and traffic are evaluated in this section based on Appendix G of the CEQA Guidelines. Implementation of the proposed project may have a significant adverse impact if it would do any of the following:

- 1) 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?)
- 2) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?
- 3) 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?
- 4) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?
- 5) Result in inadequate parking capacity?
- 6) Conflict with adopted policies, plans or programs supporting alternative transportation (e.g. bus turnouts, bicycle racks)?

5.15.3 Project Impacts

General Plan 2030 Provisions: The proposed General Plan 2030 Circulation Element outlines the general location and extent of proposed major thoroughfares, transportation routes, terminals, airports and other transportation facilities intended to support future development of the Planning Area. The proposed Circulation Element Vehicular Circulation System Plan is presented in Figure 3.15, Section 3.5.2 of this EIR.

Within the proposed General Plan 2030 Circulation Element the following goals, objectives and policies would apply to transportation and traffic:

GOAL #1: GOOD MOBILITY – Provide a Safe, Efficient Transportation System that Enhances Mobility for Local Residents and Businesses, and Facilitates Regional Travel for Automobiles and Trucks.

Objective 1.1: Provide sufficient traffic carrying capacity at intersections throughout the roadway network, to achieve LOS performance standards.

Policy 1.1.1: Maintain LOS “D” or better at intersections (as defined in the most current version of the Highway Capacity Manual), except in certain high-activity areas designated by the Planning Commission, where a LOS E is acceptable.

Policy 1.1.2: If a development project would worsen an intersection peak hour LOS to E or worse, it is considered a significant impact that must be mitigated. If a development project would worsen an already deficient intersection by an amount determined to be substantial by the City Traffic Engineer, it is considered a significant impact that must be mitigated.

Implementation Measure 1.1.1.1: Assess the traffic impacts of new development and redevelopment projects to determine whether the projects would cause affected intersections to operate at a deficient LOS, or would substantially worsen the already deficient LOS. A threshold for determination of what classes of projects trigger a traffic impact analysis or traffic study shall be established by the City Engineer.

Policy 1.1.3: Require new development and redevelopment projects to bear responsibility for the traffic system improvements necessary to mitigate the project’s significant impacts at affected intersections, concurrently with the construction of such projects.

Implementation Measure 1.1.3.1: Typically, developers will construct necessary traffic system improvements. Alternately, in lieu of developer-provided improvements, the City will impose exactions, dedications, and/or fees on new development and redevelopment projects to fund improvements that mitigate significant safety and/or congestion impacts on the roadway network. These shall be based on a clear and proportional nexus between the level of project impact and the estimated cost of providing the improvements required to mitigate the impact.

Policy 1.1.4: Complete deficiency plans to mitigate near-deficient and deficient intersections to an acceptable level of service or to prevent degrading to a worse level of service.

Implementation Measure 1.1.4.1: Incorporate deficiency plan projects into the five-year Capital Improvement Program or into longer range plans.

Objective 1.2: Achieve and maintain mobility goals set forth in the countywide CMP, on local CMP segments.

Policy 1.2.1: Support and cooperate with all aspects of the countywide CMP for maintaining levels of service for CMP segments located in the planning area.

Implementation Measure 1.2.1.1: The City will be responsible for requiring, reviewing, and approving traffic impact analyses and traffic studies for all applicable private and public projects, in accordance with CMP standards for these studies.

Implementation Measure 1.2.1.2: Incorporate deficiency plan projects into the five-year Capital Improvement Program. or into longer range plans.

Objective 1.3: Complete the planned highway improvements.

Policy 1.3.1: Participate with Caltrans and SANBAG on the environmental documents for the realignment of US-395 through the Planning Area.

Policy 1.3.2: Complete the Project Approval and Environmental Document for the High Desert Corridor Project.

Policy 1.3.3: Prioritize General Plan improvements for new interchanges, interchange modifications, new road constructions, and road widenings.

Implementation Measure 1.3.3.1: Incorporate deficiency plan projects into the five-year Capital Improvement Program or into longer range plans.

Objective 1.4: Maintain Smooth Traffic Flow, Reduce and Minimize Traffic Conflicts

Policy 1.4.1: Restrict residential driveway access on arterial roadways to locations where a finding can be made that such access will not result in a significant safety problem, will not conflict with traffic movements, and will not result in a congestion impact.

Policy 1.4.2: Minimize through traffic in residential neighborhoods through a variety of land use controls, traffic control devices, signs, traffic calming techniques, etc.

Policy 1.4.3: Support and participate in regional efforts to improve/expand freight movement via trucks and train services, without increasing conflicts with passenger car traffic and without increasing congestion on the highway and arterial roadway networks.

Policy 1.4.4: Continue to enforce truck route restrictions throughout the planning area.

Objective 1.5: Ensure adequate planning and programming of roadway improvements.

Policy 1.5.1: Review and prioritize Transportation Systems Management (TSM) measures and incorporate into Capital Improvement Programming (CIP) as appropriate.

Implementation Measure 1.5.1: Each year, as part of the CIP effort, select a specific set of TSM measures to complete in the next fiscal year, to optimize the efficiency of the local roadway network. TSM measures include, but are not limited to:

- Intersection widening

- Installation of traffic control devices – signals and stop signs
- Signal timing optimization
- Signal synchronization
- Channelization
- Exclusive turn lanes
- Continuous, two-way left turn lanes
- Turn prohibitions
- Parking prohibitions
- One way streets
- Intelligent Transportation System technologies
- Traffic surveillance and incident control

GOAL #2: EFFICIENT MULTI-MODAL TRANSPORTATION NETWORK –

Meet diverse transportation needs of existing and future residents and businesses in the planning area through convenient, safe, multi-modal means.

Objective 2.1: Complete the Non-Motorized components of the Circulation Plan by 2020

Policy 2.1.1: Each year, as part of the CIP effort, consider allocation of funds toward completion of some portion of the Non-Motorized components of the Circulation Plan.

Objective 2.2: Expand public transit in conjunction with population growth

Policy 2.2.1: Require new development and redevelopment projects (public and private), to incorporate needed public transit facilities as identified by the Victor Valley Transit Authority (VVTA).

Implementation Measure 2.2.1.1: Consult with the VVTA during planning/design of major new development and redevelopment projects and public facilities, to incorporate appropriate public transit improvements, in optimal locations.

Implementation Measure 2.2.1.2: Consult with the VVTA regarding regular assessments of special transit needs for low-income, elderly, handicapped, and other residents who do not have access to private automobiles or the public bus system.

GOAL #3: ADEQUATE INFRASTRUCTURE – Develop and maintain infrastructure that supports the transportation and circulation needs of the community in a cost-effective and environmentally sensitive manner.

Objective 3.1: Meet multiple infrastructure needs within common public rights-of-way.

Policy 3.1.1: Planning and design of new roadways and the expansion/completion of existing roadways shall include a consideration of water, sewer, storm drainage, communications, and energy facilities that can be co-located within the roadway right of way.

Implementation Measure 3.1.1.1: Establish specifications for the construction of utility infrastructure within each roadway functional classification.

Objective 3.2: Design infrastructure that minimizes impacts to the environment.

Policy 3.2.1: Minimize or prohibit the use of landscape materials that require regular watering in the design of landscaping for public streets.

Policy 3.2.2: Include in the design specifications for public and private streets structural and non-structural techniques to filter stormwater runoff prior to conveyance to storm drain inlets.

Policy 3.2.3: Program the funding and construction of wet and dry utilities within City service areas concurrent with the actual need for those improvements.

Objective 3.3: Provide adequate infrastructure improvements in conjunction with new development and redevelopment projects

Policy 3.3.1: Require private and public development projects to be responsible for constructing roadway improvements along all frontages abutting a public street right of way, in accordance with the design specifications for that roadway. Such road frontage improvements shall be constructed concurrently with, and completed prior to the opening of the project.

Implementation Measure 3.3.1.1: Require private and public development projects to be responsible for constructing roads, traffic control devices, and wet and dry utility improvements necessary to meet the needs of the project, and to properly integrate the projects into the established and planned infrastructure systems. Such improvements shall be constructed concurrently with and completed prior to opening of the project.

Scope of Impact Analysis: The TSR evaluates the future traffic conditions for year 2035 for General Plan buildout conditions. Since General Plan buildout is assumed to be 2030, the traffic study is a worse-case scenario of future traffic conditions in 2030. The TSR projected level of service for 566 segments, including 13 locations along Highway 395 and 60 freeway ramp locations. In addition, the traffic study evaluates the level of service at 167 intersections (including freeway ramps).

The 2035 trip forecast assumes seven of the City’s twelve land use planning areas are 90 percent or more built out. The planning areas and their 2035 buildout assumptions (%) are: North Mojave (92), Turner Heights (100), Central City (93), Spring Valley Lake (95), East Bear Valley (97), West Bear Valley (100) and Golden Triangle (90). The Northern Expansion Area is assumed 43 percent built out in 2035; approximately 50 percent of this area is designated Open Space.

Through implementation of the 2030 Circulation Element, the City seeks to maintain LOS C or better on all non-CMP roadways segments and LOS D or better on all non-CMP intersections. For CMP segments and intersections, the City seeks to maintain LOS E or better. In addition to these standards, the City of Victorville would continue to use the following thresholds of significance for traffic impacts: (1) If a development project worsens an intersection peak hour LOS to E or worse, it is considered a significant impact and must be mitigated; (2) If a development project would worsen an already deficient intersection by two percent or more, it is considered a significant impact that must be mitigated.

By proposing to expand the City SOI, the proposed General Plan Land Use Map would expand the Planning Area from 46,791 acres to 99,253 acres, a 112% increase. As the Northern Annexation Area SOI transitions from a largely undeveloped area to a developed area, substantial increases in dwelling units and commercial and industrial square footages are expected. These changes are expected to result in substantial increases in the future number of vehicular trips travelling to and from the Planning Area. Table 5.15-6 provides projections of the trips generated by the existing (2005) and the proposed General Plan Update 2030 Land Use Plan.

Table 5.15-6 Travel Demand Model – Calculated Trip Generation for Existing Conditions (2005) to General Plan 2030³				
	Square Foot (Commercial & Industrial)	Total Dwelling Units	Single Family Units	Multi- Family Units
Existing (2005)	203,905	253,272	210,352	42,920
General Plan 2030	633,544	842,249	606,541	235,708
Increase (from Existing)	429,638	588,977	396,189	192,788
Percentage Difference	+211%	+233%	+188%	+449%
Source: City of Victorville Travel Demand Model, PB.				

³ Square footages and unit counts used in Traffic Study and Air Quality Study count internal Planning Area trips plus the trips attracted from outside.

Table 5.15-7 disaggregates the trips generated by the existing and future land uses into trips produced in the Planning Area and trips travelling to the Planning Area.

Table 5.15-7 Existing Conditions to General Plan 2030 Trip Comparisons - Average Daily Trips (ADT)			
	Existing 2005	General Plan 2035	Increase
Productions	361,836	1,177,621	815,785
Attractions	457,178	1,475,793	1,018,615
Total Trips	819,014	2,653,414	1,834,400

Source: PB, July 28, 2008. Productions and Attractions are forecasted as home-based work, work-based office, home-based office, office-based office and school trips.

5.3.3.1. Would the project 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?)

Impact Discussion:

The proposed General Plan Update will result in a substantial increase in trips at buildout of approximately 2.3 million ADT. However, the proposed 2035 Circulation System (Figure 3.15 of this EIR) is designed to match the projected traffic load and the capacity of the street system. The Transportation Study Report has evaluated both the level of service for roadway segments and for area intersections and recommended traffic improvements when feasible.

Table 5.15-5 lists the forecasted Level of Service (LOS) for each roadway segment for 2035. The majority of the segments with unacceptable LOS occurs along Interstate 15 and Bear Valley Road, or occurs on roadway segments in built out areas of the City where the forecasted traffic volumes exceed the existing roadway capacity. LOS D, which is unacceptable for local streets where LOS C is the standard, occurs approximately on approximately twenty (20) local and collector roadway segments.

Based on the forecasted traffic conditions for 2035, numerous roadway extensions and roadway classification changes are recommended and have been included in the 2035 Circulation Plan (Figure 3.15). The following 19 roadway changes listed in Table 5.15-8, consisting of new extensions and realignments, are already planned for implementation prior to the 2035. The planned changes include but are not necessarily limited to the extensions in Table 5.15-8.

1	Topaz Road from Sycamore Street to Bear Valley Road
2	La Mesa Road west of Cantina Drive to Balsam Road
3	Dos Palmas Road from Mesa Linda Avenue to US-395
4	Pacoima Road from Maricopa Road to Seneca Road
5	Seneca Road from Amethyst Road to US-395
6	Hook Boulevard from Diamond Road to US-395
7	Cobalt Road from Mojave Drive to Hopland Street
8	Extend/realign Tawney Ridge Lane from Ferndale Road to US-395
9	Hopland Street from Cobalt Road to US-395
10	El Evado Road from Haver Hill Street to Air Express Boulevard
11	Extend/realign Rancho Rd. from El Evado Rd. to Air Expressway Blvd.
12	Air Expressway Boulevard from National Trails Hwy. To I-15
13	Green Tree Boulevard from Hesperia Road to Yates Road
14	Seneca Road east of Hesperia Road
16	3 rd Avenue from south of Mayapan Lane to Bear Valley Road
17	Realign Spring Valley Parkway from Huerta Street to Bear Valley Road
18	Ottawa Street from Cypress Ave to Mariposa Rd

Source: TSR, Appendix C, pp. 20-21.

The recommended Roadway Classifications and Capacities used for the 2035 Circulation Plan are listed in Table 5.15-5 (also reference Table 4-1 in Appendix C). LOS C for roadway segments is the general accepted service level for local roadway segments in the City and LOS D for City intersections. Even though extensive upgrades are recommended for the Circulation system to increase capacity, an acceptable level of services will not occur along certain roadways without increasing roadway width to more than eight lanes.

When forecasted traffic volumes exceed 600 ADT on an eight-lane arterial, a level of service of D at intersections will not be achieved. The proposed new Modified Super Arterial also has a capacity of 50,600 ADT at LOS D and the new 8-lane divided roadway classification has a capacity of 67,500 at LOS D. Therefore, forecasted traffic volumes above 67,500 ADT within the City on collectors and arterials will not achieve LOS D.

Table 5.15-9 identifies the sixty-nine (69) roadway classification changes recommended within the proposed Circulation Plan. In general, the recommended changes in roadway classifications in Table 5.15-9 are from a lower roadway classification to the higher (e.g. wider right-of-way) roadway classification.

8-Lane Divided	
1	El Evado Road from Air Expressway to High Desert Corridor (Major Arterial)
2	Eucalyptus Street from Amethyst Road to Interstate 15 (Major Arterial)
Modified Super Arterials (SA2)	
3	7 th Street from Green Tree Boulevard to Lorene Drive (Major Arterial)

Table 5.15-9 Recommended Roadway Classifications (Existing Classification)	
4	Hesperia Road from Center Street to Seneca Road (Arterial)
5	Hesperia Road from Seneca Road to Green Tree Boulevard (Major Arterial)
6	Green Tree Boulevard from Arrowhead Drive to Hesperia Road (Major Arterial)
7	Green Tree Boulevard from 7 th Street to Arrowhead Drive (Major Arterial)
8	El Evado Road from Palmdale Road to Tawney Ridge Lane (Major Arterial)
9	Amethyst Road from Palmdale Road to Mojave Drive (Major Arterial)
10	Hesperia Road from Nisqualli Road to Silica Road (Major Arterial)
11	Hesperia Road from Silica Road to Bear Valley Road (Major Arterial)
12	El Evado Road from La Mesa Road to Palmdale Road (Major Arterial)
13	Amethyst Road from Bear Valley Road to Palmdale Road (Major Arterial)
14	Amethyst Road from Eucalyptus Street to Bear Valley Road (Major Arterial)
15	Eucalyptus Street from Topaz Road to Amargosa Road (Arterial)
16	Smoketree Road from Topaz Road to Amargosa Road (Arterial)
17	Eucalyptus Street from Bellflower Street to US-394 (Major Arterial)
18	Bellflower Street from Palmdale Road to Sycamore Street (Major Arterial)
19	Bellflower Street from Sycamore Street to Eucalyptus Street (Major Arterial)
20	Mojave Drive from Interstate 15 to La Paz Drive (Arterial)
21	Roy Rogers Drive from I-15 SB Ramps to I-15 NB Ramps (Arterial)
Super Arterials (SA1)	
22	Bear Valley Road from west of the Interstate 15 to west of US-395 (Major Arterial)
23	Amethyst Road from Bear Valley Road to Palmdale Road (Collector/Major Arterial)
24	Palmdale Road from Interstate 15 to Bellflower Street (Major Arterial)
25	El Evado Road from Palmdale Road to Mojave Drive (Collector/Major Arterial)
26	Mojave Drive from Village Drive to La Paz Drive (Arterial)
27	Roy Rogers Drive from Amargosa Road to Civic Drive (Major Arterial)
28	Green Tree Blvd. from Hesperia Rd. to Yates Rd. (Planned extension, now Arterial)
Major Arterials	
29	La Mesa Road from Amethyst Road to El Rio Road (Arterial)
30	El Evado Road from La Mesa Road to Palmdale Road (Collector/Arterial)
31	Amargosa Road from north of Luna Road to Dos Palmas Road (Arterial)
32	Mojave Drive from Amargosa Road to Ashley Glen Drive (Arterial)
33	La Paz Drive from Plaza Drive to Valley Center Drive (Arterial)
34	El Evado Road from Mojave Drive to Air Expressway Boulevard (Collector)
35	Air Expressway Boulevard from El Evado Road to National Trails Highway
36	Nisqualli Road from Balsam Road to I I th Avenue (Collector)
Arterials	
37	Topaz Road from Bear Valley Road to San Miguel Street (Collector)
38	Seneca Drive from Amargosa Road to US-395 (Collector)
39	Hook Boulevard from Amethyst Road to US-395 (Collector)
40	Hopland Street from west of Amethyst Road to US-395 (Collector)
41	Ridgecrest Road from Chinquapin Drive to Yates Road (Collector)
42	Yates Road from Ridgecrest Road to Fortuna Lane (Collector)
43	Spring Valley Parkway from Bear Valley Road to Pahute Road (Collector)
44	Silica Road from Hesperia Road to I st Avenue (Local)
45	Nisqualli Road from east of Hesperia Road to I I th Street (Collector)

Table 5.15-9 Recommended Roadway Classifications (Existing Classification)	
46	Topaz road from La Mesa Road to Luna Road (Local/New Road)
47	7 th Avenue from Bear Valley Road to Nisqualli Road (Collector)
48	Arrowhead Drive from Nisqualli Road to Yates Road (Collector)
49	Ottawa Street from Arrowhead Drive to 11 th Street (Collector)
50	2 nd Avenue from Bear Valley Road to south of Mayapan Lane (Collector)
51	3 rd Avenue from Bear Valley Road to south of Mayapan Lane (Local Street)
52	Balsam Road from Nisqualli Road to north of Nisqualli Road (Collector)
Residential Arterial	
53	La Mesa Road from Cantina Drive to west of US-395 (Local Street)
54	11 th Avenue from Bear Valley Road to Nisqualli Road (Collector)
Collector	
55	Cobalt Road from Hook Boulevard to Mojave Drive (Local Street)
56	Pacoima Road from Maricopa Road to Seneca Road (Local Street)
57	Luna Road from Cantina Drive to US-395 (Local Street)
58	Dos Palmas Rd. from west of Cobalt Rd. to US-395(Planned extension/Local Street)
59	Tawney Ridge from west of Amargosa Road to US-395 (New planned extension/realignment)
60	5 th Street from Yucca Avenue to D Street (Local Street)
61	Cypress Avenue from 9 th Avenue to Nisqualli Road (Local Street)
62	Yates Road from Interstate 15 to Arrowhead Drive (Local Street)
63	Jasmine Street from Industrial Boulevard to Hesperia Road (Local Street)
64	Hughes Road from La Paz Drive to Hesperia Road (Local Street)
65	Puesta Del Sol Drive from Village Drive to Tawney Ridge Lane (Local)
66	West Trail from Mojave Drive to Reno Loop Road (Local Street)
67	East Trail from Mojave Drive to Reno Loop Road (Local Street)
68	Reno Loop Road (Local Street)
69	South Trail from Reno Loop Road to Seneca Road (Local Street)
Source: TSR, Appendix C, pp. 23-25.	

The recommended roadway classifications changes for the SCLA and the Old Town Specific Plan are listed in Table 5.15.10.

Table 5.15-10 Recommended Roadway Classifications for SCLA and Old Town Specific Plan (Proposed Classification)	
Old Town Specific Plan	
1	Change 7 th Street from Forest Ave to D St. (Arterial)
Southern California Logistics Authority	
2	Phantom West from Perimeter Rd. to Air Expressway Blvd. (Major Arterial)
3	Air Expressway Blvd. From Phantom East to National Trails Hwy. (Major Arterial)
Source: TSR, Appendix C, pp. 23-25.	

Despite the proposed roadway improvements outlined in Tables 5.15-8, 5.15-9 and 5.15-10, and incorporated in the proposed General Plan 2030 Circulation Plan, proposed General Plan growth will cause thirty-nine (39) segments in the Planning Area to experience unacceptable

levels of service at General Plan buildout. These deficient segments are located in built-out areas, along Interstate 15, US-395, SR-18, and along Bear Valley Road, and are listed in Table 5.15.11.

1	7 th Avenue from Ottawa Street to Nisqualli Road
2	7 th Street from D Street to Palmdale Road/Green Tree Blvd.
3	Air Expressway Blvd. from Village Dr. to Phantom East St.
4	Bear Valley Rd. from Fish Hatchery Rd. to Bellflower St.
5	Cahuenga Rd. from Luna Rd. to La Mesa Rd.
6	Cantina Dr. from Luna Rd. to Bear Valley Rd.
7	Cobalt Rd. from Hopland St. to Luna Rd.
8	Cottonwood Ave. from Mariposa Rd. to Bear Valley Rd.
9	D St. from 11 th St. to I-15 NB Ramps
10	Dos Palmas Rd. from El Evado Rd. to Hook Blvd.
11	Eucalyptus Rd. from Amargosa Rd. to Bellflower St.
12	Green Tree Blvd. from 7 th St. to Ridgecrest Rd.
13	Hesperia Rd. from D St. to Silica Rd.
14	Hook Blvd. from Amethyst Rd. to Cobalt Rd.
15	Industrial Blvd. from Silica Rd. to Bear Valley Rd.
16	La Mesa Rd. from Amargosa Rd. to Monte Vista Rd.
17	La Paz Dr. from I-15 NB Ramps to Lorene Dr.
18	Luna Rd. from Amethyst Rd. to Baldy Mesa Rd.
19	Mariposa Rd. from I-15 NB Off-ramp to Kingswood Dr.
20	Mesa Linda St. from Sycamore St. to Verano St.
21	Mesa St. from US-395 to Pena Ave.
22	Mojave Dr. from Del Rey Dr. to Cobalt Rd.
23	National Trails Hwy from Turner Rd. to I-15 SB Ramps
24	Nisqualli Rd. from 11 th Ave. to Mariposa Rd.
25	Olivine Rd. from Cantina Dr. to Beaver Ave.
26	Ottawa St. from Hesperia Rd. to Mariposa Rd.
27	Pacoima Rd. from La Mesa Rd. to Northstar Ave.
28	Pahute Rd. Spring Valley Pkwy to Balsam Rd.
29	Palmdale Rd. (SR18) from Green Tree Blvd to Mesa Linda Ave.
30	Phantom East St. from Shay Rd. to Air Expressway Blvd.
31	Rodeo Dr. from Victor St. to Pebble Beach Dr.
32	Roy Rogers Dr. from I-15 NB Ramps to I-15 SB Ramps
33	Seneca Rd. from Hesperia Rd. to Us-395
34	Spring Valley Pkwy from Driftwood Dr. to Country Club Dr.
35	Smoketree Rd. from Amargosa Rd. to Topaz Rd.
36	Stoddard Wells Rd. from Dante St. to I-15 SB Ramps
37	Sycamore St. from Mesa Linda St. to Monte Vista Rd.
38	Village Dr. from Mojave Dr. to Air Base Rd/Air Expressway Blvd.
39	Yates Rd. from Arrowhead Rd. to Mariposa Rd.

Mitigation measures TR-1, TR-2, TR-10, TR-11 and TR-12, are recommended for inclusion into the project to address these projected deficiencies (reference Section 5.15.5, below). However, these measures are not expected to reduce the expected deficiencies to less than significant levels.

Impact Finding: Significant and unavoidable.

5.15.3.2. Would the project exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?

Impact Discussion:

For intersections and roadway segments included in the CMP network, the acceptable level of service is LOS E or better. As indicated earlier, the roadways within the City of Victorville included in the SANBAG CMP) include: Interstate 15, US-395, SR-18 (D Street and Palmdale Road) and Bear Valley Road (Amargosa Road to east). As shown in Table 5.15-12, each of these four segments have a forecasted 2035 level of service of LOS F despite recommended Circulation Plan improvements.

For intersections included in the CMP, a project has a significant impact if determined by the City Traffic resulting in a LOS F. If the intersection is already at LOS F, a significant impact occurs when the project increases the traffic demand substantially as determined by the City Traffic Engineer. There are seven (7) intersections on the CMP network in the City that are forecasted as LOS F in 2035 (reference (Table 5.15-12).

Proposed General Plan 2030 growth would contribute to these deficient CMP segments and intersections. Proposed General Plan circulation improvements and objectives and policies (including Objective 1.2 and Policy 1.2.1 listed above) would not reduce these deficiencies to less than significant levels. Mitigation Measures TR-4 through TR-10 are recommended for inclusion into the project to address these projected deficiencies (reference Section 5.15.5, below). However, these measures are not expected to reduce the expected deficiencies on CMP roadways to less than significant levels.

Impact Finding: Significant and unavoidable.

Table 5.15-12 Roadway Segments/Intersections in the Congestion Management Program (CMP) Without/With the Proposed Circulation Plan		
Roadway Segments		
No.	Description	LOS Without/With Mitigation
1	Bear Valley Road from Hesperia Road to Amargosa Road	LOS F/F
2	SR-18 (D Street and Palmdale Road)	LOS F/F
3	Interstate 15	LOS F/F
4	US-395	LOS F/F
Intersections		
1	Bear Valley Road/Amargosa Road	LOS F/F
2	Bear Valley Road/Mariposa Road	LOS F/F
3	Bear Valley Road/Cottonwood Avenue	LOS F/F
4	Bear Valley Road/7 th Avenue	LOS F/F
5	Bear Valley Road/Hesperia Road	LOS F/F
6	Bear Valley Road/I Avenue-Tamarisk Road	LOS F/F
7	Mariposa Road/Mariposa Road	LOS F/F

Source: PB, July 11, 2008.

5.15.3.3. Would the project 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?

Impact Discussion:

Southern California Logistics Airport (SCLA) is located in the northwest corner of the City north of Air Expressway and west of Interstate 15. SCLA has two existing runways, with one runway being 15,050 feet in length to accommodate international flights during the summer heat. The SCLA Specific Plan (2,300 acres) was adopted by the City to implement related policies of the General Plan Land Use, Noise and Safety Elements relative to growth of SCLA and its compatibility with surrounding areas.

Although the General Plan 2030 includes pre-zoning of the City’s existing Sphere of Influence and the Northern Expansion Area, these changes do not propose to locate new uses within the designated safety zones of SCLA. General Plan 2030 does not propose to alter the runways or operations of SCLA as governed by its adopted Specific Plan. Mitigation Measure TR-3 is recommended for inclusion into the project to encourage SCLA to incorporate proposed changes to its roadways (Table 5.15-10) into its Specific Plan. This measure is expected to ensure consistency between General Plan 2030 and the SCLA Specific Plan.

The General Plan 2030 will not result in any buildings that may interfere with flight operations. Therefore, the project will not likely change any air traffic patterns or impose any additional safety risk upon flight operations, or necessitate a change in location for the airfield.

Impact Finding: Less than significant with mitigation.

5.15.3.4. Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?

Impact Discussion:

The General Plan 2030 does not propose incompatible uses that present hazards to travel on local roadways. The proposed Circulation Element contains a plan, roadway cross-sections and objectives and policies that are designed to reduce hazards, promote design features for local roadways consistent with City standards and accommodate projected traffic at local intersections. The General Plan 2030 Land Use Element does not include an agricultural designation that would increase farm equipment transport. The proposed Circulation Element (Figure Circ-6) designates Truck Routes within the City to reduce hazards to other vehicles. Consequently impacts related to design hazards are expected to be less than significant.

Impact Finding: Less than significant.

5.15.3.5. Would the project result in inadequate parking capacity?

Impact Discussion:

Proposed Circulation Element rights-of-way for roadway allow for inclusion of parking lanes. The proposed Land Use Element does not address parking policy. Parking capacity and layout is specified by the Zoning Code or Specific Plans and is addressed during project review of individual development projects. Consequently impacts related to parking capacity are expected to be less than significant.

Impact Finding: Less than significant.

5.15.3.6. Would the project conflict with adopted policies, plans or programs supporting alternative transportation (e.g. bus turnouts, bicycle racks)?

Impact Discussion:

The General Plan Update Land Use Plan will result in the need for alternative transportation system capacity. Proposed Circulation Element Goal 2, and its supporting objectives and policies, listed above, require implementation of an efficient multi-modal transportation network, including expansion of transit. The precise location of bus turnouts or bicycle racks would be determined during project level review of specific development projects, consistent with this Circulation Element Goal and its provisions. Consequently impacts related to alternative transportation are expected to be less than significant.

Impact Finding: Less than significant.

5.15.4 Cumulative Impacts

Impact Discussion:

The TSR prepared for the General Plan 2030 is based on future average daily traffic volumes generated by the validated City of Victorville Travel Demand Model. The model is a sub-regional model of the SANBAG regional model. The City of Victorville Travel Demand Model takes into account planned land use changes, roadway and transportation improvements and modifications, infrastructure changes, modal usage, demographic forecasts and regional growth. Usage of the City and sub-regional model assures cumulative impacts are included in the traffic analysis.

However, as shown in Table 5.15-12, there are four CMP segments and seven CMP intersections forecasted to have a 2035 level of service of LOS F despite recommended Circulation Plan improvements and proposed mitigation measures. Proposed General Plan 2030 growth would contribute to these deficient CMP segments and intersections.

Impact Finding: Significant and unavoidable.

5.15.5 Mitigation Measures

Planning Mechanisms

TR-1: The City shall develop a program designating Deficient Roadway Segments that cannot feasibly meet the LOS C level of service standard for roadway segments.

TR-2: The City of Victorville shall study the circulation system on an ongoing basis to determine what feasible improvements can be made to achieve an acceptable level of service for segments and intersections. If an acceptable level of service cannot be achieved, feasible improvements will be identified that will improve, or mitigate the degradation of the level of

service. The feasible improvements will be incorporated into the City's Capital Improvement Program.

TR-3: The City shall incorporate the adopted Circulation Element and applicable General Plan Update goals into the SCLA Specific Plan as needed.

TR-4: The City shall cooperate with San Bernardino Association of Governments (SCAG), the San Bernardino Association Governments (SANBAG), and the California Department of Transportation (Caltrans) to incorporate the adopted Circulation Element and applicable General Plan Update goals into the Interstate 15 Comprehensive Corridor Study when Alternative D or the Alternative C/E Hybrid is selected.

TR-5: The City shall cooperate with California Department of Transportation (Caltrans) and the Federal Highway Administration to incorporate the adopted Circulation Element and applicable General Plan Update goals into the implementation plans for the proposed new interchange at Interstate 15 at La Mesa Road and Nisqualli Road.

TR-6: The City shall cooperate with Caltrans, the San Bernardino Association Governments (SANBAG), and other agencies on the proposed realignment of US-395.

TR-7: The City shall cooperate with the Town of Apple Valley to incorporate the adopted Circulation Element and applicable General Plan Update goals into the implementation plans for the proposed High Desert Corridor project, and the Yucca Loma / Green Tree Blvd extension.

TR-8: The City shall cooperate with the City of Hesperia to incorporate the adopted Circulation Element and applicable General Plan Update goals into the implementation plans for proposed interchange improvements on Interstate 15, including Eucalyptus Street, should that project be approved and funded.

TR-9: The City shall cooperate with SANBAG to provide mitigation measures for existing and projected LOS deficiencies on the CMP network that are beyond the scope of the City of Victorville Circulation Element.

TR-10: The City shall update its Capital Improvement Program every year to implement required roadway/intersection improvements.

TR-11: The City shall coordinate and work with Victor Valley Transit Authority to expand service on the roadways expected to have substantial travel demands increases to connect existing and new trip generators.

Funding Mechanisms

TR-12: Applicants for development permits shall pay all applicable City of Victorville traffic impact fees. Evidence of payment shall be provided to the Planning Department prior to issuance of a building permit.

TR-13: Applicants for development permits with significant traffic impacts on the CMP system and on State and Federal Highways in the City of Victorville (i.e. pursuant to a certified CEQA/NEPA document) shall pay their fair share of mitigation improvements (if required) or construct improvements. Evidence of such payment (if required) shall be provided to the Planning Department prior to issuance of a building permit.

5.15.7 Level of Significance After Policies/Mitigation Measures – Significant and unavoidable.

5.16 UTILITIES AND SERVICE SYSTEMS

This section addresses issues related to utilities and service systems as the General Plan 2030 proposes to change planned land uses and expand the SOI by about 37,000 acres. These types of changes could significantly impact utilities, inclusive of wastewater treatment facilities, storm drainage facilities, water supply, and solid waste capacity including compliance with applicable regulations. It emphasizes City consistency with regional planning efforts to: (1) provide for sufficient wastewater treatment; (2) provide sufficient storm drainage infrastructure; (3) provide sufficient water supplies including conservation, water reclamation, recycling, development of alternative sources of water, and protection of groundwater quality; and (4) work with regional landfill planning and expansion efforts to reduce waste and provide materials recycling in compliance with local regulations.

5.16.1 Existing Conditions

5.16.1.1 Wastewater Treatment Facilities

The Victor Valley Water Reclamation Authority (VWVRA)¹ was originally formed by the Mojave Water Agency to help meet the requirements of the federal Clean Water Act and provide wastewater treatment for the growing area. The original treatment plant, with supporting pipelines and infrastructure, began operating in 1981, providing tertiary level treatment for up to 4.5 million gallons per day (MGD). The VWVRA is now a joint powers authority and public agency of the state of California. Over the years, VWVRA has completed treatment plant upgrades and several capacity increases.

The regional treatment plant, Victor Valley Water Reclamation Plant, is currently capable of treating a portion of the flow to a tertiary level and the remaining flow to a secondary level for percolation. A majority of the highly treated wastewater is discharged into the Mojave River Basin and a smaller amount is currently used to irrigate landscaping at the treatment plant and the nearby Westwinds Golf Course.

The VWVRA only owns and maintains 40.5 miles of interceptor sewer lines on the VWVRA easements and the City owns and maintains all other trunk lines in Victorville. The VWVRA treats water from five (5) different areas: Town of Apple, City of Hesperia, City of Victorville, Area 42 (Oro Grande) and Area 64 (Spring Valley Lake). The VWVRA also has two pump stations and a projected 18 mgd (million gallons per day) Regional Wastewater Reclamation Plant.

PB Engineers prepared the “City of Victorville General Plan Infrastructure Summary” dated July 2008. In their study, PB noted Victor Valley Water Reclamation Plant improvements to increase capacity from 12.5 MDG in 2005, to 14.5 MGD by the end of 2007 (still in process)

¹ Victor Valley Water Reclamation Authority website – Home page: <http://www.vvwra.com/>

to a further proposed increased to 18 MGD (no date given). Improvements to the treatment facility include four new primary clarifiers, four additional aeration basins, a second blower building, four new secondary clarifiers, two new anaerobic digesters, seven additional sludge drying beds, four additional percolation ponds, generator upgrades, a new septage (partially treated waste store in a septic tank) receiving station, and other miscellaneous improvements. The improvements will also prepare the plant to accommodate solids returned to the sewer from the proposed subregional treatment facilities.

According to the VVWRA, the treatment plant currently treats a portion of the waste to the tertiary level, with the remaining waste treated to the secondary level prior to onsite percolation. The higher quality effluent from the treatment facility discharges to the Mojave River, onsite irrigation at the treatment facility and landscape irrigation at the Westwinds Golf Course.

Equalization basins have been provided at the treatment facility to store peak wastewater flows for later treatment. The typical daily flows will range from about 2,400 gallons per minute at night to over 8,500 gallons per minute in the afternoon. The equalization basins also help alleviate the peak flows produced during rainstorms. This allows for the treatment processes to occur at a more constant rate which is important to the activity of the biological organisms in the secondary treatment process.

The aforementioned improvements are necessary to keep up with the population growth within the five communities in the Plant's service area. The VVWRA has projected to the year 2025 based on projected service population, equivalent dwelling units (EDU) and the wastewater flow for the areas impacting the reclamation plant. For 2005, the treatment plant treated sewage for approximately 141,000 people, with an average flow of 12.55 MGD.

Both the City and VVWRA have studied the feasibility of developing recycled water programs. VVWRA's Regional Plant currently produces recycled water that is used for irrigation or is discharged to the Mojave River or to percolation ponds. One of the options studied by VVWRA was to treat wastewater at the Regional Facility and to pump recycled water to the major use areas; however the plant is located at a low elevation and is distant from most of the potential reclaimed water users in its service area.

The VVWRA continues planning to develop subregional reclamation facilities, which will provide wastewater treatment for the growing community, as well as high quality reclaimed water for non-potable uses such as landscape irrigation.² Initially two subregional facilities will be constructed, one 4 MGD facility in Hesperia, and a second 4 MGD facility in Apple Valley, which should be operational by late 2009. Using the subregional reclamation facilities, VVWRA will wholesale recycled water to its member entities, and the member entities will execute contracts to sell the recycled water to both public and private water customers in the Victor Valley. Proceeds from the sale of recycled water will be used to offset the monthly

² Victor Valley Reclamation Authority Current Projects website: <http://www.vvwra.com/>

cost of wastewater treatment. By 2020 the flow of wastewater from the service area is expected to be 25.6 MGD, and by 2025 the flow is expected to be 32 MGD.

The City of Victorville recently completed a final draft of their Sewer System Master Plan and Collection System Model.³ This *Sewer System Master Plan* (SMP) describes the City of Victorville's plan for developing its system of trunk and interceptor sewers. It also addresses the VVWRA future loading capacity. This report states that the City of Victorville discharges to the VVWRA interceptor system at six (6) locations. While there are several areas within the Victorville sphere of influence where wastewater is treated with on-site septic systems, the VVWRA estimates in their *Sewage Facilities Plan Update Year 2005 Amendment* that 97% of Victorville's population is currently connected to the City's sewer system. The VVWRA has been working with its member agencies, including the City of Victorville, over the past several years to study the feasibility of developing recycled water programs.

The SMP reiterates the PB report, in that the VVWRA has studied the concept of constructing sub-regional reclamation facilities located at strategic locations throughout the service area. Wastewater would be diverted from the existing sewer system at key points in the system and directed to a new reclaimed water treatment facility, thereby avoiding capacity improvements to the downstream pipe network.

The SMP report identifies three sub-regional treatment facilities that have been studied by VVWRA: Green Tree, Upper Narrows, and West Sub-regional Facility. Based on a review of the Green Tree site, the City should consider a site nearby due to its beneficial location from a hydraulic perspective. The Upper Narrows site is also centrally located; however, fewer potential users are nearby. The West Sub-regional Facility is located in the Baldy Mesa Planning Area. This facility has excellent potential and its viability has increased due to planning work of the Baldy Mesa Water District. The SMP recommends an in-depth study to identify additional sites in order to provide more options from which the City can choose.

The costs associated with treating and distributing reclaimed water can be high; however, there are several benefits to implementing a recycled water program should the City decide to do so. Some benefits to reclaimed water use are listed below:

- Wastewater diverted from the sewer conveyance system for reclaimed water use can delay or eliminate conveyance improvements required to serve the future population.
- Reclaimed water use reduces the volume and therefore the cost to the City for treatment at the Regional Plant.
- Reclaimed water use provides treatment capacity for the future population.
- Reclaimed water use reduces demands on the potable water system.

³ City of Victorville. Sewer System Master Plan and Collection System Model. Final Review Draft. Prepared by Earth Tech. March 2008.

- Reclaimed water use provides water for beneficial uses such as irrigation and reclaimed water use provides enhanced stability for the potable water system, as it reduces demands on that system during peak use periods.
- Reclaimed water can be used for groundwater recharge.
- Other non-potable uses.

5.16.1.2 Storm Water Drainage Facilities

PB Engineers' "City of Victorville General Plan Infrastructure Summary" provides an overview of existing drainage infrastructure and where possible deficiencies occur. The evaluation is based on a 2007 site visit of existing drainage facilities and evaluation of the status of existing need, future need and proposed improvements. Hydrology calculations were conducted to determine the runoff for each local basin within the Victorville City limits.

PB determined that only a few regional facilities have been constructed since the 1992 Master Plan of Drainage was published, and the City of Victorville is deficient in meeting regional drainage facility demand. There are several storm drain projects that are still proposed, but have not yet been constructed. During their site visit they found that several of the existing facilities were not connected to any downstream facilities and discharge to open-unlined channels. Also, several facilities that were constructed appeared to be incomplete, such as missing liners in the bottom of the channel, or channels running through a golf path on a golf course. In these cases, the facilities may erode and not be adequate in years to come. For the local facilities that have been constructed, the calculations provided by PB were used as a guideline to compare what should have been in the ground as of 2005 against future needs. PB concludes that given the new development being constructed throughout Victorville, it is inevitable that an increase in flow will occur and larger pipe sizes will have to be constructed.

The City of Victorville recently completed a final draft of their Sewer System Master Plan and Collection System Model.⁴ This *Sewer System Master Plan (SMP)* describes the City of Victorville's plan for developing its system of trunk and interceptor sewers. It describes the existing sewers and pumping facilities, the City sewer atlas geodatabase, system planning criteria, hydraulic evaluation of the system for current conditions and future development, and the proposed Capital Improvement Program for the development of future sewer facilities. The SMP identifies the major sewer facilities needed to satisfy the sewage conveyance requirements within this area for the current conditions (year 2006), and for the years 2014 and 2030 planning horizons. Additional information is provided in Section 5.16.4.1.

5.16.1.3 Water Supply

⁴ City of Victorville. Sewer System Master Plan and Collection System Model. Final Review Draft. Prepared by Earth Tech. March 2008.

The City of Victorville is located within and draws all of its water supply from the Alto (or “Upper Mojave”) sub-basin of the Mojave River Ground Water Basin. Details of the regional overview were discussed in Section 5.8.1, Hydrology and Water Quality Existing Conditions.

The City of Victorville is within the service area of the Mojave Water Agency / Watermaster (MWA), which is one of twenty-nine (29) State Water Contractors in the State of California. In 1963, the MWA entered into a contract with the California Department of Water Resources (DWR) to purchase a maximum annual entitlement of 50,800 acre feet from the State Water Project (SWP) for all regions within MWA jurisdiction. On March 26, 1996, the MWA approved a water transfer of 25,000 acre feet/year of SWP entitlement from the Berrenda Mesa Water District in Kern County, thereby increasing the entitlement within the MWA jurisdiction to 75,800 acre feet/year. The MWA has several projects that are using SWP Water and have two additional projects under design that will bring additional water into the Victor Valley. MWA is also pursuing other opportunities to bring additional entitlement to their service area.

Victorville Water District

Water service is provided to the Victorville Planning Area by the Victorville Water District (VWD), which was recently formed (August 15, 2007) by the consolidation of the Baldy Mesa Water District and the Victor Valley Water District. Both of the previous Districts had current (2005) Urban Water Management Plans (UWMPs). As stated above, the sole source of water for the City is the groundwater aquifer located in the High Desert.

In May 2008, Carollo Engineers prepared a letter report to describe the City of Victorville's supply availability to meet water demands associated with planned land uses reflecting the City's Draft General Plan Update. This memorandum was subsequently expanded by Carollo Engineers and incorporated in Water Supply Assessment (WSA) for the General Plan 2030.⁵

Within the VWD, two improvement districts exist: Victorville Water District Improvement District #1 (VWD ID#1), formerly known as the Victor Valley Water District, and Victorville Water District Improvement District #2 (ID#2), formerly known as the Baldy Mesa Water District.⁶

The VWD ID#1 operates the larger of the two improvement districts within the City of Victorville and serves potable water to approximately 72,000 customers. The infrastructure system at the end of 2005 for the VWD ID#1 includes nearly 400 miles of distribution and transmission mains, 23 active wells, 1 booster pumping station (3 booster pumps), 18 water storage reservoirs, and 8 pressure-regulating stations. The VWD ID#1 has four primary pressure zones, three sub-zones and one small, isolated pressure zone in an elevation range between 2700-feet and 3200-feet.

⁵ Water Supply Availability in the City of Victorville, memorandum by Carollo Engineers, May 8, 2008; Draft General Plan Water Supply Assessment, prepared for the City of Victorville (Victorville Water District), Final, by Carollo Engineers July 2008.

⁶ PB. City of Victorville General Plan Infrastructure Summary. July 2008.

The Victorville Water District Improvement District #2 (VWD ID#2) serves a portion of the City of Victorville which encompasses 26.7 square miles. There are three pressure zones within the district from 3180-feet to 3680-feet, governed by level of water in reservoirs. The district is generally bounded by Palmdale Road to the north, Mesa Street to the south, Caughlin Road to the west and Interstate 15 to the east.⁷

Water supply is currently pumped from forty well pumping plants with a combined capacity of 52 million gallons per day (MGD). The water system has twenty-seven (27) above ground storage reservoirs with a capacity of approximately seventy-five (75) million gallons. This extensive storage capacity allows the Water District to operate the well pumping plants during off peak times, which saves in power costs and meet fire flow requirements throughout the City. The water distribution system consists of over 500 miles of pipelines ranging in size from 4-inch (current minimum diameter is 8-inch) to 30-inch.

VWD currently has a Free Production Allowance from the MWA of 15,542 AF / year. VWD produced 30,515 AF of water for the 2006-2007 Water Year. VWD will pay MWA over \$4,000,000 for the 2006-2007 Water Year to compensate for the difference between Free Production Allowance and actual production. The MWA will use this money to purchase replacement water from the SWP and to construct additional water storage (percolation) facilities. This money may also be used to purchase additional entitlement from other State Water Contractors.

Water System Interconnections

To ensure that the water demands are met during short-term emergencies or planned shutdowns, interconnecting pipelines to share water supplies are available between neighboring water systems. VWD has interconnections with the City of Adelanto, Apple Valley Ranchos Water Company, and San Bernardino County Service District.

Water Consumption

Water demands are based on the City's historical water production and number of service connections from 1996 through 2006.⁸ Residential land uses consume the highest volume of water, followed by commercial and industrial uses respectively. Note that water production rates have generally continued to increase but vary annually based on fluctuations in precipitation and water conservation efforts. As shown in Table 5.16-1, production in FY 2005 was 27,600 acre-feet per year (afy) or 24.6 million gallons per day (mgd). Of this 24.6 mgd, 19.44 mgd was produced for ID1 and 5.17 mgd produced for ID2. Population in 2005 was approximately 100,900. Using production for 2005/06 from Table 5.16-1, the average annual per capita demand, including unaccounted-for water, was 244 gallons per capita per

⁷ Ibid.

⁸ Carollo Engineers. Final Water Supply Assessment. Draft General Plan. July 2008.

day (gpcd). Note that this data does not contain information on the SCLA or Desert Gateway Specific Plan areas.

Fiscal Year	Service Connections	Total Annual Water Production	
		(afy)	(mgd)
1995-96	19,452	19,126	17.07
1996-97	19,222	19,196	17.14
1997-98	19,209	17,190	15.25
1998-99	19,496	18,364	16.39
1999-2000	20,034	20,164	18.00
2000-01	20,962	20,000	17.85
2001-02	21,645	20,699	18.48
2002-03	23,388	21,622	19.30
2003-04	25,708	23,853	21.29
2004-05	29,416	24,216	21.62
2005-06	30,685	27,567	24.61

Source: Table I. Carollo Engineers. Final Water Supply Assessment. Draft General Plan. July 2008.

Alternatives to Address Water Supply Deficiencies

Consumption of large water volumes increase costs to the consumer as well as the water supplier, which must increase both supply and water treatment operations to satisfy demand. Efficient water use can reduce costs through lower water use, lower sewage volumes with lower energy and chemical use requirements, and lower capacity charges and limits. Some water conservation strategies involve no additional cost or rapid paybacks. Other strategies such as biological wastewater treatment, rainwater harvesting and graywater plumbing systems often involve more substantial investment.

To reduce the demands on the local ground water basin and to ensure adequacy of water supplies to support the City’s long-term community development objectives, several approaches are underway to conserve and expand water supply resources. These include: water conservation, water reuse, installation of additional wells, and importing water from the SWP, via the California Aqueduct. Six new well pumping plants were recently constructed and five more wells have been drilled and designs to equip the wells are under way.

VWD’s Water Conservation Department currently provides the following services:

- Water Audits
- Residential plumbing retrofits
- Rate Structure which encourages conservation
- Public Information Programs

- Awareness Events With Alliance for Water Awareness and Conservation (AWAC)
- Community Outreach
- Education Programs
- Developer Incentives
- Water Conservation Specialists
- Water Waste Prohibition Ordinance
- Cash-for-Grass
- Water Smart Landscaping
- Low water use appliance rebates

VWD's conservation department has aggressive new programs that pay the existing customers to remove their turf and replace it with Water Smart landscaping. The City of Victorville has a recent ordinance which requires new homes to be constructed with Water Smart landscaping. The average usage for the new homes is approximately 0.65 AF/residential connection which is down from 0.90 A/F residential connection for customers with traditional landscaping. The Conservation Department also has rebate programs for low flow toilets and low usage washing machines. Programs like these will allow the City of Victorville to grow without increasing their water usage.

Even with conservation, within the General Plan Infrastructure Summary, as reported by Carollo Engineers in "the report titled "*Alternatives for Water Supply for the California Aqueduct*" notes that the existing basin extraction rate has increased rapidly within the past few years and that a serious shortfall could occur in as little as 10 years". With the future population and land use increasing over time, the constant supply of water within the aquifer may not be sufficient to keep up with the consumer demands. An additional 5 wells are scheduled to come online in the near future to help alleviate the need for water within the City of Victorville. Alternative water sources may have to be investigated, such as the California Aqueduct, to provide enough water to the Victorville Water District service areas.

Water Recycling

As discussed above, under wastewater, recycled wastewater is a viable alternative water supply and sales of recycled water can be used to offset the costs of treating wastewater. (The terms "recycled water" and "water recycling" are now used in the California Water Code in place of the formerly used terms "reclaimed water" and "water reclamation".) Residential graywater use decreases residential water demand. Recycled water has a wide variety of applications. The applications include agricultural irrigation, landscape irrigation (including highway landscape, parks and golf courses), impoundments for landscape, recreational and/or wildlife uses, wetland and wildlife enhancement, industrial processes (e.g., cooling water, process water, wash water, dust control), construction activities and ground water recharge.

Section 13.60 of the City Municipal Code, *Water Conservation*, establishes standards for water conservation and water recycling. Pursuant to the code, all new residential tracts in the City must install reclaimed water pipes (purple pipes) to facilitate future connects to reclaimed

water when it becomes available. More detail on the City Code is presented in Section 5.16.2.4.

5.16.1.4 Landfills/Solid Waste

Victorville Landfill

Non-hazardous solid and liquid waste generated in the Planning Area is currently deposited in the Victorville Landfill, which is operated by the County of San Bernardino Public Works Department, Solid Waste Management Division. A private contractor, Burrtec Waste Industries, operates the landfill under contract to the County. This landfill is located at 17080 Stoddard Wells Road in the northeastern quadrant of the City, and designated as 'Specific Plan'. This designation ensures that any development in the northeast quadrant will be planned in consideration of surrounding properties, and that required infrastructure will be master planned with adjoining areas.

The City entered into a Waste Disposal Agreement (WDA) in 1998 with San Bernardino County. The term of the Agreement is for 15 years (through 2013). It requires the City to deliver its controllable waste (waste collected under City control) to the County Landfill. This includes waste collected by the City's franchised hauler, Victorville Disposal, and residue from the City's Materials Recovery Facility (MRF), as well as waste hauled by City vehicles (e.g. Public Works trucks). The WDA obligates the County to provide disposal capacity at its Victorville Landfill, or to transfer the material to another facility.

In 2006, the City of Victorville's residents, businesses, and institutions delivered approximately 129,865.25 tons to the County landfill system—mostly to the Victorville landfill. Approximately 116,595.88 tons were disposed and 13,269 tons were diverted through a recycling program at the landfill.

Most of the waste is collected directly from residents and businesses and then hauled to the County landfill by Victorville Disposal. Victorville Disposal also hauls material from construction job sites and residue from the City's MRF. Additional tonnage is taken directly to the County landfill by contractors, individuals, and businesses hauling their own trash. This tonnage is generated from within the City limits of Victorville, but is not collected by the City's franchised hauler. The County has implemented a landfill based diversion program at the Victorville landfill. The program targets inerts, concrete and asphalt, wood waste, corrugated cardboard, and scrap metal.

Table 5.16-1 shows the tonnage generated by the City and delivered to the County landfill system in 2006.

**Table 5.16-1
2006 City Of Victorville Tonnage Delivered/Disposed To
San Bernardino County Landfill System**

Source of Material	Total Tons	% of Total
Victorville Disposal—Residential, Commercial, Industrial Pick Up	74,811	57.6
Victorville Disposal—Construction, Temporary Rolls Offs	11,615	8.9
MRF Residue	7,434.62	5.7
City of Victorville—Public Works	408	0.003
Other—Cash Customers, Contractors, etc.	35,596	27.4
Total Delivered	129,865	99.6
Diverted at Landfill	13,269	10.2
Total Disposed	116,596	89.8

Source: Quarterly Disposal Reports, San Bernardino County Solid Waste Management

The Victorville Landfill property area is approximately 491 acres in total, with an approximately 80-acre parcel currently in use for landfill operations. The 80-acre parcel includes 67 acres that are in active use for landfilling, a 7-acre expansion area that was formerly used as septic ponds, and 6 acres of former “borrow pit”(excavation area) which had been used to generate daily cover for refuse.

The Victorville Landfill primarily serves the Victor Valley region. Table 5.16-2 shows the communities served by the County’s Victorville Landfill.

**Table 5.16-2
Communities Contributing Waste to
the Victorville Landfill**

Community	% of Waste Delivered
Victorville	31.2
Hesperia	21.1
Apple Valley	20.6
Unincorporated County Area	19.6
Adelanto	7.4

Source: CIWMB, Disposal Reporting System

In 2006, approximately 422,375 tons of solid waste were delivered to the landfill. It currently is accepting approximately 1,180 tons per day. Current expansion plans, as summarized in the “Joint Technical Document” (JTD) prepared by San Bernardino County Solid Waste Management Division, increase the landfilling “footprint” from the current 67 acres to approximately 341 acres; increase the maximum elevation of the landfill to 3,182 feet; and increase peak flow to 3,000 tons per day. This planned expansion extends the anticipated life of the landfill to the year 2047 and provides capacity for approximately 37 million tons of refuse.

The landfill site is within the area of the City’s Southern California Logistics Airport (SCLA) Specific Plan area. In November 2007, the City sent a letter to the San Bernardino County Solid Waste Management Division, regarding the future operation of the Victorville Landfill.

Since the City is in the midst of developing the SCLA into an inland port, and given that landfills are known for attracting birds, the City informed the County of their concerns regarding landfill operation and aviation safety. The City expressed its interest in having the County close the landfill, and recommended numerous goals be included within the Countywide Integrated Waste Management Plan five year review. Additional information on the County Victorville Landfill and future operations is presented in Section 5.16.2.3 below.

Materials Recycling Facility and Related Programs

The Victor Valley Materials Recovery Facility (MRF), located in Victorville at 17000 Abbey Lane, is co-owned by the Town of Apple Valley and City of Victorville. Residential and commercial curbside recyclable materials are picked up by the contractor for the City and taken to the MRF. The MRF serves the City by reducing waste in order to comply with the requirements of state law AB 939 which mandates a 50% reduction in the amount of waste sent to landfill by the year 2000 and beyond. In support of this program the City of Victorville has established a number of recycling programs for its residential and commercial customers. Materials targeted for collection include papers, bottles, cans, and plastic containers. The facility, operating since 1995, has a residential curbside recycling program and business recycling programs. The facility also processes recyclables from adjacent communities and serves as a drop off and recycling buy-back center for residents and businesses.

The City also provides information on backyard composting, grass mulching, and other waste reduction ideas. A \$3 million dollar upgrade was completed on the MRF at the end of 2005, and the facility now uses the latest, state-of-the-art technology to provide recyclable material sorting services. The MRF is currently processing about 150 tons per day (5 day/week basis).

The City also has collection programs for brush and wood waste from commercial customers and City facilities. These materials are taken to the privately operated California BioMass composting facility located on Shay Road in Victorville.

The City also has extensive “in-house” recycling programs through its Public Works Department and at the Southern California Logistics Airport. Items recovered include concrete and asphalt, dirt, tires, wood waste, and scrap metal.

There are also extensive private recycling efforts underway to recover a wide variety of materials including:

- Paper fibers
- Scrap metal
- Concrete, asphalt
- Greenwaste/wood waste
- Reusable items (clothing, household goods)
- Tires
- CRV (deposit) bottles and cans
- Rendering/grease collection

- Pallets
- Drywall

5.16.2 Regulatory Framework

5.16.2.1 Federal

Clean Water Act. The Safe Drinking Water Act of 1974, codified as Section 303 *et seq.* of the CWA, provides for: (1) establishment of primary regulations for the protection of the public health; (2) establishment of secondary regulations relating to the taste, odor, and appearance of drinking water; (3) measures to protect underground drinking water sources; and (4) record-keeping, inspection, and issuance of regulations. The primary standards are designed to provide maximum feasible protection of the public health, utilizing the best treatment methods generally available. Pursuant to Sections 13576 and 13577 of the CWA, otherwise known as the Water Recycling Act of 1991: (1) the development of traditional water resources in California has not kept pace with the State's increasing population; (2) there exists a need for a reliable source of water for uses not related to the supply of potable water; (3) the benefits associated with the use of recycled water include a reduced demand for water in the Sacramento – San Joaquin Delta; (4) the use of recycled water has proven to be safe from a public health standpoint; (5) the use of recycled water is a cost-effective, reliable method of helping to meet California's water supply needs; and (6) a Statewide goal has been established to recycle a total of one-million acre-feet per year by the year 2010.

As presented in detail in Section 5.8, Hydrology and Water Quality, the CWA also requires states to develop water quality standards consisting of a detailed description of the hydrologic descriptions of the waterbodies, the beneficial uses which apply to each waterbody, and the water quality criteria (objectives) which will protect those uses. A 1987 CWA amendment established regulations for permitting (under the National Pollutant Discharge Elimination System (NPDES) permit program) of municipal and industrial storm water discharges. The USEPA published final regulations regarding storm water discharges on November 16, 1990 which require that discharge from the municipal separate storm sewer system (MS4) to surface waters be regulated by a NPDES permit. Storm water runoff pollution must be controlled to the maximum extent practicable. The CWA precludes discharge of pollutants from point sources to jurisdictional waters of the United States unless an NPDES permit is first obtained.

In 1972, the CWA was amended to require NPDES permits for the discharge of pollutants to waters of the United States from any point source. A "point source" is defined as "any discernible, confined, and discrete conveyance" of pollutants to a water body. Congress also addressed the problem of nonpoint source (NPS) water pollution in the 1972 amendments. Nonpoint sources include but are not limited to urban, agricultural, or industrial areas, roads, highways, construction sites, communities served by septic systems, recreational boating activities, timber harvesting, mining, livestock grazing, as well as physical changes to stream channels, and habitat degradation. The state must identify the categories, subcategories, and

individual NPSs that contribute to water quality impairment and describe a program for the development of Best Management Practices (BMPs) to control identified nonpoint sources of pollution. States are to develop state management programs and submit those programs to the USEPA for approval.

5.8.2.1 State

California Environmental Quality Act: In accordance with Section 21000(d) of CEQA, “[t]he capacity of the environment is limited, and it is the intent of this legislature that the government of the state take immediate steps to identify any critical thresholds for the health and safety of the people within the state and take all coordinated actions necessary to prevent such thresholds from being reached.” CEQA does not provide specific methodology for assessing impacts of utilities and service systems, but provides threshold criteria upon which to base impacts.

California Water Code. As required under the Urban Water Management Planning Act (UWMPA), codified in Sections 10610-10656 in Division 5 of the CWC, “[e]very urban water supplier shall prepare and adopt an urban water management plan in the manner set forth in Article 3 (commencing with Section 10640)” (Section 10620[a], CWC). As defined therein, an “urban water supplier” is defined as a publicly or privately owned supplier providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet (AF) of water annually (Section 10617, CWC). Each urban water supplier shall update its plan at least once every five years (Section 10621, CWC).

Senate Bills 610 and 221, which became effective on January 1, 2002, amended State law to improve the link between information on water supply availability and certain land-use decisions made by cities and counties in California. SB 610 and SB 221 are companion measures that seek to promote more collaborative planning between local water supplies and cities and counties. The two statutes require that detailed information regarding water availability be provided to decision-makers prior to approval of specific large development projects and that information be included in the administrative record that serves as the evidentiary basis for an approval action on such projects.

Under SB 221, City or county approval of certain residential subdivisions require an affirmative written verification of sufficient water supply. Under SB 610, water supply assessments (WSAs) must be furnished to local governments for inclusion in any CEQA documentation for certain large projects. Qualifying projects include those that would consume an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project. For those projects, the WSA must be requested from the local water provider by the City or county considering the project at the time the City or county determines whether an EIR, a negative declaration, or a mitigated negative declaration is required under CEQA. The water agency must then provide the WSA within 90 days but,

under certain circumstances, may request a time extension. The WSA must include specific information, as detailed in the legislation, including an identification of existing water supply entitlements and contracts. If groundwater is anticipated as a source of water, the assessment must contain additional information. The governing board of the water agency must approve the WSA at a public meeting.

A foundational document for compliance with both SB 610 and SB 221 is the urban water management plan (UWMP). Both statutes identify the UWMP as a planning document that, if properly prepared, can be used by a water supplier to meet the standards set forth therein.

In addition, Section 13550 of the CWC states that the Legislature hereby finds and declares that the use of potable domestic water for non-potable uses is a waste or an unreasonable use of the water within the meaning of Section 2 of Article X of the California Constitution, if reclaimed water is available which meets all of the following conditions, as determined by the SWRCB: (1) the source of reclaimed water is of adequate quality for these uses and is available for these uses; (2) the reclaimed water may be furnished to these uses at a reasonable cost to the user; (3) after concurrence with the California Department of Public Health (CDPH), formally the California Department of Health Services (DHS), the use of reclaimed water from the proposed source will not adversely affect downstream water rights, will not degrade water quality, and is determined not to be injurious to plant life, fish, and wildlife.

Public Resources Code. The California Integrated Solid Waste Management Act of 1989 (AB 939), codified in Division 30, Section 40000 *et seq.* of the PRC, requires every City and county in the State to reduce or recycle 25 percent of the solid wastes disposed in landfills by the year 1995 and 50 percent by the year 2000. For those jurisdictions unable to meet AB 939 diversion objectives and established deadlines, monetary penalties can be imposed against those agencies. As required under AB 939, each City and county shall prepare a “source reduction and recycling element” (SRRE), a “household hazardous waste element” (HHWE), and a “non-disposal facility element” (NDFE). The SRRE serves to document the agency’s existing waste stream and delineates the agency’s solid waste diversion plans. The HHWE specifies how each jurisdiction will safely collect, recycle, treat, and dispose of its household hazardous wastes (HHW). The NDFE identifies all existing and proposed non-disposal facilities needed to implement the SRRE.

The California Solid Waste Reuse and Recycling Access Act of 1991 (AB 1327), codified in Sections 42900 through 42911 of the PRC, requires that the California Integrated Waste Management Board (CIWMB) draft a model ordinance requiring the designation of areas for collecting and loading recyclable materials in “development projects.” As defined in Section 42905 of the PRC, “development projects” include: “(a) A project for which a building permit will be required for a commercial, industrial, or institutional building, marina, or residential building having five or more living units, where solid waste is collected and loaded and any residential project where solid waste is collected and loaded in a location serving five or more units. (b) Any new public facility where solid waste is collected and loaded and any improvements for areas of a public facility used for collecting and loading solid waste.”

California Government Code. In accordance with Section 53091(d) of the CGC, building ordinances of a county or City shall not apply to the location or construction of facilities for the production, generation, storage, treatment, or transmission of water, wastewater, or electrical energy by a local agency.

In recognition of the potential hazards to underground pipelines associated with grading and associated earthmoving activities, the State has imposed certain requirements regarding excavation activities in proximity to existing underground infrastructure.⁹ As required under Section 4216.2(a) of the CGC: “Except in an emergency, every person planning to conduct any excavation shall contact the appropriate regional notification center, at least two working days, but not more than 14 calendar days, prior to commencing that excavation, if the excavation will be conducted in an area which is known, or reasonably should be known, to contain subsurface installations other than the underground facilities owned or operated by the excavator and, if practical, the excavator shall delineate with white paint or other suitable markings the area to be excavated.” As further indicated in Section 4216.9(a) of the CGC: “No permit to excavate issued by any local agency, as defined in Section 4216, or any State agency, shall be valid unless the applicant has been provided an initial inquiry identification number by a regional notification center pursuant to Section 4216.2.”

Compliance with those requirements, which is mandatory for all contractors, ensures that grading activities fully consider and avoid potential impacts upon any “subsurface installation” (i.e., any underground pipeline, conduit, duct, wire, or other structure, except non-pressurized sewer lines, non-pressurized storm drains, or other non-pressurized drain lines) that may exist within the area of proposed ground disturbance.

Pursuant to Sections 54999-54999.6 of the CGC, subject to specified provisions, a public agency providing public utility service may charge another agency a capital facilities fee or capacity charge in order to pay the capital cost of a public utility facility. “Public utility facility” means a facility for the provision of water, light, heat, communications, power, or garbage service, for flood control, drainage or sanitary purposes, or for sewage collection, treatment, or disposal.

California Code of Regulations. CDPH (formally DHS) is responsible for establishing uniform Statewide reclamation criteria to ensure that the use of recycled water is not detrimental to public health and protects beneficial uses. In Title 22, Division 4, Chapter 3 (Water Recycling Criteria), the CDPH (DHS) sets forth water quality criteria, treatment process requirements, and treatment reliability criteria for reclamation operations.

The provision of potable water and toilet facilities is required under OSHA (29 CFR 1926.51) and Cal/OSHA (Section 1524-1526, CCR) standards. As required by OSHA, during construction, toilets shall be provided for employees according to the following ratio: (1) twenty or fewer employees – one toilet; (2) 20 to 200 employees – one toilet seat and one

⁹/ Chapter 3.1, Article 3, Sections 4215-4216.9, CGC.

urinal for each 40 employees; and (3) more than 200 employees – one toilet seat and one urinal for each 50 employees. Typically, “port-a-potties” are brought onto construction sites and are maintained by the firm providing those temporary facilities. Using a vacuum truck, waste materials are then disposed of off those sites in accordance with the permits held by those vendors.

Nonpoint Source Pollution Control Program. As required under Section 319 of the CWA, California’s “Plan for California’s Nonpoint Source Pollution Control Program” (NPS Program Plan) was approved by the USEPA on July 17, 2000. As indicated therein, NPS pollution (polluted runoff) is the leading cause of water quality impairments in California. NPS, including natural sources, are the major contributors of pollution to impacted streams, lakes, wetlands, estuaries, marine waters, and groundwater basins and are important contributors of pollution to harbors and bays. Examples of pollutants associated with specific land-use activities include: (1) excess pesticides and fertilizers from agricultural lands, urban lawns, and parks; (2) oil, grease, heavy metals, and chemicals from urban streets, parking lots, and industrial sites; (3) sediment from improperly managed construction sites, forest lands, abandoned roads, and eroding streambanks; (4) bacteria and nutrients from livestock, pet wastes, and faulty septic systems; and (5) other pollutants.

Among other features, the NPS Program Plan: (1) adopts 61 management measures (MMs) as goals for six NPS categories (i.e., agriculture, forestry, urban areas, marinas and recreational boating, hydromodification, and wetlands/riparian areas/vegetated treatment systems); (2) provides a 15-year strategy for implementing the MMs; and (3) relies on the use of existing authorities and regulatory processes to achieve implementation, allowing for the adoption of the MMs as regulation after each five-year cycle if adequate progress in NPS pollution control has not been demonstrated. MMs serve as general goals for the control and prevention of polluted runoff. Site-specific BMPs are then used to achieve the goals of each MM.

5.16.2.3 Regional

Water Quality Control

Lahontan Regional Water Quality Control Board. As per the California Porter-Cologne Water Quality Control Act, discussed in Section 5.8, Hydrology and Water Quality in Section 5.8.2.2, the Planning Area is under the jurisdiction of the Lahontan Region. The Lahontan Region issues and approves NPDES permits per the federal CWA for the regulation of point source discharges. Construction activities that disturb more than one acre are required to obtain coverage under California’s General Permit for Discharges of Storm Water Associated with Construction Activity, Water Quality Order 99-08-DWQ (Construction General Permit). Activities subject to permitting include clearing, grading, stockpiling, and excavation. The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP) which specifies Best Management Practices (BMPs) that will reduce or prevent construction pollutants from leaving the site in storm water runoff

and will also minimize erosion associated with the construction project. The SWPPP must contain site map(s) that show the construction site perimeter; existing and proposed structures and roadways; storm water collection and discharge points, general topography both before and after construction; and drainage patterns across the site. Additionally, the SWPPP must describe the monitoring program to be implemented.

Industrial activities with the potential to impact storm water discharges are required to obtain a NPDES permit for those discharges. In California, an Industrial Storm Water General Permit, Order 97-03-DWQ (Industrial General permit) may be issued to regulate discharges associated with ten broad categories of industrial activities. The General Industrial Permit requires the implementation of management measures that will protect water quality. In addition, the discharger must develop and implement a SWPPP and a monitoring plan. Through the SWPPP, sources of pollutants are to be identified and the means to manage the sources to reduce storm water pollution described. The monitoring plan requires sampling of storm water discharges during the wet season and visual inspections during the dry season. A report must be submitted each year by July 1 documenting the status of the program and monitoring results.

NPDES also requires local governments to obtain an NPDES Permit for stormwater induced water pollutants in their jurisdiction. The SWRCB Order No. 2003-2005-DWQ, NPDES General Permit and Waste Discharge Requirements for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (MS4s) was adopted in 2003 to provide NPDES permit coverage to small MS4s required to comply with federal storm water permitting requirements. The Mojave Watershed Group of Small Communities enrolled under statewide Phase II Municipal Storm Water NPDES General Permit No. CAS000004 include the cities of Victorville, Apple Valley, Hesperia and portions of San Bernardino County. These co-permittees comply with General Permit provisions.^{10,11}

As part of the process, the Mojave Watershed Group submitted a Storm Water Management Plan (SWMP) which is a plan for development and phased implementation of six minimum control measures (MCM) over the first term of the permit (5 years). These six MCMs are:

1. Public Education and Outreach on Storm Water Impacts
2. Public Involvement/Participation
3. Illicit Discharge Detection and Elimination
4. Construction Site Storm Water Runoff Control
5. Post-Construction Storm Water Management in New Development and Redevelopment
6. Pollution Prevention/Good Housekeeping for Municipal Operations

¹⁰ Lahontan Regional Water Quality Control Board. Executive Officer's Report. March 2005.

¹¹ Mojave River Watershed Group. National Pollutant Discharge Elimination System for Stormwater Discharges from the Mojave Watershed. Stormwater Management Plan. FY06-07 Annual Report. General Permit No. CAS000004.

The SWMP sets measurable goals for each MCM in a staged fashion so that by the fifth year the co-permittees have in place a fully developed and implemented program. The measurable goals in each MCM program need to be integrated over time and across the programs to create a coherent and effective overall SWMP. The SWMP is a work-in-progress especially for the period of the first permit term. It will be revised to reflect emerging or changing priorities based on the experience of the co-permittees including the results of additional studies such as watershed mapping and characterization. While the entire document need not be revised each year as the annual report is prepared, modifications and adjustments to the selected BMPs and measurable goals can be identified. This approach is recommended in both the federal guidance for the Phase II program and the General Permit.¹²

Water Supplies

State Water Resources Act. The State Water Resources Act of 1945 provided the State Water Resources Board broad powers to initiate and conduct investigations of the water resources of the State. In response, the State Water Resources Board released a series of bulletins addressing the water resources of the State. The “California Water Plan” is the State’s strategic plan for managing and developing water resources. Since the publication of Bulletin No. 3 in 1957, the California Department of Water Resources (DWR) has prepared seven water plan updates (known as the Bulletin 160 series). The California Water Code now requires that the water plan be updated every five years. In addition, the plan shall include a report on each hydrologic region’s development of regional and local water projects to improve water supplies to meet municipal, agricultural, and environmental water demands and minimize the need to import water from hydrologic regions.

As indicated in the 2005 update of the “California Water Plan” (Bulletin 160-05): “Projected population increases will have a significant impact on water demands. More than 50 percent of the region’s water supplies are imported from other parts of the State through the SWP (State Water Project), the Los Angeles Aqueduct, and the Colorado River Aqueduct (CRA). By year 2016 California’s Colorado River allocation will be reduced from the current 5.3 million acre-feet per year to 4.4 million acre-feet per year. Several water exchange, conjunctive use, and conservation programs must be developed to offset this reduction. Drought impacts are a long-term concern and require the development of other local sources of supply to meet dry year demands, including recycling, expanded conservation, conjunctive use, and desalination.”¹³

Climate change experts believe that the timing and quality of available water resources in the coming decades may be less predictable due to changing climate conditions. These changes in precipitation and temperature patterns may lead to impacts to California’s water resources and water project operations.¹⁴ Because climate change may seriously affect the State’s water

¹² Stormwater Management Program (SWMP) for the Mojave River Watershed. August 2005. http://www.co.san-bernardino.ca.us/mojave_river/pdf/SWMP_August2005.pdf

¹³ The Resources Agency, California Department of Water Resources, California Water Plan Update, December 2005, Volume I (Strategic Plan), p. 3-22.

¹⁴ The Resources Agency, California Department of Water Resources, Progress on Incorporating Climate into Planning and Management of California’s Water Resources, July 2006, p. 2-75.

resources, particularly the State Water Projects¹⁵ (SWP) ability to deliver water, climate change is identified in the “California Water Plan Update 2005” as a key consideration in planning for the State’s future water management. As indicated therein, the State’s “water systems have been designed and operated based on data from a relatively short hydrologic record. Mounting scientific evidence suggests that forecasted climate changes could significantly change California’s precipitation patterns and amount from that shown by the record. Less snowpack would mean less natural water storage. More variability in rainfall, wetter at times and drier at times, would place more stress on the reliability of existing flood management and water systems. California’s high dependence on reservoir storage and snowpack for water supply and flood management makes us particularly vulnerable to these types of projected hydrologic changes.” Despite these uncertainties, “[t]he region’s water agencies generally have solid plans for adapting to changing conditions and meeting future water needs.”

As reported in the “California Water Plan Update 2005,” between 1972 and 2003, the Metropolitan Water District of Southern California (MWD) imported an average of 703,000 acre-feet per year (AFY) of water from the SWP. The contracted amount is 1,811,000 AFY and imports after 2003 have been closer to this amount. In addition, depending on the availability of surplus water, the MWD imports 680,000 AFY or more from the CRA. Fifteen percent of the region’s water supply is developed by water agencies located outside the service area of the MWD and its member agencies. These agencies also import water from the SWP or use local supplies, primarily groundwater. Groundwater resources meet about 23 percent of the region’s water demand in normal years and about 29 percent in drought years.

San Bernardino County. San Bernardino County provisions of maintenance of infrastructure facilities and public services is coordinated through Special Districts and County Service Areas (CSAs).¹⁶ Special Districts and CSAs are separate legal entities authorized by California laws and formed by the County Board of Supervisors to provide municipal type services and capital improvements to unincorporated County areas. They are formed and tailored to meet the specific needs of an area so that the property owners only pay for the services they want. County Service Area 64 provides water, sewer and roadway infrastructure services to the Victorville unincorporated area.

The County’s domestic water sources are supplied through both local and imported water. For the entire County it is estimated that, on average, 85 % of the domestic water is supplied by local sources with the balance of 15% as imported purchased water. There are supply percentage differences depending on geographic area. Imported water is primarily purchased

¹⁵ The SWP is a water storage and delivery system of reservoirs, aqueducts, power plants, and pumping plants that extends for more than 600 miles. Its main purpose is to divert and store surplus water during wet periods and distribute it to service areas in Northern California, the San Francisco Bay area, the San Joaquin Valley, the Central Coast, and Southern California. Other project purposes include flood control, power generation, recreation, fish and wildlife protection, and water quality management in the Sacramento-San Joaquin Delta (Source: The Resources Agency, California Department of Water Resources, The State Water Project Delivery Reliability Report 2007, Draft, December 2007, p. 3).

¹⁶ County of San Bernardino General Plan Update. Circulation and Infrastructure Background Report. February 2006.

from the Metropolitan Water District of Southern California (MWD) and the SWP California Aqueduct as a supplemental source to local water supplies. While MWD distributes their water through local pipelines, there are also three SWP contractors and one sub-contractor in the County. They are:

- Crestline-Lake Arrowhead Water Agency (CLAWA);
- Mojave Water Agency (MWA);
- San Bernardino Valley Municipal Water District (SBVMWD);
- Inland Empire Utilities Agency, (IEUA), which is a member agency or subcontractor of MWD.

County water providers in Victorville include the Victor Valley County Water District and the Victorville Water District.

Solid Waste

California Integrated Waste Management Board (CIWMB). The California Integrated Waste Management Board (CIWMB) maintains a website providing the current status of all closed, active, and proposed solid waste facilities in the State, known as the Solid Waste Information System (SWIS).¹⁷ The types of facilities found in this database include landfills, transfer stations, material recovery facilities, composting sites, transformation facilities, waste tire sites, and closed disposal sites. There are eleven (11) solid waste San Bernardino County-operated landfills listed, including both regional and local facilities. In addition, 52 other facilities encompassing the full complement of solid waste services including facilities operated and managed by the County of San Bernardino Department of Public Works, Solid Waste Management Division (SWMD) and facilities operated and managed by private owners/operators, are identified in the SWIS. The SWMD is responsible for the operation and management of the County's solid waste disposal system which consists of six regional landfills, five community collection centers, and eight transfer stations.

San Bernardino County Public Works Department, Solid Waste Management Division. The Victorville Landfill, located on Stoddard Wells Road, in the County un-incorporated area, is owned and managed by the County of San Bernardino Public Works Department, Solid Waste Management Division. The landfill accepts non-hazardous solid and inert wastes, which are "Class III" wastes per CA 27 CCR, Sections 20220 and 20230. A private contractor, Burrtec Waste Industries, operates the landfill under contract to the County. The Victorville Landfill primarily serves the Victor Valley region.

According to the California Integrated Waste Management Board (CIWMB) website for the Victorville Landfill¹⁸, as of 2006, the total landfill acreage is 491 acres with the disposal area being 341 acres. The maximum permitted throughput is 3,000 tons/day, with a remaining

¹⁷ California Integrated Waste Management Board, Solid Waste Information System (<http://www.ciwmb.ca.gov/SWIS/>).

¹⁸ California Integrated Waste Management Board. Facility Site Summary Details (SWIS) <http://www.ciwmb.ca.gov/SWIS/detail.asp?PG=DET&SITESCH=36-AA-0045&OUT=HTML>

capacity of 82,200,000 cubic yards. The landfill is permitted to operate through October 2047.

In the mid to late 1990's, the County began consolidating its landfill system by closing smaller landfills and creating regional facilities. In the Victor Valley, landfills in Apple Valley, Phelan, and Hesperia were closed, and plans were made to expand the Victorville landfill to serve the needs of the region. In 1998 and 2006, the County worked to revise the Solid Waste Facilities Permit to expand the Victorville Landfill to provide refuse disposal capacity well into the future. Permit revisions detailed a plan to:

- increase the "footprint" of the landfill to approximately 341 acres, up from 67 acres
- increase the maximum elevation of the landfill to 3,182 feet
- increase peak flow to 3,000 tons per day
- increase the maximum number of vehicles to 600 per day

Making these changes extended the anticipated life of the landfill to the year 2047 and provided capacity for approximately 37 million tons of refuse.

The "Joint Technical Document" (JTD) prepared by San Bernardino County Solid Waste Management Division is the main supporting document that is needed to obtain a Solid Waste Facilities Permit and a Waste Discharge Requirement Permit. The JTD describes landfill operations, maintenance, design, expansion plans, and closure/post closure maintenance plans. According to the County's JTD, "The conceptual engineering design proposed four excavations and four refuse fill phases" during the proposed expansion. These phases are titled IA, IB, 2, and 3. Construction of Phase IA was completed in January 2007 and refuse placement began in June 2007. The Phase IA Expansion Area is on the northwest corner of the existing refuse and is approximately 4 acres in size. The Phase IB Expansion Area consists of the existing borrow area (43 acres) and an additional 20 acres south, for a total of 63 acres. The County is planning to begin installing a liner in the Phase IB area during the Spring of 2008. Excavation of Phase IB and part of Phase 2 will be done to provide for daily cover for landfill operations. The later stages of Phase 2 and all of Phase 3 will require mass excavations and stockpiling of excavated material.

According to the JTD, the end use of the Victorville Landfill will be undeveloped open space. Due to concerns about methane gas production as well as settlement of landfilled areas, there will be no building or development of the site. A Final Closure Plan must be prepared and submitted to appropriate regulatory agencies at least two years before the landfill's closure.

5.16.2.4 Local

City of Victorville Capital Improvement Program (CIP). Water, sewer and storm drainage infrastructure (wet utilities) and electricity, natural gas, and telecommunications infrastructure (dry utilities) are essential components of the circulation system. Such infrastructure is typically installed in conjunction with new roadways or street improvements to serve new or expanded developments or be reasonably related to those developments. Utility systems

usually follow the street system and are installed within the public right of way. Planning and maintenance of wet utilities is the City's responsibility.

Through its annual Capital Improvement Program (CIP), the City identifies anticipated major infrastructure needs for the next five years, including street improvements, traffic signals, sewer improvements, water system improvements and storm drains. The County Service Area 64 handles the planning and programming of water system improvements. CIP projects include those for which funding is anticipated, from Federal, State and local sources. Since priorities and funding levels are subject to change, the CIP is subject to annual review and revisions. The CIP is designed to:

1. Provide a centralized and comprehensive mechanism for forecasting and defining capital improvement needs;
2. Assign priorities among capital projects;
3. Budget projects in accordance with City priorities;
4. Develop a projected revenue program for financing;
5. Schedule projects on a fixed-time basis and provide for appropriate implementation;
6. Coordinate activities of various City departments and outside entities in meeting schedule objectives
7. Monitor and evaluate the progress of capital improvements; and
8. Inform the public and private developers of projected capital improvements needs and implementation projects.

While the CIP can save the City money by facilitating purchase of land and materials in advance of actual need, careful consideration is necessary when programming projects to ensure that physical improvements do not outpace need. The City's policy has and continues to be that infrastructure should be installed only when necessary and only to the extent warranted to avoid excessive maintenance costs.

City of Victorville Municipal Code: Portions of several chapters of the Municipal Code apply to utilities and public services. These are presented below.

Title 6, Health and Sanitation, Chapter 6.30 of the Municipal Code, *Storm Drainage Fees*, contains methods of collecting funds for improving drainage infrastructure. Chapter 6.36 of the Municipal Code, *Garbage Regulations*, includes the City's provisions for solid waste handling services including, but not limited to, the collection, transfer and disposal of solid waste within the City, including recycling and solid waste processing services, which may include recycling of solid waste from any or all premises within the City (6.36.020 Declaration of policy). Chapter 6.60 of the Municipal Code, *Domestic Water Supply Systems*, includes provisions regarding supplying water for domestic consumption in a pure state, free from any contamination or pollution.

Title 10, Water and Sewers, Chapter 10.04 of the City Municipal Code, *Sewer Connections*, establishes requirements for connecting structures to public sewer. Title 13, Public Peace,

Safety, and Morals, Chapter 13.60 of the City Municipal Code, *Water Conservation*, establishes numerous standards for water conservation and water recycling, drought tolerant plantings. Title 17, Subdivisions, Chapter 17.60 of the Municipal Code – *Drainage* contains requirements for drainage and flood hazard prevention during subdivision design.

5.16.3 Thresholds of Significance

Significant impacts relative to utilities and service systems are evaluated in this section based on Appendix G of the CEQA Guidelines. Implementation of the proposed project may have a significant adverse impact if it would do any of the following:

- 1) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?
- 2) 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?
- 3) Result in a determination by the wastewater treatment provider which 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?
- 4) 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?
- 5) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?
- 6) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?
- 7) Comply with federal, state, and local statutes and regulations related to solid waste?

5.16.4 Project Impacts

General Plan 2030 Provisions: Of the proposed General Plan 2030, portions of the Resources, Safety, Land Use and Circulation Elements apply to potential impacts associated with utilities and service systems. These are four of the General Plan elements mandated by State Government Code (Section 65302(g)). They are intended to identify and, whenever

possible, reduce impacts associated with utilities and service systems which may result in impacts to the health, safety, and property of the residents living and working in the Victorville Planning Area. The applicable goals focus City consistency with regional planning efforts to: (1) provide for sufficient wastewater treatment; (2) provide sufficient storm drainage infrastructure; (3) provide sufficient water supplies including conservation, water reclamation, recycling, development of alternative sources of water, and protection of groundwater quality; and (4) work with regional landfill planning and expansion efforts to reduce waste and provide materials recycling in compliance with local regulations.

Within the proposed General Plan 2030 Resources Element the following goals, objectives, policies, and implementation measures apply to utilities and service systems:

GOAL #1: Sufficient, Safe Water Supply - Maintain Adequate Water Supply Resources And Water Delivery System To Support The Implementation Of The City's Land Use Policies And Fire Protection Standards, And To Meet Essential Needs During Emergencies And Severe Drought Conditions.

Objective 1.1: Reduce Rate of Groundwater Extraction for Municipal Water Supply to no more than 80% of 2006 levels, by the year 2012, and maintain or reduce that lower level over the long term.

Policy 1.1.1: Require water conservation measures in the design of new development and major redevelopment, for both public and private projects, such as low-water consuming indoor plumbing devices and use of xerophytic landscape materials that require minimal irrigation.

Implementation 1.1.1.1: Offer incentives for projects that demonstrate significant water conservation through use of innovative water consumption technologies. For example, offer discounted water rates for projects that achieve U.S. Green Building Council LEED standards for certification relative to water efficiency.

Implementation 1.1.1.2: The City will periodically revise development standards in its zoning and subdivision regulations, and in its building and plumbing codes, to include a range of water conservation measures to be incorporated into site design, building construction, landscaping and irrigation systems.

Implementation 1.1.1.3: The City will continue to maintain a list of xerophytic plant materials and publications providing guidelines and methods for establishing and maintaining xerophytic landscapes and irrigation systems. This information shall be readily available to the public.

Policy 1.1.2: Penalize high volume water consumers that operate with wasteful water consumption practices

Policy 1.1.3: Support conversions of wasteful water practices to water conserving practices, including public and private water consumers

Implementation 1.1.3.1: Convert City-owned landscaping in streets, parkways and parks to xerophytic palettes and replace older, inefficient irrigation systems with efficient, water conserving irrigation systems

Objective 1.2: Expand sources of water supply and delivery systems through alternatives to ground water extractions

Policy 1.2.1: Support VVWA's development and expansion of recycled wastewater treatment and delivery capacity for appropriate water uses such as irrigation of outdoor landscapes

Implementation 1.2.1.1: Conduct master planning study to develop program specifications for incorporating recycled wastewater infrastructure into City's existing and future street network, and to develop performance standards to be met by new development projects, to enable ready connection to recycled water infrastructure, when available.

Policy 1.2.2: Participate in regional efforts to acquire imported water from the State Water Project, along with 'water wheeling' from fallowed agricultural areas and other lands with significant ground water resources

Implementation 1.2.2.1: Conduct a preliminary engineering study to identify optimal location(s) for a turnout from the California Aqueduct to deliver imported State Water Project water that may be purchased in the future

Objective 1.3: Protect ground water quality.

Policy 1.3.1: Require new development and major redevelopment projects public and private, to prepare and implement water quality management plans that incorporate a variety of structural and non-structural best management practices to minimize, control and filter construction site runoff and various forms of developed site urban runoff, prior to discharge to receiving waters.

Implementation 1.3.1.1: Assign properly qualified professionals to conduct plan checks and inspections to ensure proper design and implementation of water quality management plans for new development and major redevelopment projects.

Implementation 1.3.1.2: Assess and mitigate impacts on surface and groundwater quality as a routine aspect of the City's CEQA implementation procedures.

Within the proposed General Plan 2030 Safety Element the following goals, objectives, policies, and implementation measures apply to utilities and service systems:

GOAL #2: Protection Of Public Health And Safety -Integrate Public Health And Safety Issues Into Planning And Development Policies.

Objective 2.3: Maintain Sufficient Peak Load Water Supplies.

Policy 2.3.1: Ensure that new development proposals (private or public) do not over-consume the City's water supplies to the extent that the minimum volume of water storage required to meet the City's peak load water supply standard could not be met.

Implementation Measure 2.3.1.1: Require a water assessment of all new major developments to ensure that sufficient peak load water supplies are available.

Implementation Measure 2.3.1.2: Prior to approval of any major development project, require water supply assessments in compliance with state law.

Within the proposed General Plan 2030 Land Use Element the following goals, objectives, policies, and implementation measures apply to utilities and service systems, specifically infrastructure:

GOAL #2: Economic Development – Encourage A Diversified Economic Base

Objective 2.1: Support Victorville as a major regional center for business and commerce.

Policy 2.1.3: Encourage the revitalization of existing commercial areas.

Implementation Measure 2.1.3.2: Pursue grant monies as well as other funding sources for road and public infrastructure improvements to revitalize areas in need.

Policy 2.1.4: Consider annexations which will improve the City's economic base and contribute to quality development.

Implementation Measure 2.1.4.1: Evaluate all prospective annexations to determine the level of urban services necessary and whether or not the revenues from the annexation area will pay for those services.

Implementation Measure 2.1.4.2: Evaluate existing infrastructure in prospective annexation areas to determine the costs necessary to bring such infrastructure up to City standards.

GOAL #3: Ample City Services – Ensure Provision of Adequate City Services and Infrastructure.

Objective 3.1: Permit development in areas where such uses are appropriate and provide for adequate roadways, infrastructure, and public services.

Policy 3.1.1: Provide mechanisms through which development can pay the cost of its infrastructure and services needs.

Implementation Measures 3.1.1.1: Collect and apply development impact fees to pay for infrastructure improvements as identified in the capital improvement plan.

Implementation Measures 3.1.1.2: Continue to review and add projects to the capital improvement plan as deemed necessary to ensure the orderly growth of the City.

Implementation Measures 3.1.1.4: Continue to require new development to pay the capital costs of public facilities and services needed to serve those developments.

Implementation Measures 3.1.1.5: Continue to contact utility companies, school districts, and special districts as necessary when new projects are submitted to ensure their capability to serve the new projects.

Within the proposed General Plan 2030 Circulation Element the following goals, objectives, policies, and implementation measures apply to utilities and service systems:

GOAL #3: Adequate Infrastructure - Develop And Maintain Infrastructure That Supports The Transportation And Circulation Needs Of The Community In A Cost-Effective And Environmentally Sensitive Manner.

Objective 3.1: Meet multiple infrastructure needs within common public rights-of-way.

Policy 3.1.1: Planning and design of new roadways and expansion/completion of existing roadways shall include consideration of water, sewer, storm drainage, communications, and energy facilities that can be co-located within the road right of way.

Implementation Measure 3.1.1.1: Establish specifications for construction of utility infrastructure within each roadway functional classification.

Objective 3.2: Design infrastructure that minimizes impacts to the environment.

Policy 3.2.2: Include in the design specifications for public and private streets structural and non-structural techniques to filter stormwater runoff prior to conveyance to storm drain inlets.

Policy 3.2.3: Program the funding and construction of wet and dry utilities within City service areas concurrent with the actual need for those improvements.

Objective 3.3: Provide adequate infrastructure improvements in conjunction with new development and redevelopment projects

Policy 3.3.1: Require private and public development projects to be responsible for constructing road improvements along all frontages abutting a public street right of way, in accordance with the design specifications for that roadway. Such road frontage improvements shall be constructed concurrently with and completed prior to opening of the project.

Implementation Measure 3.3.1.1: Require private and public development projects to be responsible for constructing roads, traffic control devices, wet and dry utility improvements necessary to meet the needs of the project, and to properly integrate into the established and planned infrastructure systems. Such improvements shall be constructed concurrently with and completed prior to opening of the project.

Scope of Impact Analysis: General Plan 2030 proposes to change planned land uses and expand the SOI by about 37,000 acres. During the 20-year planning period, these changes could significantly impact utilities, inclusive of wastewater treatment facilities, storm drainage facilities, water supply, and solid waste capacity including compliance with applicable regulations.

5.16.4.1 Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Impact Discussion: Wastewater from Planning Area development over the 20-year planning period has the potential to exceed the RWQCB wastewater treatment requirements. Uncollected and untreated wastewater could include pollution that would contaminate the Mojave River Basin and its tributaries, harm biological aquatic species, and increase the risk of flooding by clogging gutters and catch basins. The regional treatment plant, Victor Valley Water Reclamation Plant, is designing for future capacity to treat domestic wastewater, sludge, industrial and commercial sewage, as well as construction waste. However, wastewater may contain toxic materials that the Victor Valley Water Reclamation Plant will not be designed to handle, and therefore, could exceed wastewater treatment requirements. A majority of the highly treated wastewater is and will continue to be discharged into the Mojave River Basin and a smaller amount is currently used to irrigate landscaping at the treatment plant and the nearby Westwinds Golf Course.

Future planned improvements will prepare the plant to accommodate solids returned to the sewer from proposed subregional treatment facilities, and to maximize treatment and distribution of reclaimed water from sub-regional reclamation facilities located at strategic

locations throughout the service area. Wastewater would be diverted from the sewer system at key points in the system and directed to these reclaimed water treatment facilities. The reclaimed water would be used for beneficial uses such as irrigation, enhanced stability for the potable water system by reducing demand on the system during peak use periods, be used for groundwater recharge, and other non-potable uses.

Operation and maintenance of local main sewer lines are the responsibility of the City of Victorville. The Victor Valley Water Reclamation Authority (VWVRA) collects wastewater from the City of Victorville. VWVRA has adopted policies and programs that have been approved by the Lahontan Region Water Quality Control Board (Lahontan Region). The Lahontan Region requires adherence to Best Management Practices (BMPs) to ensure cleaner water sources and a cleaner environment. Individual projects of the General Plan 2030 Planning Area will be required to comply with such wastewater standard requirements and BMPs will be incorporated into each project throughout the permit application process.

As discussed in Section 5.8.2, Section 402 of the Clean Water Act (CWA) established the National Pollutant Discharge Elimination System (NPDES). This act requires all construction activity resulting in land disturbance of one (1) or more acres to obtain a Construction Activities Storm Water General Permit (NPDES General Permit). In the Planning Area, the Lahontan Region issues and approves NPDES permits per the federal CWA. General Permits require projects to develop and implement a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP must list the Best Management Practices (BMPs) the Applicant will employ to “prevent all construction pollutants from contacting storm water”, and BMPs must be developed “with the intent of keeping all products of erosion from moving off site into receiving waters channels.” The SWPPP must also include a visual monitoring program and a chemical monitoring program for non-visible pollutants.

NPDES also requires local governments to obtain an NPDES Permit for stormwater induced water pollutants in their jurisdiction. Victorville is a co-permitted of the Mojave Watershed Group of Small Communities enrolled under statewide Phase II Municipal Storm Water NPDES General Permit No. CAS000004, for Municipal Separate Storm Sewer Systems (MS4s), effective 2005. The permit establishes a region-wide Stormwater Management Plan (SWMP) to control discharges of sanitary wastewater, septic tank effluent, car wash wastewaters, improper oil disposal, radiator flushing, laundry wastewater, spills from roadway accidents, and improper disposal of toxic materials. Pollutant control measures in the SWMP include specific focus on failing septic tanks, industrial/business connections, recreational sewage and illegal dumping. Developers are required to implement appropriate BMPs on construction sites to control erosion and sediment.

The City’s Municipal Ordinance also contains requirements for the collection of storm drainage fees for improving drainage infrastructure in Chapter 6.30 of Title 6, Health and Sanitation. Provisions for connections to sewers are included in Title 10, Chapter 10.04.020 *Connection to Sewers*, for building located in the City. Provisions for new construction in the City and rural subdivisions are discussed in Chapters 10.04.050 and 10.04.060.

The City's Municipal Ordinance contains extensive requirements for water conservation and recycling measures in Chapter 13, Code 13.60 – *Water Conservation*. Included are chapters 13.60.040 *Prohibited water uses and water waste*, 13.60.050 *Limitation on water intensive landscape and turf areas within new nonresidential facilities*, and 13.60.060 *Limitations on model home and new residential development landscaping*. Water conservation reduces runoff and the potential for such runoff to contain or obtain pollutants which may enter receiving waters. Chapter 13.60.195 *Reclaimed water pipelines*, requires all new residential tract development to provide for such installation, and to encourage the use of reclaimed water when safe and appropriate in order to conserve potable water.

The City's Municipal Ordinance contains requirements for drainage and flood hazard prevention during subdivision design. This is contained in Title 17, Chapter 17.60 *Drainage*. Requirements for design flood flows, drainage channel and conduits, hydraulic design, catchbasin inlet and carrying capacity of water across streets are addressed in Chapters 17.60.020 through 17.60.070.

Without proper planning and conservation to meet the Planning Area's future population and land use demand, the capability of the regional treatment system to keep up with treatment demands may not be sufficient and impacts could result. Proposed General Plan 2030 Resources Element Goal #1 serves to provide for a sufficient and safe water supply. Objective 1.1 will reduce the rate of groundwater extraction for municipal water supply to no more than 80% of 2006 levels by 2012, and maintain that level over the long term. To support this Policy 1.1.1 will require water conservation measures for new development and major redevelopment. Policy 1.1.2 will penalize high volume wasteful water practices. Policy 1.1.3 will support conversions of wasteful water practices to water conserving practices. Objective 1.2 will expand sources of water supply and delivery systems through alternatives to groundwater extractions. Policy 1.2.1 will support VVWRA's development and expansion of recycled wastewater treatment and delivery for appropriate uses, and Policy 1.2.2 will participate in regional efforts to acquire imported water from the SWP along with "water wheeling" from appropriate sources.

Objective 1.3 is proposed to protect ground water quality. Policy 1.3.1 requires new development and major redevelopment projects to prepare and implement water quality management plans that incorporate BMPs to minimize, control and filter construction site runoff and various forms of developed site urban runoff, prior to discharge to receiving waters. Its implementation measures support the policy by assigning qualified professionals to conduct plan checks (Implementation Measure 1.3.1.1), and to assess and mitigate impacts on surface and groundwater quality as a routine aspect of the City's CEQA process (Implementation Measure 1.3.1.2).

Project developments within the Planning Area are required to comply with the Lahontan Region requirements for adherence to BMPs to ensure cleaner water sources and a cleaner environment. Under the supervision of the City staff, any applicant must comply with these requirements and the Municipal Code to ensure that their project would not violate any water quality standards or waste discharge requirements. Because these are City

requirements prior to construction, any impacts would be considered less than significant. Also, the Municipal Code contains provisions for collection of storm drainage fees, connections to sewers, water conservation, installation of reclaimed water lines in new developments, and appropriate design for drainage and flood prevention. The proposed General Plan 2030 supports these code provisions. General Plan 2030 Resources Element Policy 1.3.1 requires development projects to prepare and implement water quality management plans that incorporate BMPs, which reinforces the NPDES regulatory requirements. Therefore, the potential to exceed the RWQCB wastewater treatment requirements associated with development within the Planning Area under the General Plan 2030 are expected to be less than significant.

Impact Finding: Less than Significant.

5.16.4.2 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?

Impact Discussion: In July 2008, Carollo Engineers prepared a Technical Memorandum to present projected water demands through 2030 based on draft general plan land uses, provide current information on future supply sources planned by the City, and determine availability of supplies to meet demands.¹⁹ Demand projections were presented for the following four areas within the City's Sphere of influence (as designated by the Local Agency Formation Commission): (1) Improvement District 1 (IDI), the former Victor Valley Water District (W D or District); (2) Improvement District 2 (ID2), the former Baldy Mesa Water District (BMWWD); (3) Southern California Logistics Airport (SCLA); and (4) Desert Gateway Specific Plan.

Demands within the District are projected to increase from 27,602 acre feet per year (afy) in 2005 to approximately 79,100 afy by 2030. Recent economic conditions may result in a lower rate of growth which would extend these projections beyond 2030. The numbers are based on the information and assumptions described below.

Both districts ID1 and ID2 prepared an Urban Water Management Plan in 2005 (UWMP), which was used as a primary source of information regarding supply assumptions. However the UWMP supply assumptions were in the Technical Memorandum with currently planned supply projects. Demand projections in the UWMP were based on general plan land uses for VVWD and growth projections for BMWWD, which were current in 2004. Demand projections were updated here to reflect draft general plan land uses.

Water demand factors for ID1 and ID2 were applied to the planned land use acreages projected years up to 2030. It is anticipated that water demand per acre will increase in ID1

¹⁹ Carollo Engineers. Final Water Supply Assessment. Draft General Plan. July 2008.

as the area develops, densification occurs, and land values increase (all resulting in more intense uses of land) resembling more typical water demand factors (WDFs). Future factors were developed to calculate water demands under more relevant future density conditions. These future WDFs, were developed based on discussions with City staff, historical data, and comparison data with other agencies, including the City of Hesperia.

Within ID2, the initial set of water demand factors for the existing system were higher than ID1 and reflective of typical values for the vicinity. ID2 demand factors were not adjusted for future conditions. For future updates, the City should revisit the consideration of increasing the use factors, if warranted. The timing of development assumed for 2010, particularly with Low Density Residential developments, may be delayed from these estimates due to changing economic conditions in the region.

Demand projections for SCLA were provided by the City based on SCLA Water and Wastewater System Master Plans. These projections reflect land uses planned for in the SCLA Specific Plan. Desert Gateway Specific Plan projections were based on 26,100 dwelling units planned and an average demand of 0.7 afy per connection.

Aside from recycled water, it is assumed that State Water Project (SWP) water would be reduced during drought conditions (both single and multiple dry years), while groundwater would not be affected in the short term. The reductions of imported water are based on historical drought conditions that occurred in the period 1986 to 1992. However, more severe drought conditions may occur in the future due to climate change, resulting in greater reductions in imported supplies than assumed based on empirical data. In addition, a recent court decision that has yet to be finalized regarding water supplies pumped from the Sacramento-San Joaquin River Delta have greatly reduced the reliability of State Water Project (SWP) imported water supplies since the completion of the last Urban Water Management Plans (UWMPs) in 2005.

The City is currently pumping beyond the safe yield of the aquifer to meet its water demand, requiring replenishment fees or purchase of water rights from other agencies in the sub-basin. The District is planning projects to mitigate the additional pumping, however, pumping beyond the safe yield will be necessary until the acquisition of additional water entitlements occurs along with storage (e.g., groundwater storage) to increase the reliability of this new supply. It should also be noted that the additional groundwater pumping is expected to increase the basin overdraft and could reduce groundwater levels such that the basin capacity is reduced.

The City is moving forward with plans to use SWP water to recharge the groundwater basin and has conducted pilot recharge projects to determine the feasibility of variations of this supply option. The Oro Grande Wash Recharge Project will take water from the SWP aqueduct into percolation ponds. The water then percolates into the groundwater basin, increasing local supplies. Piloting has indicated that percolation is a feasible method to replenish the aquifer. The Oro Grande Wash Recharge Project will be fully operational by 2015, augmenting the aquifer with 8,000 afy of surface supply.

The Regional Recharge and Recovery Project, or R3, was studied for feasibility and found to be an effective method of increasing groundwater supplies. MWA will construct percolation ponds and extraction wells along the Mojave River. The wells will discharge into a distribution system that will serve the Town of Apple Valley, City of Hesperia, City of Victorville, City of Adelanto, and unincorporated areas of San Bernardino County. R3 is anticipated to be fully operational by 2015 augmenting the District supply with 12,000 afy of SWP supply.

Groundwater injection through the aquifer storage and recovery (ASR) is already in place. Wells are currently injecting treated SWP water in partnership with the High Desert Power Project.

The City is planning for a 50 mgd water treatment plant by 2020. The new facilities would allow the City to treat raw SWP water from the California Aqueduct and directly distribute the treated water to its customers. As with the recharge projects, SWP supply would be obtained through MWA, the SWP contractor. Several sites for the facilities are being considered at this time; the decision will be based on the best hydraulically suited site, taking into account land availability. This new treatment plant will be operated conjunctively with groundwater wells providing a base supply of water to reduce pumping.

Voluntary or enforced water conservation measures, such as water use education and low flow plumbing fixtures, will contribute to a decrease in existing water consumption and a lower water demand for new customers (not to be confused with increasing water demand factors which reflect increasing demands on a per acre basis due to infill and higher densities of new uses). The City currently has a number of conservation programs in place and is considering additional programs.

According to the UWMPs, demands could be reduced up to 50 percent during a supply shortage of 36% to 50% (which is also referred to as a Stage 3 water shortage), however, to be conservative it was assumed that up to 22% reduction would be implemented during multiple dry years as well as a single dry year, less if supply is available as in 2020. A 22% reduction in demands for multiple dry years is more realistic to achieve due to the difficulty and hardships associated with a 50 percent reduction in demands.

The City has planned sufficient water supply projects to meet demands through 2030 under each supply condition. This conclusion is based on the following assumptions:

- Demand estimates for year 2030 as presented herein are accurate.
- Target demand reductions during single and multiple dry years can be met.
- Supply sources will reliably provide the amount of water presented here.
- The Regional Recharge and Recovery Project (R3) will be online by 2015 and provide 12,000 afy.
- The Oro Grande Wash Recharge Project will be online around 2011 (assumed here by 2015) and provide 8,000 afy.

- Sufficient imported SWP entitlements can be secured by 2020 to deliver up to 44,806 afy of treated water during normal years, 33,156 afy during single dry years, and 17,519 afy during multiple dry years.

Greater aerial coverage of lands planned for urban uses per the draft general plan may be supplied with potable water in the future under different assessment assumptions. Increased availability of planned potable supplies would result from additional conservation programs and the implementation of recycled water projects.

As discussed in Section 5.16.4.1, the City of Victorville recently completed a final draft of their Sewer System Master Plan and Collection System Model.²⁰ This *Sewer System Master Plan* (SMP) describes the City of Victorville's plan for developing its system of trunk and interceptor sewers. It describes the existing sewers and pumping facilities, the City sewer atlas geodatabase, system planning criteria, hydraulic evaluation of the system for current conditions and future development, and the proposed Capital Improvement Program for the development of future sewer facilities. The SMP identifies the major sewer facilities needed to satisfy the sewage conveyance requirements within this area for the current conditions (year 2006), and for the years 2014 and 2030 planning horizons.

The Capital Improvement Program for the 2014 planning horizon includes 46 pipe reaches comprised of approximately 252,000 feet of pipe. Of this total, 157,000 feet of new pipe is required to service future growth areas, and 97,000 feet of existing pipe will require upsizing as a result of future growth. Two reaches (Reach 37 and 48) are comprised of 25,000 feet of pipe that belongs to the VVWRA. The Capital Improvement Program for the 2030 planning horizon includes 23 pipe reaches comprised of 49,000 feet of pipe. These pipes are existing and will require upsizing as a result of future growth.

Also, the Victor Valley Water Reclamation Plant, is designing for future capacity to treat domestic wastewater, sludge, industrial and commercial sewage, as well as construction waste. Future improvements will also prepare the plant to accommodate solids returned to the sewer from proposed sub-regional treatment facilities, and to maximize treatment and distribution of reclaimed water from sub-regional reclamation facilities located at strategic locations throughout the service area. Wastewater would be diverted from the sewer system at key points in the system and directed to these reclaimed water treatment facilities. The reclaimed water would be used for beneficial uses such as irrigation, enhanced stability for the potable water system by reducing demand on the system during peak use periods, be used for groundwater recharge, and other non-potable uses.

As discussed in Section 5.16.4.1 above, the City's Municipal Code contains requirements for the collection of storm drainage fees for improving drainage infrastructure in Chapter 6.30 of Title 6, Health and Sanitation. Provisions for connections to sewers are included in Title 10, Chapter 10.04.020 *Connection to Sewers*, for building located in the City. Provisions for new

²⁰ City of Victorville. Sewer System Master Plan and Collection System Model. Final Review Draft. Prepared by Earth Tech. March 2008.

construction in the City and rural subdivisions are discussed in Chapters 10.04.050 and 10.04.060.

The City's Municipal Code contains extensive requirements for water conservation and recycling measures in Chapter 13, Code 13.60 – *Water Conservation*. Included are chapters 13.60.040 *Prohibited water uses and water waste*, 13.60.050 *Limitation on water intensive landscape and turf areas within new nonresidential facilities*, and 13.60.060 *Limitations on model home and new residential development landscaping*. Water conservation reduces runoff and the potential for such runoff to contain or obtain pollutants which may enter receiving waters. Chapter 13.60.195 *Reclaimed water pipelines*, requires all new residential tract development to provide for such installation, and to encourage the use of reclaimed water when safe and appropriate in order to conserve potable water.

The City's Municipal Ordinance contains requirements for drainage and flood hazard prevention during subdivision design. This is contained in Title 17, Chapter 17.60 *Drainage*. Requirements for design flood flows, drainage channel and conduits, hydraulic design, catchbasin inlet and carrying capacity of water across streets are addressed in Chapters 17.60.020 through 17.60.070.

Without proper planning and conservation to meet the Planning Area's future population and land use demand, new water and wastewater facilities could result in significant environmental impacts. Proposed General Plan 2030 Resources Element Goal #1 serves to provide for a sufficient and safe water supply. Objective 1.1 will reduce the rate of groundwater extraction for municipal water supply to no more than 80% of 2006 levels by 2012, and maintain that level over the long term. To support this Policy 1.1.1 will require water conservation measures for new development and major redevelopment. Policy 1.1.2 will penalize high volume wasteful water practices. Policy 1.1.3 will support conversions of wasteful water practices to water conserving practices. Objective 1.2 will expand sources of water supply and delivery systems through alternatives to groundwater extractions. Policy 1.2.1 will support VVWRA's development and expansion of recycled wastewater treatment and delivery for appropriate uses. Policy 1.2.2 will participate in regional efforts to acquire imported water from the SWP along with "water wheeling" from appropriate sources. Objective 1.3 is proposed to protect ground water quality.

Other State regulations also apply to assure that sufficient water is available for new large developments. As discussed in Section 5.8.2.2 above, per SB 221, City approval of residential subdivisions that would consume an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project require an affirmative written verification of sufficient water supply. Under SB 610, water supply assessments (WSAs) must be furnished to local governments for inclusion in any CEQA documentation for certain large projects. For those projects, the WSA must be requested from the local water provider by the City considering the project at the time the City determines that CEQA is required. The WSA must include specific information, as detailed in the legislation, including an identification of existing water supply entitlements and contracts. If groundwater is anticipated as a source of water, the assessment must contain additional information.

While the City has planned for sufficient water supply projects to meet demands through 2030 under normal, single dry year, multiple dry years, it must be able to meet its assumptions for proper planning and conservation, including that demand estimates and target demand reductions are met; planned water treatment plants and wells are constructed, that the Regional Recharge and Recovery project (R³) will be online by 2015 and that sufficient imported entitlements for SWP water can be secured. The Victor Valley Water Reclamation Plant, is designing for future capacity including sub-regional treatment facilities which would treat water and maximize treatment and distribution of reclaimed water. Also, the City has planning underway for developing its system of trunk and interceptor sewers. In addition to measures provided in the Municipal Code, with implementation of the General Plan 2030 policies and objectives for water planning, conservation and water quality protection, potential adverse impacts related to expansion of water or wastewater treatment facilities associated with development within the Planning Area under the General Plan 2030 are expected to be less than significant.

Impact Finding: Less than Significant.

5.16.4.3 Result in a determination by the wastewater treatment provider which 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?

Impact Discussion: As discussed in Section 5.16.4.1, the Victor Valley Water Reclamation Authority is planning for long-term future needs of its service area. Additional information is provided herein. To meet the immediate needs to 2012, the Regional Treatment Plant and the Interceptor Sewer System will be expanded to convey and treat up to 18 MGD of wastewater.²¹ Additional relief sewers, peak flow pumping facilities, off-line storage, or a combination will be needed to convey the anticipated wastewater flow to the Regional Treatment Plant. Subregional Reclamation Facilities will be constructed and will begin operating by 2012 in the Town of Apple Valley and the City of Hesperia, and these subregional facilities will be sized and configured to capture all of the wastewater generated by these cities for reclamation and beneficial use. Using this combination of regional treatment and subregional reclamation facilities, the City of Victorville and the communities of Oro Grande and Spring Valley Lake will be conveyed to the Regional Treatment Plant for processing. Solids generated by the subregional facilities may be discharged back into the regional interceptor systems with a small transport flow for treatment by the Regional Treatment Plant and eventual disposal. Recycled water produced by the subregional

²¹ Victor Valley Wastewater Reclamation Authority. Adopted Policy for Serving Growth of the Community. August 2005. <http://www.vvwra.com/PDF%20Files/communitygrowthpolicy2005.pdf>

reclamation facilities may be discharged to one or more remotely located percolation basins during wet weather periods, when irrigation demands are minimal.

To meet the demand anticipated between the years 2012 and 2020, the capacity of the subregional reclamation facilities, sewage and recycled water pumping stations, and remotely located wet weather percolation ponds will be expanded so that all of the wastewater generated by the Town of Apple Valley and the City of Hesperia is captured for reclamation and beneficial reuse. The only exception will be the solids generated by the respective subregionals, along with a small amount of sewage flow if needed to transport the solids to the Regional Treatment Plant for processing. During this period additional subregional reclamation facilities may be constructed to capture and reclaim excess flows generated in outlying areas such as western Victorville, as determined by the Board of Commissioners based on future engineering, environmental, and economic studies.

To meet long term needs anticipated after the year 2020, the capacity of the Regional Treatment Plant and the Interceptor Sewer System will be expanded to convey and treat the additional wastewater generated by the City of Victorville, Oro Grande, and Spring Valley Lake. Based on growth projections, it is anticipated that by 2020 the capacity of the Regional Treatment Plant will need to be expanded to 22 MGD or more to meet the needs of these cities. In addition, the construction of expanded solids handling capacity may be necessary at the Regional Treatment Plant to match the increasing solids generated by the Town of Apple Valley and City of Hesperia regional facilities. During this period, additional subregional reclamation facilities may be constructed to capture and reclaim excess flows generated in newly developed and/or outlying areas, as determined by the Board of Commissioners based on future engineering, environmental, and economic studies.

The City of Victorville is also planning for sewer expansion for Planning Area growth. As discussed in Section 5.16.4.2, the City of Victorville's *Sewer System Master Plan* (SMP) describes the City of Victorville's plan for developing its system of trunk and interceptor sewers. The Capital Improvement Program for the 2014 planning horizon includes 46 pipe reaches comprised of approximately 252,000 feet of pipe. Of this total, 157,000 feet of new pipe is required to service future growth areas, and 97,000 feet of existing pipe will require upsizing as a result of future growth. Two reaches (Reach 37 and 48) are comprised of 25,000 feet of pipe that belongs to the VVWRA. The Capital Improvement Program for the 2030 planning horizon includes 23 pipe reaches comprised of 49,000 feet of pipe. These pipes are existing and will require upsizing as a result of future growth.

As discussed in Section 5.16.4.1 above, the City's Municipal Code contains requirements for the collection of storm drainage fees for improving drainage infrastructure in Chapter 6.30 of Title 6, Health and Sanitation. Provisions for connections to sewers are included in Title 10, Chapter 10.04.020 *Connection to Sewers*, for building located in the City. Provisions for new construction in the City and rural subdivisions are discussed in Chapters 10.04.050 and 10.04.060.

The City's Municipal Code contains extensive requirements for water conservation and recycling measures in Chapter 13, Code 13.60 – *Water Conservation*. Included are chapters 13.60.040 *Prohibited water uses and water waste*, 13.60.050 *Limitation on water intensive landscape and turf areas within new nonresidential facilities*, and 13.60.060 *Limitations on model home and new residential development landscaping*. Water conservation reduces runoff and the potential for such runoff to contain or obtain pollutants which may enter receiving waters. Chapter 13.60.195 *Reclaimed water pipelines*, requires all new residential tract development to provide for such installation, and to encourage the use of reclaimed water when safe and appropriate in order to conserve potable water.

The City's Municipal Ordinance contains requirements for drainage and flood hazard prevention during subdivision design. This is contained in Title 17, Chapter 17.60 *Drainage*. Requirements for design flood flows, drainage channel and conduits, hydraulic design, catchbasin inlet and carrying capacity of water across streets are addressed in Chapters 17.60.020 through 17.60.070.

Without proper planning and conservation to meet the Planning Area's future population and land use demand, insufficient wastewater facility capacity could result in significant environmental impacts. Proposed General Plan 2030 Resources Element Goal #1 serves to provide for a sufficient and safe water supply. Policy 1.2.1 will support VVWRA's development and expansion of recycled wastewater treatment and delivery for appropriate uses. Implementation Measure 1.2.1.1 provides that the City conduct master planning studies to develop program specifications for incorporating recycled wastewater infrastructure into City's existing and future street network, and to develop performance standards to be met by new development projects, to enable ready connection to recycled water infrastructure, when available. Policy 1.2.2 will participate in regional efforts to acquire imported water from the SWP along with "water wheeling" from appropriate sources. Objective 1.3 is proposed to protect ground water quality.

Impact Summary: The Victor Valley Water Reclamation Plant is designing for future capacity including sub-regional treatment facilities which would treat water and maximize treatment and distribution of reclaimed water through year 2020 and beyond. To support the VVWRA plant the City of Victorville's *Sewer System Master Plan (SMP)* describes the City's plan for developing its system of trunk and interceptor sewers. In addition to measures provided in the Municipal Code, with implementation of the General Plan 2030 policies and objectives for collection of storm drainage fees to support infrastructure expansion, support VVWRA's development and expansion of wastewater treatment and delivery for beneficial uses, water conservation and water quality protection. In addition, the proposed General Plan 2030, Resources Element Policy Goal #1, Policy 1.2.1 will support VVWRA's development and expansion of recycled wastewater treatment and delivery for appropriate uses. Thus, the wastewater treatment provider and the City are planning for the appropriate capacity to serve the long-term needs of the Planning Area and potential adverse impacts under General Plan 2030 are expected to be less than significant.

Impact Finding: Less than Significant.

5.16.4.4 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?

Impact Discussion:

PB Engineers prepared the “City of Victorville General Plan Infrastructure Summary” dated July 2008. The report provides an overview of existing drainage infrastructure and where possible deficiencies occur. The evaluation is based on a 2007 site visit of existing drainage facilities and evaluation of the status of existing need, future need and proposed improvements in addition to several documents: (1) the “Baldy Mesa Master Plan of Drainage, San Bernardino County Flood Control District” December 2006 report (currently being used as a guide by the City of Victorville); (2) the “Victor Valley Development Association Drainage Master Plan” draft report completed in January 2007; and (3) the SCLA Master Plan of Drainage, performed by RBF Consulting which provides detailed drainage information for the specific plan area of the SCLA. Hydrology calculations were conducted to determine the runoff for each local basin within the Victorville City limits.

PB determined, that only a few regional facilities have been constructed since the 1992 Master Plan of Drainage was published, and the City of Victorville is deficient in meeting regional drainage facility demand. There are several storm drain projects that are still proposed, but have not yet been constructed. During their site visit they found that several of the existing facilities were not connected to any downstream facilities and discharge to open-unlined channels. Also, several facilities that were constructed appeared to be incomplete, such as missing liners in the bottom of the channel, or channels running through a golf path on a golf course. In these cases, the facilities may erode and not be adequate in years to come. For the local facilities that have been constructed, the calculations provided by PB were used as a guideline to compare what should have been in the ground as of 2005 against future needs. PB concludes that given the new development being constructed throughout Victorville, it is inevitable that an increase in flow will occur and larger pipe sizes will have to be constructed.

The existing and proposed drainage infrastructure is insufficient to accommodate growth projected by the General Plan 2030. Future growth will exceed the capacity of planned drainage systems resulting in uncontained runoff including sources of polluted runoff. According to the PB report, the impact is significant.

Municipal Code Chapter 6.30.010, *Establishment of a storm drainage fund*, creates procedures for storm drainage fund collection. The moneys received into the storm drainage collection account shall be used for storm drainage acquisition, construction, reconstruction, maintenance, operation, administration and management, the payment of debt service and the maintenance of an adequate working reserve for such storm drainage facilities.

Municipal Code Chapter 13.60 of the City Municipal Code, *Water Conservation*, establishes numerous standards for water conservation and water recycling. Included are chapters 13.60.040 *Prohibited water uses and water waste*, 13.60.050 *Limitation on water intensive landscape and turf areas within new nonresidential facilities*, and 13.60.060 *Limitations on model home and new residential development landscaping*. Municipal Code Chapter 13.60.040 *Prohibited water uses and water waste*, subpart (h) states that: It shall be unlawful for any water user to willfully or negligently permit or cause the escape or flow of irrigation water in such quantity as to cause flooding, impede vehicular or pedestrian traffic, create a hazardous condition to such traffic or cause damage to public or private rights of way through failure or neglect to properly operate or maintain any irrigation structure, delivery ditch or waste ditch.

Proposed General Plan 2030 Land Use Element Goal #2 encourages a diversified economic base, including goals, objectives, policies, and implementation measures that apply to infrastructure. Objective 2.1, Policy 2.1.3 support Victorville as a major business and commerce center and encourage revitalization. The implementation measure serves to pursue grant monies and other funding sources for public infrastructure improvements (Implementation Measure 2.1.3.2). Policy 2.1.4 serves to consider annexations to improve the City's economic base and contribute to quality development. Within this policy implementation measures will evaluate all proposed annexations to determine the urban services necessary and whether or not the revenues from the annexation area will pay for those services (Implementation Measure 2.1.4.1), and evaluate existing infrastructure in prospective annexation areas to determine the costs necessary to bring such infrastructure up to City standards (Implementation Measure 2.1.4.2). Goal #3 provides for ample City services including infrastructure. Objective 3.1 serves to permit development in appropriate land use areas and provide for infrastructure. Policy 3.1.1 provides mechanisms through which development can pay the cost of its infrastructure and services needs. The policy's implementation measures serve to collect and apply development fees to pay for infrastructure as identified in the capital improvement program (Implementation Measure 3.1.1.1), review and add projects to the capital improvement plan as necessary (Implementation Measure 3.1.1.2), require new development to pay the capital costs of facilities to serve the developments (Implementation Measure 3.1.1.4), and continue to contact special districts as necessary when new projects are proposed to ensure service capability to serve the new projects (Implementation Measure 3.1.1.5).

In addition to the General Plan 2030 Land Use Element goals, objectives, policies and implementation measures, and Municipal Code sections, Mitigation Measures HWQ-1 through HWQ-3, presented in Section 5.8 Hydrology and Water Quality, have been formulated in order to ensure that drainage facilities for new projects through the General Plan 2030 period are evaluated. The mitigation measures are presented in Section 5.8.6, and below, and address the requirements for the evaluation of drainage requirements for individual projects with developer payment responsibility, regional public projects, and updating of the 1992 Master Plan of Drainage.

Impact Summary: Future growth projected by the proposed General Plan 2030 will exceed the capacity of planned drainage systems resulting in uncontained runoff including sources of polluted runoff. The existing 1992 Master Plan of Drainage is outdated. The proposed General Plan 2030 Land Use Element contains goals, objectives, policies and implementation measures which evaluate the need for project specific infrastructure improvements (including new development, redevelopment, and annexation), methods of assuring and acquiring adequate sources of development fees are collected, that improvements are planned for in capital improvement programs, and that contacts with special districts continues as necessary for new developments. The Municipal Code provides means for procedures for storm drainage fund collection, and identifies failure or neglect to properly operate or maintain any irrigation structure as unlawful. In addition, Mitigation Measures HWQ-1 through HWQ-3 address the requirements for the evaluation of drainage requirements for individual/local and regional projects with determination of payment responsibility, and proposed updating of the 1992 Master Plan of Drainage. With implementation of the General Plan 2030 goals the means for expanding infrastructure combined with the Municipal Ordinance codes and mitigation measures, impacts to storm water drainage systems within the Planning Area under the General Plan 2030 are expected to be less than significant.

Impact Finding: Less than Significant.

5.16.4.5 Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

As discussed in Section 5.16.4.2, above, in July 2008, Carollo Engineers prepared a Technical Memorandum to present projected water demands through 2030 based on draft general plan land uses, provide current information on future supply sources planned by the City, and determine availability of supplies to meet demands.²² Demands within the District are projected to increase from 27,602 acre feet per year (afy) in 2005 to approximately 79,100 afy by 2030. Recent economic conditions may result in a lower rate of growth which would extend these projections beyond 2030.

The City is currently pumping beyond the safe yield of the aquifer to meet its water demand, requiring replenishment fees or purchase of water rights from other agencies in the sub-basin. The District is planning projects to mitigate the additional pumping, however, pumping beyond the safe yield will be necessary until the acquisition of additional water entitlements occurs along with storage (e.g., groundwater storage) to increase the reliability of this new supply. It should also be noted that the additional groundwater pumping is expected to increase the basin overdraft and could reduce groundwater levels such that the basin capacity is reduced.

²² Carollo Engineers. Final Water Supply Assessment. Draft General Plan. July 2008.

The City is moving forward with plans to use SWP water to recharge the groundwater basin and has conducted pilot recharge projects to determine the feasibility of variations of this supply option. The Oro Grande Wash Recharge Project will take water from the SWP aqueduct into percolation ponds. The water then percolates into the groundwater basin, increasing local supplies. Piloting has indicated that percolation is a feasible method to replenish the aquifer. The Oro Grande Wash Recharge Project will be fully operational by 2015, augmenting the aquifer with 8,000 afy of surface supply.

The Regional Recharge and Recovery Project, or R3, was studied for feasibility and found to be an effective method of increasing groundwater supplies. MWA will construct percolation ponds and extraction wells along the Mojave River. The wells will discharge into a distribution system that will serve the Town of Apple Valley, City of Hesperia, City of Victorville, City of Adelanto, and unincorporated areas of San Bernardino County. R3 is anticipated to be fully operational by 2015 augmenting the District supply with 12,000 afy of SWP supply.

Groundwater injection through the aquifer storage and recovery (ASR) is already in place. Wells are currently injecting treated SWP water in partnership with the High Desert Power Project.

The City is planning for a 50 mgd water treatment plant by 2020. The new facilities would allow the City to treat raw SWP water from the California Aqueduct and directly distribute the treated water to its customers. As with the recharge projects, SWP supply would be obtained through MWA, the SWP contractor. Several sites for the facilities are being considered at this time; the decision will be based on the best hydraulically suited site, taking into account land availability. This new treatment plant will be operated conjunctively with groundwater wells providing a base supply of water to reduce pumping.

Voluntary or enforced water conservation measures, such as water use education and low flow plumbing fixtures, will contribute to a decrease in existing water consumption and a lower water demand for new customers (not to be confused with increasing water demand factors which reflect increasing demands on a per acre basis due to infill and higher densities of new uses). The City currently has a number of conservation programs in place and is considering additional programs.

According to the UWMPs, demands could be reduced up to 50 percent during a supply shortage of 36% to 50% (which is also referred to as a Stage 3 water shortage), however, to be conservative it was assumed that up to 22% reduction would be implemented during multiple dry years as well as a single dry year, less if supply is available as in 2020. A 22% reduction in demands for multiple dry years is more realistic to achieve due to the difficulty and hardships associated with a 50 percent reduction in demands.

The City has planned sufficient water supply projects to meet demands through 2030 under each supply condition. This conclusion is based on the following assumptions:

- Demand estimates for year 2030 as presented herein are accurate.

- Target demand reductions during single and multiple dry years can be met.
- Supply sources will reliably provide the amount of water presented here.
- The Regional Recharge and Recovery Project (R3) will be online by 2015 and provide 12,000 afy.
- The Oro Grande Wash Recharge Project will be online around 2011 (assumed here by 2015) and provide 8,000 afy.
- Sufficient imported SWP entitlements can be secured by 2020 to deliver up to 44,806 afy of treated water during normal years, 33,156 afy during single dry years, and 17,519 afy during multiple dry years.

Greater aerial coverage of lands planned for urban uses per the draft general plan may be supplied with potable water in the future under different assessment assumptions. Increased availability of planned potable supplies would result from additional conservation programs and the implementation of recycled water projects.

The Municipal Ordinance contains provisions for water conservation and recycling in Chapter 13.60 of the City Municipal Code, *Water Conservation*. Such code provisions include chapters 13.60.030 *Drought tolerant plants*, 13.60.040 *Prohibited water uses and water waste*, 13.60.050 *Limitation on water intensive landscape and turf areas within new nonresidential facilities*, 13.60.060 *Limitations on model home and new residential development landscaping*, and 13.60.080 *Drought management plan implementation*. Water conservation reduces water use and waste, and aids in maintaining groundwater resources. Also, the potential for runoff to contain or obtain pollutants which may enter the groundwater system is reduced.

Without proper planning and conservation to meet the Planning Area's future population and land use demand, the supply of water within the aquifer may not be sufficient to keep up with the consumer demands. Proposed General Plan 2030 Resources Element Goal #1 serves to provide for a sufficient and safe water supply. Objective 1.1 will reduce the rate of groundwater extraction for municipal water supply to no more than 80% of 2006 levels by 2012, and maintain that level over the long term. To support this Policy 1.1.1 will require water conservation measures for new development and major redevelopment. This policy's implementation measures offer incentives for projects that demonstrate significant conservation or innovative techniques (Implementation Measure 1.1.1.1); revise development standards in City regulations and codes to include conservations measures to be incorporated into development (Implementation Measure 1.1.1.2); and maintain xerophytic plant information available to the public (Implementation Measure 1.1.1.3). Policy 1.1.2 will penalize high volume wasteful water practices. Policy 1.1.3 will support conversions of wasteful water practices to water conserving practices, and Implementation Measure 1.1.3.1 will convert City-owned landscaping to xerophytic palettes and replace inefficient irrigation systems. Objective 1.2 will expand sources of water supply and delivery systems through alternatives to groundwater extractions. Policy 1.2.1 will support VVWA's development and expansion of recycled wastewater treatment and delivery for appropriate uses, and Implementation Measure 1.2.1.1 will conduct planning to for incorporating recycled wastewater infrastructure into the City's existing and future street network. Policy 1.2.2 will participate in regional efforts to acquire imported water from the SWP along with "water

wheeling” from appropriate sources. Implementation Measure 1.2.2.1 will conduct engineering to identify turnout locations from the California Aqueduct to deliver future SWP waters. Objective 1.3 is proposed to protect ground water quality. Policy 1.3.1 requires new development and major redevelopment projects to prepare and implement water quality management plans that incorporate BMPs to minimize, control and filter construction site runoff and various forms of developed site urban runoff, prior to discharge to receiving waters. Its implementation measures support the policy by assigning qualified professionals to conduct plan checks (Implementation Measure 1.3.1.1), and to assess and mitigate impacts on surface and groundwater quality as a routine aspect of the City’s CEQA process (Implementation Measure 1.3.1.2).

Other State regulations also apply to assure that sufficient water is available for new large developments. As discussed in Section 5.8.2.2 above, per SB 221, City approval of residential subdivisions that would consume an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project require an affirmative written verification of sufficient water supply. Under SB 610, water supply assessments (WSAs) must be furnished to local governments for inclusion in any CEQA documentation for certain large projects. For those projects, the WSA must be requested from the local water provider by the City considering the project at the time the City determines that CEQA is required. The WSA must include specific information, as detailed in the legislation, including an identification of existing water supply entitlements and contracts. If groundwater is anticipated as a source of water, the assessment must contain additional information.

Impact Summary: While the City has planned for sufficient water supply projects to meet demands through 2030 under normal, single dry year, multiple dry years, it must be able to meet its assumptions for proper planning and conservation, including that demand estimates and target demand reductions are met; planned water treatment plants and wells are constructed, that the Regional Recharge and Recovery project (R³) will be online by 2015 and that sufficient imported entitlements for SWP water can be secured. In addition to the water conservation and recycling measures provided in the Municipal Code, with implementation of the General Plan 2030 policies and objectives for water planning, conservation and groundwater protection, potential adverse impacts of the depletion of groundwater supplies or interference with groundwater recharge would be less than significant.

Impact Finding: Less than Significant.

5.16.4.6 Be served by a landfill with sufficient permitted capacity to accommodate the project’s solid waste disposal needs?

Impact Discussion: The Victorville Landfill property area is approximately 491 acres in total, with an approximately 80-acre parcel currently in use for landfill operations. In 2006, approximately 422,375 tons of solid waste were delivered to the landfill. It currently is

accepting approximately 1,180 tons per day. Current expansion plans, as summarized in the “Joint Technical Document” (JTD) prepared by San Bernardino County Solid Waste Management Division, increase the landfilling “footprint” from the current 67 acres to approximately 341 acres; increase the maximum elevation of the landfill to 3,182 feet; and increase peak flow to 3,000 tons per day. This planned expansion extends the anticipated life of the landfill to the year 2047 and provides capacity for approximately 37 million tons of refuse.

The City entered into a Waste Disposal Agreement (WDA) in 1998 with San Bernardino County. The term of the Agreement is for 15 years (through 2013). It requires the City to deliver its controllable waste (waste collected under City control) to the County Landfill. This includes waste collected by the City’s franchised hauler, Victorville Disposal, and residue from the City’s Materials Recovery Facility (MRF), as well as waste hauled by City vehicles (e.g. Public Works trucks). The WDA obligates the County to provide disposal capacity at its Victorville Landfill, or to transfer the material to another facility.

The Municipal Code, Chapter 6.36 *Garbage Regulations*, includes the City’s provisions for solid waste handling services including, but not limited to, the collection, transfer and disposal of solid waste within the City, including recycling and solid waste processing services, which may include recycling of solid waste from any or all premises within the City (6.36.020 Declaration of policy). Further details are provided in Chapters 6.36-030 through 6.36.160. Chapter 6.36.040 identifies those persons (including authorized agents, servants and employees, or any contractors) authorized to collect, transport, dispose of, etc., garbage, etc. Chapter 6.36.045 identifies those persons (including authorized agents, servants and employees, or any contractors) authorized to provide recycling and solid waste processing services.

Within the proposed General Plan 2030 Land Use Element, Goal #3 – Ample City Services – Ensure Provisions of Adequate City Services and Infrastructure, Objective 3.1, Policy 3.1.1, serves to provide mechanisms through which development can pay the cost of its infrastructure and services needs. The supporting implementation measures serve to collect and apply development impact fees to pay for infrastructure improvements as identified in the capital improvement plan, to review and add projects to the capital improvement plan to ensure the orderly growth, to require new development to pay the capital costs of public facilities and services needed to serve those developments, and to service providers when new projects are submitted to ensure their capability to serve the new projects.

Impact Summary: Project developments within the Planning Area need to be served by a landfill with sufficient capacity to avoid impacts to the environment and the health and safety of the local community. The Victorville Landfill has expansion plans that extend the anticipated life of the landfill to the year 2047 included increased operations to cover the planned area-wide growth. The City has a Waste Disposal Agreement good through year 2013 with the County who operates the landfill, which requires the City to deliver its controllable waste (waste collected under City control) to the County Landfill. The City also operates a Materials Recovery Facility which helps to reduce waste delivered to the landfill. The Municipal Code includes the City’s provisions for solid waste handling services including,

but not limited to, the collection, transfer and disposal of solid waste within the City, including recycling and solid waste processing services, which may include recycling of solid waste. Goal #3 within proposed the General Plan 2030 Land Use Element, includes a policy and its implementation measures which provide mechanisms through which development can pay the cost of its infrastructure and services needs. Therefore, impacts associated with the Planning Area being served by a landfill with sufficient permitted capacity to accommodate the future solid waste disposal needs under the General Plan 2030 are expected to be less than significant.

Impact Finding: Less than Significant.

5.16.4.7 Comply with federal, state and local statutes and regulations related to solid waste?

Impact Discussion: State law AB 939 requires all California communities to plan and implement programs to reduce the amount of waste sent to landfill by 50% by the year 2000 and beyond. In support of this program the City of Victorville has established a number of recycling programs for its residential and commercial customers. Materials targeted for collection include papers, bottles, cans, and plastic containers. The City also has collection programs for brush and wood waste from commercial customers and City facilities. These materials are taken to the privately operated California BioMass composting facility located on Shay Road in Victorville.

The City of Victorville, along with the Town of Apple Valley co-own the Victor Valley Materials Recovery Facility (MRF). The MRF serves the City by reducing waste in order to comply with the requirements of state law AB 939. The facility has a residential curbside recycling program and business recycling programs. The facility also processes recyclables from adjacent communities and serves as a drop off and recycling buy-back center for residents and businesses.

Chapter 6.36 of the Municipal Code, *Garbage Regulations*, includes the City's provisions for solid waste handling services including, including recycling services, which may include recycling of solid waste from any or all premises within the City (6.36.020 Declaration of policy). Chapter 6.36.045 identifies those persons (including authorized agents, servants and employees, or any contractors) authorized to provide recycling and solid waste processing services.

Within the proposed General Plan 2030 Land Use Element, Goal #3 – Ample City Services – Ensure Provisions of Adequate City Services, Objective 3.1, Policy 3.1.1, serves to provide mechanisms through which development can pay the cost of its service needs. The supporting implementation measures serve to collect and apply development impact fees to pay for service improvements as identified in the capital improvement plan, to review and add projects to the capital improvement plan to ensure the orderly growth, to require new

development to pay the capital costs of public services needed to serve those developments, and to service providers when new projects are submitted to ensure their capability to serve the new projects.

Impact Summary: In compliance with State law AB 939, to reduce the amount of waste sent to landfill by 50% by the year 2000 and beyond, the City of Victorville has established a number of recycling programs and operates its Materials Recovery Facility. The Municipal Code includes the City's provisions for solid waste handling services including, recycling and solid waste processing services, which may include recycling of solid waste. Goal #3 within proposed the General Plan 2030 Land Use Element, includes a policy and its implementation measures which provide mechanisms through which development can pay the cost of its services needs. Therefore, impacts associated with the Planning Area being compliant with applicable regulations (local) related to solid waste under the General Plan 2030 are expected to be less than significant.

Impact Finding: Less than Significant.

5.16.5 Cumulative Impacts

Impact Discussion: Project developments within the Planning Area need to have sufficient wastewater treatment services, storm water drainage facilities, sufficient water supplies and be served by a landfill with sufficient capacity to avoid impacts to the environment and the health and safety of the local community. Compliance with and conformity to adopted plans and policies, including those within the General Plan 2030, are intended to ensure that future development occurs in a manner compatible with adjacent and surrounding planned land uses. The Resources, Safety, Land Use, and Circulation Elements of proposed General Plan 2030 contain provisions intended to identify and reduce impacts resulting from inadequate utilities and service systems could threaten the health, safety, and property of the residents living and working in the Victorville Planning Area. It emphasizes City consistency with regional planning efforts to: (1) provide for sufficient wastewater treatment including expansion plans for the 20-year planning period; (2) provide sufficient storm drainage infrastructure; (3) provide sufficient water supplies including conservation, water reclamation, recycling, development of alternative sources of water, and protection of groundwater quality; and (4) work with regional landfill planning and expansion efforts to reduce waste, and provide materials recycling in compliance with local regulations. Provisions of the Municipal Code also serve to reinforce most of the proposed General Plan 2030 provisions. To further support these provisions, Mitigation Measures HWQ-1 through HWQ-3 (from Section 5.8) have been formulated in order to ensure that drainage facilities for new projects through the General Plan 2030 period are evaluated, payment methods are assured and that the Master Plan of Drainage is updated. As a result, further intensification of the Planning Area and

region is not expected to create a significant adverse cumulative impact on the region's existing utilities and service systems

Impact Summary: Compliance with and conformity to adopted plans and policies, including those within the General Plan 2030, and recommended mitigation measures will help to mitigate the potential cumulative impacts produced by the potential impacts to utilities and service systems associated with future development within the Planning Area.

Impact Finding: Less than Significant.

5.16.6 Mitigation Measures - Reference Section 5.8.5, Mitigation Measures HWQ-1, HWQ-2 and HWQ-3.

5.16.7 Level of Significance After Policies/Mitigation Measures – Less than Significant.

Chapter 6.0.

OTHER CEQA CONSIDERATIONS

This Section summarizes long-term implications of the project should it be implemented and addresses other environmental considerations and topics mandated under CEQA. These topics include Growth-Inducing Impacts, Significant Impacts including Cumulative Impacts and Significant and Unavoidable Environmental Effects of the project, Mandatory Findings of Significance, and Significant Irreversible Environmental Changes that would be caused by adoption and implementation of the General Plan 2030 project.

6.1 GROWTH-INDUCING IMPACTS

Pursuant to Section 15126.2 (d) of the CEQA Guidelines, growth-inducing impacts are the ways, in which a proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are direct and indirect growth-inducing impacts, including projects that remove obstacles to population growth (a major expansion of a waste water treatment plan). Increases in population that tax existing community service facilities, requiring construction of new facilities with significant effects may also be growth inducing. It must not be assumed that growth in any area is necessarily beneficial, detrimental or of little significance to the environment.

6.1.1 Types of Growth-Inducing Impacts

Direct growth-inducing impacts occur when a project would remove obstacles to population growth. (A major expansion of a wastewater treatment plant or a new road into an undeveloped area might, for example, increase economic or population growth). These types of growth-inducing projects may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects.

Indirect growth-inducing impacts occur when a project encourages or facilitates other activities that could cause significant environmental effects. (A new residential subdivision in a previously undeveloped area might, for example, generate the need for new commercial development, public schools and subsequently new roads.)

6.1.2 Project Growth-Inducing Impacts

The proposed General Plan 2030 project consists of the following components:

The Project consists of five primary components:

1. General Plan 2030 which would comprehensively update and supersede the City's current General Plan, with the most significant change to land use being the provision of larger commercial corners at major intersections, and a circulation plan to implement it. This includes deletion of the Old Town and SCLA Elements which are included in the existing General Plan; and
2. Rezoning of the unincorporated County islands to include Mountain View Acres North and South and the Coad Road area, and rezoning of the City's existing northern sphere area to include 2,049 acres of land adjacent to the existing sphere. All of the existing northern sphere is to be zoned Specific Plan upon annexation into the City; and
3. Extension of the City Sphere of Influence to include the Northern Expansion Area of approximately 37,000± acres and the Victorville Water District Sphere of Influence to be coterminous with the proposed City Sphere of Influence; and
4. Expansion of the Victorville Water District boundary to be coterminous with the northern sphere rezoning; and
5. Deletion of the Midtown and Southdown Industrial Specific Plans.

Of these project components, the General Plan 2030, the rezoning of the existing northern sphere, the extension of the SOI to include the Northern Expansion Area and the expansion of the Victorville Water District are growth inducing. These components of the project would provide new urban land use designation for the existing northern sphere and Northern Expansion Area, provide for new roads to serve the Northern Expansion Area as well as other City and regional growth, and expand the water district boundaries to provide water service to the Northern Expansion Area. These changes would provide for new development within the 99,253 acre Planning Area, of which approximately 25,000 acres are developed today.

The historical pattern of growth from 1990 to 2008 for the City has been from 15,627 housing units in 1990 to 34,876 units in 2008 (1,063 annually) and a population growth from 40,674 in 1990 to 107,408 in 2008 (3,707 annually)¹. Growth has been much faster since 2001 to 2008, with 22,498 housing units and 64,209 populations in 2001. This increase translates to 2,272 units annually and a population increase of 5,400 annually.

According to the draft General Plan 2030 Housing Element, at buildout, the proposed Land Use Element would result in an estimated 138,617 units in the Planning Area. This represents a 276% increase in housing supply over the 2007 count of 36,797 dwelling units. This increase translates into approximately 4,500 units annually.

Similarly, the proposed Land Use Element will increase commercial and industrial acreage within the City from approximately 9,800 acres to an estimated 14,000 acres in 2030. Undoubtedly, the emergence of Southern California Logistics Airport is one of the primary factors spurring growth and development within the City beyond historical patterns. As shown

¹ The data is from *Table E-8: City/County/State Population and Housing Estimates 4/1/1990 to 4/1/2000* and *Table E-3 Table E: City/County Population Estimates, 2008, State of California, Department of Finance, May 2008.*

in Section 5.12, SCAG projections for the City are substantially lower than buildout of General Plan 2030.

General Plans, by their very nature, are growth-inducing because they address future land use designations and development within their jurisdiction. However, with proper planning and implementation, the goal is to balance growth with the required infrastructure and services required for future development. General Plan 2030 is designed to both accommodate future growth, and to provide the needed infrastructure and public services so the growth is accommodated while minimizing adverse environmental impacts. Therefore, the General Plan 2030 is designed to encourage housing and employment opportunities with adequate infrastructure and services for its current and future residents.

Specifically, the following issues have been considered in evaluating the growth-inducing aspects of General Plan 2030:

1. The Circulation Plan will accommodate the projected trips generated by the proposed Land Use Plan.
2. The Water Supply Assessment will accommodate the projected water demand and supply needed for the proposed Land Use Plan.
3. The storm drainage and wastewater requirements will be accommodated through proposed General Plan policies and recommended mitigation measures promulgated in this EIR.
4. The Resource Element will accommodate the projected park and recreational needs for future residents.
5. The Safety Element will accommodate the projected public service and emergency service needs for future residents, business persons and travelers.
6. The City will coordinate with local school districts to accommodate the projected students residing in future housing developments associated with the Land Use Plan.
7. The increased impervious areas created by development of the proposed Land Use Plan are not expected to impact existing floodplain areas.

The technical analyses completed for General Plan 2030 has not identified any issues where development will impose “spillover” or ancillary adverse impacts for adjacent areas outside of the City. Examples of such effects including increasing employment without increasing roadway capacity or housing opportunities within the City, allowing development in perimeter areas without extending public services, or overcrowding schools by increasing the housing stock without increasing enrollment capacity.

Outside forces, beyond the City’s control, also exert growth-inducing impacts in the area and region. These factors include increased traffic on Interstate 15 and the regional need for Southern California Logistics Airport services.

In conclusion, while General Plan 2030 is growth-inducing, measures recommended to reduce adverse public service and utility impacts of the project will reduce the plan's growth inducing effects to the extent feasible. General Plan 2030 does have growth-inducing effects relative to regional population and housing growth (reference Section 5.12), which are significant and unavoidable.

6.2 SIGNIFICANT ENVIRONMENTAL IMPACTS

Significant environmental impacts include cumulative impacts and impacts that cannot be avoided include any significant impacts, including those that can be mitigated but not reduced to a level of insignificance. Section 5.0, above, discusses expected significant environmental impacts associated with the proposed the General Plan 2030.

6.2.1 Significant Environmental Impacts

The analyses presented in this EIR finds that the project will result in significant adverse impacts relative to the following environmental topics, discussed in detail in Section 5.0 of this EIR:

1. **Aesthetics:** Potential impacts related to scenic visual resources; visual character and quality and light and glare.
2. **Agricultural Resources:** Potential, but less than significant, impacts related to conversion of prime farmlands; agricultural contracts; and agricultural zoning.
3. **Air Quality:** Potential impacts related to conflicts with applicable air quality plans; violations of air quality standards; significant contribution to greenhouse gases; impacts to sensitive receptors; cumulatively considerable increases in criteria pollutants; objectionable odors; cumulative air quality impacts.
4. **Biological Resources:** Potential impacts related to sensitive habitat or species; riparian habitat or other sensitive natural communities; federally protected wetlands; conflicts with local policies or ordinances protecting biological resources; conflicts with the provisions of an adopted Habitat Conservation Plan; cumulative impacts to biological resources.
5. **Cultural Resources:** Potential impacts relative to historical resources; archaeological resources; paleontological resources; and human remains.
6. **Geology and Soils:** Potential impacts related to earthquake faults and seismic-related shaking or ground failure; substantial soil erosion or the loss of topsoil; on-or off-site landslide, lateral spreading, subsidence, liquefaction or collapse; expansive soils; soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems; cumulative impacts related to geology and soils.

7. Hazards and Hazardous Materials: Potential impacts related to the routine transport, use, or disposal of hazardous materials; reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment; presence of hazardous materials substances, or waste within one-quarter mile of an existing or proposed school; location on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5; be located within an airport land use plan; be located within the vicinity of a private airstrip; impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; cumulative impacts related to hazards and hazardous materials.
8. Hydrology and Water Quality: Potential impacts related to violation of water quality standards or waste discharge requirements; substantial depletion of groundwater; substantially alteration of the existing drainage pattern resulting in erosion; substantially alteration of the existing drainage pattern resulting in flooding; contribute to runoff water which would exceed the capacity of existing or planning stormwater drainage systems or provide substantial additional sources of polluted runoff; place housing within a 100-year flood hazard area; place within a 100-year flood hazard area structures which 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 or mudflow; cumulative impacts related to hydrology and water quality.
9. Land Use and Planning: Potential impacts related to the physical division of an established community; conflict with local and regional plans; conflict with the proposed West Mojave Plan; and cumulative land use and planning impacts.
10. Mineral Resources: Potential impacts related to the loss of availability of a known mineral resource; 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.
11. Noise: Potential impacts related to exposure of persons to or generation of noise levels in excess of established standards; exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels; substantial permanent increase in ambient noise levels; substantial temporary or periodic increase in ambient noise levels; impacts related to an airport land use plan; impacts related to a private airstrip; cumulative noise impacts.
12. Population and Housing: Potential impacts relative to substantial population growth in an area; displacement of substantial numbers of existing housing; displacement of substantial numbers of people.
13. Public Services: Potential impacts related to substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered government facilities, including: Fire protection; Police protection; Schools; Parks; Other public facilities.

14. Recreation: Potential impacts related to the increased use of existing parks or other recreational facilities; inclusion of recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse effect on the environment; cumulative impacts relative to recreation.
15. Transportation and Traffic: Potential impacts related to an increase in traffic, which is substantial in relation to the existing traffic load and capacity; exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency; result in a change in air traffic patterns that results in substantial safety risks; substantial safety risks; roadway design hazards; parking capacity; alternative transportation; cumulative traffic impacts.
16. Utilities: Potential impacts related to exceedence of wastewater treatment requirements; 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; result in inadequate wastewater treatment capacity; require construction of new storm water drainage facilities or expansion of existing facilities; have sufficient water supplies; be served by a landfill with sufficient permitted capacity; comply with federal, state, and local statutes and regulations related to solid waste; cumulative impacts relative to utilities.
17. Energy: Implementation of a Green Building Code (referenced Section 8.0).

Because of the scope of the proposed General Plan 2030 project, all topics discussed were found to have at the least “less than significant impacts”. For Agricultural Resources, the EIR finds that proposed General Plan 2030 provisions would not alter existing conditions related to agricultural resources, and that no mitigation measures are required. For Geology and Soils, the EIR finds that potential impacts are expected to be fully mitigated through proposed General Plan 2030 provisions and existing City policies. For most of the other listed potential impacts, the EIR finds that potential impacts are expected to be mitigated through proposed General Plan 2030 provisions and existing City policies. Where these provisions and policies only partially mitigate an impact, the EIR recommends mitigation measures expected to reduce these impacts to less than significant levels.

However, four of the environmental topics assessed in the EIR have impacts for which no feasible mitigation measures have been identified, and consequently, will not be reduced to levels less than significant. These include: Air Quality - permanent increases in ambient noise and cumulative impacts; Population and Housing - substantial growth and cumulative impacts; Noise - permanent increases in ambient noise and cumulative impacts; and Traffic - exceedences of established traffic level of service thresholds and cumulative impacts.

6.2.2 Cumulative Impacts

“Cumulative impacts” refers to two or more individual effects, that when considered together, compound or increase other environmental impacts. Cumulative impacts may apply to General

Plan 2030 solely (e.g. significant effects from two or more effects that individually are not significant effects) or cumulative impacts from multiple projects.

General Plan 2030, as are all General Plans, are unique in the scope of their analysis and the magnitude of potential project impacts. This situation is magnified when the geographical area of the General Plan is being expanded. As discussed in Section 4.6, because the scope of the Project encompasses build-out of the Planning Area, the cumulative analyses presented throughout this EIR attempt to incorporate all current and future projects within the Planning Area, as well as major projects currently proposed in adjacent communities. Cumulative projects considered in the preparation of the City traffic model and used as the basis for the traffic, air quality and noise assessments presented in this EIR, also encompass planned Victor Valley and regional growth.

As discussed above, this EIR finds that the project could have potentially significant cumulative impacts related to air quality, noise, population and housing and traffic. The recommended mitigation measures reduce these cumulative impacts, but not to a less than significant level. Therefore, a Statement of Overriding Considerations is required for the identified cumulative impacts.

6.2.3 Significant Environmental Impacts That Cannot Be Avoided

Section 15126(b) of the *CEQA Guidelines* requires an EIR to “describe any significant impacts, including those, which can be mitigated but not reduced to a level of insignificance. Where there are impacts that cannot be alleviated without imposing an alternative design, their implications and the reasons why the project is being proposed, notwithstanding their effect, should be described.”

As discussed above, Section 5.0 of this EIR provides a description of the potential environmental impacts of the proposed project and recommends mitigation measures to reduce impacts to a less than significant level, when feasible.

However, after implementation of proposed General Plan 2030 provisions and the recommended mitigation measures, some of the potentially significant impacts associated with the proposed project are not reduced to a less than significant levels. These issues require a Statement of Overriding Considerations and include the following:

1. Air Quality - permanent increases in ambient noise and cumulative impacts;
2. Population and Housing - substantial growth and cumulative impacts;
3. Noise - permanent increases in ambient noise and cumulative impacts
4. Traffic - exceedences of established traffic level of service thresholds and cumulative impacts.

6.3 Mandatory Findings of Significance

Regarding “Mandatory Findings of Significance”, as defined in the project Initial Study (Reference Appendix A), with the inclusion of recommended mitigation measures, the project is not expected to degrade the quality of the environment, including substantial reduction in the habitat or numbers of a fish or wildlife species.

The project is expected to adversely affect human beings, either directly or indirectly, specifically in regard to traffic, noise and air quality conditions. As such, the project does result in a Mandatory Finding of Significance.

The project is not expected to contribute to impacts that are individually limited but potentially cumulatively considerable, specifically in regard to issues such as aesthetics, cultural resources, noise, biological resources, and public services and utilities. Consequently, project impacts, relative to mandatory findings of significance for these issues, is less than significant.

6.4 Significant Irreversible Environmental Changes

Significant irreversible environmental changes that would be caused by a proposed project should it be implemented are defined by Section 15126.2 (c) of the CEQA Guidelines. These changes include large commitments of nonrenewable resources, which because of the size and duration of use of such resources make removal or nonuse thereafter unlikely. Types of projects that might use large commitments of nonrenewable resources are new large-scale mining operations or highway improvements through previously undeveloped land. This CEQA Guideline also includes irreversible damage that could result from environmental accidents associated with a project.

Approval of the proposed project would cause the following irreversible environmental changes:

- Grading and development of previously undisturbed land.
- Utilization of various new raw materials (such as lumber, sand and gravel) for project construction.
- Consumption of energy to develop and maintain the project.
- Incremental increase in vehicular activity in the surrounding circulation system, resulting in associated incremental increases in air pollutant emissions and noise levels.

Based on the CEQA definition of significant irreversible environmental changes, the project would include large commitments of nonrenewable resources, which of the size and duration of

use of such resources makes removal or nonuse thereafter unlikely. The project will require substantial amounts of lumber, sand and gravel, and consumption of energy.

The project will not involve the use of potentially hazardous materials that could result in environmental accidents and irreversible damage.

Chapter 7.0.

ALTERNATIVES

This section is prepared pursuant to *CEQA Guidelines, Section 15126*, which specifies that an EIR shall describe reasonable alternatives to the project, or to the location of the project, which could feasibly attain most of the objectives of the project, and could avoid or substantially lessen one or more of the significant effects of the project. The discussion should allow meaningful evaluation, analysis and comparison of the alternatives with the proposed project. Among the factors that may be taken into account when assessing the feasibility of project alternatives are site suitability, land use consistency and economic viability.

The project alternatives selected for evaluation includes the No-Project alternative and four additional project alternatives. Alternative 1, the No-Project alternative, includes the existing site conditions, and assumes no new development would occur onsite. Alternative 2, Buildout of the Existing General Plan, projects development of the land use designations in the current General Plan. Alternative 3, the Reduced Density in 2030 alternative, proposes that all land use density proposed in General Plan 2030 (the project) be reduced by 20 percent.

Alternative 4, Land Use Alternative A, proposes substantial increased in Very Low Residential land use (22,947 acres) compared to General Plan 2030 (8,152 acres). Finally Alternative 5, Land Use Alternative B, also increases the acreage for Very Low Residential (14,098 acres) in comparison to General Plan 2030 and increases the acreage for Open Space from 22,536 acres to 33,259 acres. Alternatives 4 and 5 are based on conceptual land use plans.

While Alternative 2 includes only the 46,791 acres in the current General Plan, the remaining alternatives address land uses for 99,253 acres.

In accordance with the *CEQA Guidelines*, the primary focus for comparison among the project alternatives is on the potentially significant impacts that could result from project implementation. Accordingly, this analysis covers each of the environmental topics discussed in the EIR that require mitigation. These are each of the environmental topics address in Section 5.0 including:

1. Aesthetics
2. Agricultural Resources
3. Air Quality
4. Biological Resources
5. Cultural Resources

6. Geology and Soils
7. Hazards and Hazardous Materials
8. Hydrology and Water Quality
9. Land Use and Planning
10. Mineral Resources
11. Noise
12. Population and Housing
13. Public Services
14. Recreation
15. Transportation/Traffic
16. Utilities and Service Systems.

Section 6.0 identifies other CEQA impacts related to growth inducement, mandatory findings of significance, and significant irreversible environmental changes. Section 8.0 identifies potential energy conservation impacts related to the implementation of Green Building Ordinance.

Focus of the alternatives discussion is on those impacts for which a Statement of Overriding Considerations (SOC) is required. These include:

1. Air Quality - permanent increases in ambient noise and cumulative impacts;
2. Population and Housing - substantial growth and cumulative impacts;
3. Noise - permanent increases in ambient noise and cumulative impacts
4. Traffic - exceedences of established traffic level of service thresholds and cumulative impacts.

The project also is expected to result in unavoidable impacts relative to growth inducement; mandatory findings of significance that would adversely affect human beings, either directly or indirectly, specifically in regard to traffic, noise and air quality conditions; and significant irreversible environmental changes based on the project's expected large commitments of nonrenewable resources.

7.1 Project Alternative Comparison Matrix

Table 7-1, below, compares characteristics of the project and project alternatives in a matrix format. Project alternatives are selected and compared to permit a reasoned choice regarding their environmental impacts. Consequently, the ability of an alternative to meet the City's

General Plan objectives is included in the evaluation. As noted in Section 3.3, the primary objectives of the project are as follows:

- Update the General Plan to comply with applicable federal, state and regional policies.
- Prepare a General Plan that responds to Victorville’s current planning context and its vision for future balanced growth.
- Promote logical and orderly development in already urbanized and currently undeveloped areas of the Victorville Planning Area.
- Establish community service priorities and promote cohesive master planning of infrastructure.
- Link land use, transportation, and infrastructure, and ensure that General Plan policies are mutually supportive, internally consistent.
- Preparing a General Plan that is easy to use.

The need for mitigation under each alternative is identified. Based on these evaluations, the project and each of the five alternatives are ranked from “1” to “5” in terms of their environmental superiority (“1” being the highest).

Information presented in Table 7-1 for existing conditions and the project is derived from the City Traffic Model. For alternatives not considered in the Traffic Model, information is generated based on a percentage of existing conditions or the project, as applicable.

Table 7-1 Project Alternatives Matrix						
Item/Issue	Project General Plan 2030	Alternative 1 No Project (Existing Conditions)	Alternative 2 Existing General Plan	Alternative 3 Reduced Density	Alternative 4 Land Use Plan A	Alternative 5 Land Use Plan B
Statistical Comparisons						
Total Acres	99,253	22,577	46,791	99,253	99,253	99,253
Total Units	138,617	33,509	81,149	110,893	105,760	116,200
Population	426,300	107,395	238,553	328,672	368,800	344,900
C/I Total Sq. Ft. (000)	94,242	23,552	91,751	75,394	93,270	92,646
Total Trips	2,653,414	819,014	1,244,901	1,600,000	2,024,464	2,224,307
Total Employees	109,750	28,373	32,500	87,800	106,700	107,200
Jobs/Household	0.792	0.847	0.699	0.792	1.009	0.923

Table 7-1 Project Alternatives Matrix						
Item/Issue	Project General Plan 2030	Alternative 1 No Project (Existing Conditions)	Alternative 2 Existing General Plan	Alternative 3 Reduced Density	Alternative 4 Land Use Plan A	Alternative 5 Land Use Plan B
Environmental Comparisons						
Traffic (SOC) LOS E, F Intrstn	Yes	Yes	Yes	Yes	Yes	Yes
Air Quality (SOC)	Yes	No New Impacts	Yes	Yes	Yes	Yes
Noise (SOC)	Yes	No New Impacts	Yes	Yes	Yes	Yes
Population & Housing (SOC)	Yes	No New Impacts	No New Impacts	Yes	Yes	Yes
Aesthetics	Mitigation Feasible	No New Impacts	No New Impacts	Mitigation Feasible	Mitigation Feasible	Mitigation Feasible
Agricultural Resources	Mitigation Feasible	No New Impacts	No New Impacts	Mitigation Feasible	Mitigation Feasible	Mitigation Feasible
Biological Resources	Mitigation Feasible	No New Impacts	Mitigation Feasible	Mitigation Feasible	Mitigation Feasible	Mitigation Feasible
Cultural Resources	Mitigation Feasible	No New Impacts	Mitigation Feasible	Mitigation Feasible	Mitigation Feasible	Mitigation Feasible
Geology and Soils	Mitigation Feasible	No New Impacts	Mitigation Feasible	Mitigation Feasible	Mitigation Feasible	Mitigation Feasible
Hazards and Hazardous Materials	Mitigation Feasible	No New Impacts	Mitigation Feasible	Mitigation Feasible	Mitigation Feasible	Mitigation Feasible
Hydrology and Water Quality	Mitigation Feasible	No New Impacts	Mitigation Feasible	Mitigation Feasible	Mitigation Feasible	Mitigation Feasible
Land Use and Planning	Mitigation Feasible	No New Impacts	Mitigation Feasible	Mitigation Feasible	Mitigation Feasible	Mitigation Feasible
Mineral Resources	Mitigation Feasible	No New Impacts	No New Impacts	Mitigation Feasible	Mitigation Feasible	Mitigation Feasible
Public Services	Mitigation Feasible	No New Impacts	Mitigation Feasible	Mitigation Feasible	Mitigation Feasible	Mitigation Feasible
Recreation	Mitigation Feasible	No New Impacts	Mitigation Feasible	Mitigation Feasible	Mitigation Feasible	Mitigation Feasible
Other CEQA Considerations	Yes	No New Impacts	Yes	Yes	Yes	Yes
Utilities and Service Systems	Mitigation Feasible	No New Impacts	Mitigation Feasible	Mitigation Feasible	Mitigation Feasible	Mitigation Feasible
Environmental Rankings						

Item/Issue	Project General Plan 2030	Alternative 1 No Project (Existing Conditions)	Alternative 2 Existing General Plan	Alternative 3 Reduced Density	Alternative 4 Land Use Plan A	Alternative 5 Land Use Plan B
Environmentally Superior (1 = High)	6	1	2	3	4	5

7.2 Alternative 1 – No-Project (No-Build)

The No-Project Alternative would result in no new development within the City and Sphere of Influence beyond what exists today. No additional new development would occur. A total of 33,515 dwelling units and 26.36 million square feet of non-residential development are estimated within the City. The existing population is approximately 107,400. Existing uses generate approximately 369,000 trips daily.

With no new development, the environmental issues associated with the proposed Project construction would not occur. Under this alternative, there would be no increase in traffic, air quality emissions or noise generation from the project site. There would not be air quality impacts associated with construction dust or noise impacts associated with grading onsite and construction of the facilities.

As illustrated in Table 7-1, above, the No-Project Alternative would not create any new environmental impacts. However, it would not provide the City an opportunity to increase employment for its residents, increased property tax revenues from new development or provide additional housing opportunities for its residents.

Existing conditions do result in significant impacts on the environment, including air quality impacts in excess of regional standards, and unacceptable levels of service on the circulation network. Alternative 1 is would not meet the project objectives of updating the General Plan and providing for the orderly development of the currently developed and undeveloped sections of the Planning Area.

7.3 Alternative 2 – Existing General Plan

Alternative 2 would result in new development consistent with buildout of the existing General Plan (General Plan 2004). A total of 81,149 dwelling units and 94.59 million square feet of non-residential development are estimated within the City. The projected population at buildout is approximately 238,600. Buildout of General Plan 2004 would generate approximately 1.2

million trips daily.

Alternative 2 would not expand the SOI and would encompass less area than the project with fewer impacts relative to population and housing, agricultural resources and mineral resources. However, although impacts relative to air quality, noise, traffic and the other topics listed in Table 7.1 would be less than the Project, impacts would still occur. In the case of air quality, noise and traffic, a SOC would still be required. Alternative 2 is would not meet the project objectives of updating the General Plan and providing for the orderly development of the currently developed and undeveloped sections of the Planning Area.

7.4 Alternative 3 – Reduced Density in 2030

Alternative 3 would result in new development consistent with buildout of General Plan 2030 but at a reduced density (20 percent) in all its land use components. The acreages designated for each land use would remain the same as General Plan 2030. A total of 110,893 dwelling units and 75.3 million square feet of non-residential development are estimated within the City. The projected population at buildout is approximately 328,700. Buildout of Alternative 3 would generate approximately 1.6 million trips daily.

Alternative 3 has similar land use patterns to General Plan 2030 but at slightly lower densities. Overall residential density, outside of Specific Plans, would be reduced from 2.8 dwelling units/acre to 2.2 dwelling units/acre.

Since the total trips generated by Alternative 3 would be reduced by approximately 20 percent, the environmental issues associated with Alternative 3 are slightly less than for buildout of General Plan 2030. However, as shown in Table 7.1, above, the Alternative 3 would result in significant traffic, air quality, population and housing, and noise related impacts. However, it would provide the City an opportunity to increase employment for its residents, increased property tax revenues from new development and provide additional housing opportunities for its residents.

Alternative 3 would expand the SOI and would encompass the same area as the project. However, although impacts relative to air quality, noise, traffic and the other topics listed in Table 7.1 would be less than the Project, impacts would still occur. In the case of air quality, noise, population and housing, and traffic, a SOC would still be required. Alternative 3 is would meet the project objectives of updating the General Plan and providing for the orderly development of the currently developed and undeveloped sections of the Planning Area.

7.5 Alternative 4 – Land Use Alternative A

Alternative 4 revises General Plan 2030 in four key areas: (1) Increasing Very Low Density Residential acreage from 8,152 to 22,899 acres. This results in 22,123 single-family units in the Very Low Density Residential designation, instead of 7,695 single-family units in General Plan

2030, (2) The Low Density Residential acreage is reduced from 27,523 acres in General Plan 2030 to 17,152 acres. The reduced acreage results in 33,142 single-family units in the Low Density Residential designation, as opposed to 51,532 for General Plan 2030, (3) Land designated Commercial in Alternative 4 is reduced from 7,014 acres in General Plan 2030 to 5,254 acres, and (4) Light Industrial acreage is reduced from 5,234 acres to 3,402 acres. Therefore, Alternative 4 results in a community that is less urban in character than General Plan 2030.

Alternative 4 proposes 124,493 dwelling units and 97.5 million square feet of development are projected within the City at buildout. The projected buildout population for Alternative 4 is approximately 368,800. Alternative 4 would generate approximately 2.0 million trips daily.

Like the project, Alternative 4 has substantial increases in traffic, air quality emissions and public service demands associated with future development. Non-residential land uses generate similar magnitudes of development (97.5 million square feet compared to 99.2 million for General Plan 2030).

As shown in Table 7-1, above, Alternative 4 would create new environmental impacts. However, it would provide the City an opportunity to increase employment for its residents, increased property tax revenues from new development and provide additional housing opportunities for its residents.

Alternative 4 would expand the SOI and would encompass the same area as the project. However, although impacts relative to air quality, noise, traffic and the other topics listed in Table 7.1 would be likely be less than the Project, impacts would still occur. In the case of air quality, noise, population and housing, and traffic, a SOC would still be required. Alternative 4 is would meet the project objectives of updating the General Plan and providing for the orderly development of the currently developed and undeveloped sections of the Planning Area.

7.6 Alternative 5 – Land Use Alternative B

Alternative 5 revises General Plan 2030 in five key areas: (1) Increasing Open Space acreage from 22,536 acres to 33,259 acres., (2) The Very Low Density Residential acreage is increased from 8,152 acres in General Plan 2030 to 14,098 acres. The increased acreage results in 13,574 single-family units in the Low Density Residential designation, as opposed to 7,695 units in General Plan 2030, (3) The Low Density Residential acreage is reduced from 27,523 acres in General Plan 2030 to 17,224 acres. The reduction in acreage results in 33,281 single-family units in the Low Density Residential designation, as opposed to 51,532 units in General Plan 2030, (4) Land designated Commercial is reduced from 7,014 acres in General Plan 2030 to 5,251 acres in Alternative 5, and (5) Light Industrial acreage is reduced from 5,234 acres to 1,456 acres. Therefore, like Alternative 3, Alternative 4 results in a community that is less urban in character than General Plan 2030.

Alternative 5 proposes 81,149 dwelling units and 94.6 million square feet of development is

estimated within the City. The projected buildout population for Alternative 5 is approximately 344,900. Alternative 5 would generate approximately 2.2 million trips daily.

Like the project, Alternative 5 has substantial increases in traffic, air quality emissions and public service demands associated with future development. Non-residential land uses generate similar magnitudes of development (94.6 million square feet compared to 99.2 million for General Plan 2030).

As shown in Table 7-1, above, Alternative 5 would create new environmental impacts. However, it would provide the City an opportunity to increase employment for its residents, increased property tax revenues from new development and provide additional housing opportunities for its residents.

Alternative 5 would expand the SOI and would encompass the same area as the project. However, although impacts relative to air quality, noise, traffic and the other topics listed in Table 7.1 would be likely be less than the Project, impacts would still occur. In the case of air quality, noise, population and housing, and traffic, a SOC would still be required. Alternative 5 is would meet the project objectives of updating the General Plan and providing for the orderly development of the currently developed and undeveloped sections of the Planning Area.

7.7 Environmentally Superior Alternative

As illustrated in Table 7-1, the project and each alternative are rated from “1” to “6”, “1” being most superior. The No Project alternative, because it does not increase traffic, air quality or noise impacts in the area is the Environmentally Superior Alternative (e.g. Rated 1).

When the No-Project Alternative is designated the Environmentally Superior Alternative, the CEQA Guidelines (Section 15126 (e) (2)) requires another alternative be designated the alternate Environmentally Superior Alternative.

Alternative 2 would reduce overall impacts by not expanding into the Northern Expansion Area. However, it would not meet the project objectives of updating the General Plan and providing for the orderly development of the currently developed and undeveloped sections of the Planning Area.

Alternative 3: Reduced Density in 2030 is designated the superior alternate based on the reduced trips generated by the alternative and meeting project objectives. Alternative 3 accommodates substantial population growth in 2030, increased housing opportunities and increased employment, while meeting all of the project objectives. Although air quality, noise, population and housing, and traffic impacts would still require a SOC, these impacts would be proportionately less than the project. Alternative 3 is would meet the project objectives of updating the General Plan and providing for the orderly development of the currently developed and undeveloped sections of the Planning Area.

ENERGY CONSERVATION

8.1 ENERGY USE

In California, energy use is divided into four primary sectors: (1) transportation which uses 41 percent; (2) industrial which uses 22 percent; (3) commercial which uses 19 percent; and (4) residential which uses 18 percent. More than 80 percent of the energy consumed in the State comes from two fossil fuels; natural gas and petroleum¹. Coal-fired plants, nuclear, solar, wind, hydroelectric, geothermal and liquefied natural gas provide the remaining 20 percent

The largest use of natural gas is for electrical generation, using about half of the natural gas in the State. The residential sector uses 22 percent of the natural gas. Of that amount 88 percent is used by space and water heating.

Approximately 47 percent of all energy used in homes in the United States is used for space heating, 17 percent for water heating and 24 percent for lighting and appliances. Natural gas comprises 49 percent of the energy used and electricity 39 percent (Energy Information Administration, 2001 Residential Energy Consumption Survey).

Studies have shown that the type of housing (single-family versus multi-family) and the size of a house have strong relationships to energy use. Residents of single-family detached housing consume more than 20 percent more primary energy than those of multi-family housing and 9 percent more than those in single-family attached housing (Integrated Energy Policy Report 2007, California Energy Commission).

In 2006, the commercial sector used 37 percent of all electricity consumed in California and the industrial sector used 16 percent. In office buildings, 66 percent of the energy consumed is electricity and 34 percent is natural gas or other fuels. Space heating consumes 25 percent of the total energy used, cooling 23 percent, office equipment 20 percent, and lighting 17 percent (National Action Plan for Energy Efficiency-Office Building Energy Use Profile, 2003).

Energy use in industrial facilities is more diverse, depending on the type of facility and the type of business or manufacturing operation.

One implication of this information is that efforts to reduce energy consumption must address all four sectors. For the transportation sector, reducing vehicle miles traveled through land use

¹ Integrated Energy Policy Report 2007, Figure 5, pp. 9-11.

design or use of alternative energy vehicles, locating jobs close to residences, and improving alternative transportation systems is needed.

For the industrial sector, reducing electrical use is needed because industrial energy systems account for 80 percent of all energy used by industry. Industrial energy systems include combustion, steam, process heating, combined heat and power, compressed air, motors, pumps and fans.² On average 35 percent of that energy is lost. Efforts to reduce electrical loss in industrial facilities and installation of more energy-efficient equipment in industrial facilities are two effective strategies for reducing total energy.

For commercial and residential sectors, reducing electrical use is needed. Efforts to reduce heating and cooling usage in commercial and residential buildings are the most effective strategy for reducing total energy.

Expanding generation of electricity from other sources other than natural gas, including solar energy and wind energy, is a priority that would reduce energy consumption in each of the four sectors.

8.2 ENERGY CONSERVATION

The state Legislature adopted AB 1575, in 1975, amended Public Resources Code Section 21100(b)(3) to require EIRs to consider the wasteful, inefficient, and unnecessary consumption of energy caused by a project. In response to this legislation, Appendix F was added to the CEQA Guidelines. Appendix F provides guidelines for addressing energy conservation with CEQA environmental documents. As stated in Appendix F, the goal of conserving energy implies the wise and efficient use of energy. The means of achieving this goal include:

1. Decreasing overall per capita energy consumption.
2. Decreasing reliance on natural gas and oil, and
3. Increasing reliance on renewable energy sources.

CEQA requires that EIRs include a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful and unnecessary consumption of energy. Energy conservation implies that a project's cost effectiveness be reviewed not only in dollars, but also in terms of energy requirements. For many projects, lifetime costs may be determined more by energy efficiency than by initial dollar costs.

Appendix F lists a number of energy impact possibilities and potential conservation measures to use in preparing an EIR. These items include: Project Description, Environmental Setting, Environmental Impacts, Mitigation Measures, Alternatives, Unavoidable Adverse Effects, Irreversible Commitment of Resources, Short-Term Gains versus Long-Term Impacts and

² Industrial Technologies Program, U. S. Department of Energy, Energy Efficiency and Renewable Energy, www.eere.energy.gov; accessed July 2008.

Growth Inducing Effects. In many instances, specific items listed may not apply or additional items may not be needed. Each of the relevant topics applicable to a General Plan is considered below, or is referenced to other sections of this EIR.

8.2.1 Environmental Setting

8.2.1.1 Regulatory Setting

Title 24: The California Code of Regulations Title 24 requires all new buildings in the state to conform to energy conservation standards specified in Title 24 of the California Code of Regulations (CCR). The standards establish “energy budgets” for different types of residential and nonresidential buildings, with which all new buildings must comply. The regulations allow for trade-offs within and between the components to meet the overall budget.

The California Energy Commission (CEC) is responsible for establishing the Title 24 energy conservation standards, which were last updated by the CEC in 2005. The 2005 Building Energy Efficiency Standards Residential Compliance Manual is comprised of four major components: (1) Building Envelope Requirements, (2) Building HVAC Requirements, (3) Water Heating Requirements and, (4) Lighting. The 2005 Building Energy Efficiency Standards Non-Residential Compliance Manual is also comprised of four major components: (1) Building Envelope, (2) Mechanical Systems (3) Indoor Lighting and, (4) Outdoor Lighting and Signs.

California Green Building Code Standards: The California Building Standards Commission issued new building standards in July 2008 designed to reduce energy use in new buildings by 15 percent and target a 50 percent reduction in water for landscaping. Known as the Green Building Code (Code), Chapter 5 addresses Energy Efficiency. The adopted code is voluntary until 2010, when it will become mandatory. The standards are recommended as minimal Green Building Standards and local government entities may exceed the standards established by the code.

Section 504 of the Code identifies six approaches to reduce energy demand:

1. **ENERGY STAR.** All equipment and appliances provided by the builder shall be ENERGY STAR labeled if ENERGY STAR is applicable to that equipment and appliance.
2. **Energy Monitoring.** Provide sub-metering or equivalent combinations of sensor measurements and thermodynamic calculations, if appropriate, to record energy use data for each major energy system in the building, including chillers, heat pumps, packaged AC systems, fans, pumps, cooling towers, boilers and other heating systems, lighting systems, and process loads. This energy use data, once collected, shall be stored with a data management system.

3. Demand Response. HVAC systems with Direct Digital Control Systems and centralized lighting systems shall include pre-programmed demand response strategies that are automated with either a Demand Response Automation Internet Software Client or dry contact relays.
4. Commissioning. Building commissioning shall be included in the design and construction processes of the building project to verify that the building system and components meet the owner's project requirements. Personnel trained and certified in commissioning by a nationally recognized organization shall perform commissioning in accordance with this section. Minimum commissioning requirements are listed in the section but not included herein.
5. Building Orientation and Shading. Locate, orient and shade the building as follows: (1) Provide exterior shade for south-facing windows during the peak cooling season, (2) Provide vertical shading against direct solar gain and glare due to low altitude sun angles for east – and west-facing windows, (3) When site and location permit, orient the building with the long sides facing north and south and (4) Protect the building from thermal loss, drafts, and degradation of the building envelope caused by wind and wind-driven materials such as dust, sand, snow, and leaves with building orientation and landscape features.
6. Minimum Energy Performance for Low-Rise Residential Buildings. Low-rise residential buildings shall meet or exceed the minimum performance or prescriptive standard design required by the California Energy Code currently in effect.

Other sections of the Code address sealing joints and openings in buildings to reduce the amount of energy escaping outside the area to be heated or cooled. The Code also promotes use of on-site renewable energy such as solar, wind, geothermal, low-impact hydro, biomass and bio-gas for at least one percent of the building's energy needs.

8.2.1.2 Energy Providers in Victorville

Within the Victorville Planning Area, primary energy providers are: Southern California Edison (SCE), providing electricity to all users; Victorville Municipal Utility Services (VMUS), providing various electrical and cogeneration services and a natural gas aggregation program to those commercial and industrial customers located within the Foxborough Redevelopment District and at the SCLA only; and Southwest Gas, providing natural gas to all users.

SCE, which is the primary distribution provider for electricity in the Planning Area, distributes power to Victorville consumers from the various generation plants located throughout the region. These generation plants include the Mojave Generating Station, the Etiwanda Generation Plant, the San Onofre Nuclear Generating Station and the Big Creek hydroelectric system. The High Desert Power Project, located within the SCLA, provides power to Victorville's VMUS.

In addition to these plants, SCE and Stirling Energy Systems (SES) are building a solar power generating station in the Mojave Desert³. Subject to California Public Utilities Commission approval, the solar plant will include a 500 megawatt (MW) solar project, with an option to expand to 850 MW. Upon completion, expected in four years, the plant would provide sufficient power to serve 278,000 homes for an entire year.

To increase VMUS electrical production, the City of Victorville has submitted an Application for Certification (AFC) to construct and operate the Victorville 2 Hybrid Power Project, a hybrid of natural gas-fired combined cycle generating equipment integrated with solar thermal generating equipment, immediately north of the SCLA⁴. The project would have a net electrical output of 563 MW, with construction planned to begin in summer of 2008 and commercial operation planned by summer of 2010. The proposed Victorville 2 facility would connect via a single-circuit three-phase 230-kV transmission line to the power grid through SCE's existing Victor Substation, located approximately 10 miles south-southwest of the proposed Victorville 2 project site.

Southwest Gas serves more than 1.8 million customers in Arizona, Nevada and portions of California⁵. It has division offices at 13471 Mariposa Road in Victorville. Natural gas is a fossil fuel found underground in a natural gaseous form. It is one of the most abundant energy sources in North America, and generally is produced domestically. Comprised primarily of methane, natural gas is odorless and colorless when it comes out of the ground. It is pumped from wells then distributed via interstate pipelines to regional distributives, such as Southwest Gas.

8.3 PROJECT ENERGY COMPLIANCE

Build-out of Victorville pursuant to General Plan 2030 would generate 3,110,977 daily vehicular trips. As discussed in Section 5.12.4, the proposed General Plan 2030 Land Use is expected to result in substantial increases to population, housing and employment. Both population and housing are expected to increase by 314% between 2005 and Planning Area build-out. Employment (number of jobs) is expected to increase by 298% during that same period. At build-out, the jobs-to-housing ratio for the Planning Area would be .85 (118,794 jobs to 138,617 housing units). This represents an increase of .19 jobs to each housing unit over the current ratio of 0.66.

This increase in the ratio of jobs to housing is expected to reduce vehicle miles traveled in the region by providing housing, jobs and services within an urbanized area. This increase in the ratio of jobs to housing would transition the Victorville community from a suburban community to a more urbanized community where a full range of employment, commercial, recreational, and service facilities are available to community residents. A balanced urban community results

³ <http://www.power-technology.com/projects/victorville/>; accessed July 2008

⁴ <http://www.energy.ca.gov/sitingcases/victorville2/index.html>; accessed July 2008.

⁵ <http://www.swgas.com/news/>; accessed July 2008.

in total energy savings, as opposed to a more suburban or rural land pattern because it reduces miles, and therefore, the amount of petroleum from vehicular travel.

General Plan 2030 Provisions: Within the proposed General Plan 2030 Resource Element, the following goal, objectives, policies and implementation measures would apply to energy conservation:

GOAL #1: BALANCED LAND USES – Provide for a Balanced Community with Residential, Commercial and Industrial Development

GOAL #7: ENERGY CONSERVATION – Promote Energy Sustainability by Developing Alternative Power Supplies and Reducing Energy Use

Objective 7.1: Promote alternative energy sources

Policy 7.1.1: Support development of solar, hybrid, wind and other alternative energy generation plants.

Implementation 7.1.1.1: Continue to work with energy companies and energy developers to develop non-fossil fuel reliant power generation plants within the Planning Area.

Implementation 7.1.1.2: Through the Victorville Municipal Utility Services (VMUS), continue to expand the amount of energy generated and the distribution of that energy to all Planning Area power consumers.

Objective 7.2: Promote energy conservation

Policy 7.2.1: Support energy conservation by requiring sustainable building design and development for new residential, commercial and industrial projects.

Implementation 7.2.1.1: Incorporate green building principles and practices, to the extent practicable and financially feasible, into the design, development and operation of all City owned facilities.

Implementation 7.2.1.2: Minimize energy use of new residential, commercial and industrial projects by requiring high efficiency heating, lighting and other appliances, such as cooking equipment, refrigerators, furnaces, overhead and area lighting, and low NOx water heaters.

Implementation 7.2.1.3: Require drought tolerant landscaping in all new private developments.

Policy 7.2.2: Support energy conservation by using low-emission non-fossil fuel reliant vehicles.

Implementation 7.2.2.1: Convert all City owned vehicles to low-emission non-fossil fuel vehicles and continue to update City fleets to the meet new and better low-emission technologies.

Implementation 7.2.2.2: Require drought tolerant landscaping in all City public developments, including buildings, parks and street rights-of-way.

8.3.1 Environmental Impacts

Project: General Plan 2030 Resource Element provisions, as outlined above, encourage alternative, more energy efficient energy sources, building design, and vehicular use. All future development in the City will be required to comply with the energy requirements of Title 24 and the Green Building Code. General Plan 2030 Land Use Element provisions support an increase in employment uses relative to residential, thereby reducing the proportion of commuter vehicular trips in the region. To assist the City ensure future compliance with Title 24 and the Green Building Code, Mitigation Measures EC-1 and EC-2 are recommended for inclusion into the Project.

Alternatives: Five alternatives to the Project are discussed in Section 7.0. The energy consumption of each alternative is relative to the total number and type of dwelling units and the nonresidential square footage proposed for each alternative. However, there are also some difference in overall energy use related to the differing Land Use Plans proposed by the Project Alternatives 4, 5 include more low-density residential development than the Project but also include fewer units. Therefore, these two alternatives may have lower overall energy use than the proposed General Plan.

Unavoidable Adverse Effects: The Project does not propose wasteful use of energy consumption since future development must by comply with Title 24.

Irreversible Commitment of Resources: The Project does not preempt future energy development or future energy conservation efforts. The City has approvals for the Victorville 2 Hybrid Power Project that includes two gas turbines, one steam turbine and solar energy from a 250-acre array of parabolic trough mirrors to produce 570 megawatts. The Project is to be operational in the summer of 2010.

Short-Term Gains versus Long-Term Impacts: The consequences of implementing the No-Project alternative or the existing General Plan may result in greater energy use by encouraging growth outside of the City and in less urban contexts in the region. The Project does not induce growth beyond its boundaries but encourages growth within its jurisdiction.

8.3.2 Cumulative Impacts

The proposed General Plan 2030 proposes balanced growth within the Planning Area. It also supports energy conservation measures to reduce the amount of energy consumption and the amount of fossil fuel that new development would use. The Project is not expected to result in significant adverse impacts relative to energy conservation. Consequently, cumulative impacts of the Project related to energy conservation would be less than significant.

8.3.3 Mitigation Measures

EC-1: The City shall inform applicants of the new Green Building Code standards and assist applicants to incorporate them into the planning review and approval process.

EC-2: The City shall ensure that all new public facilities shall comply with relevant requirements of Chapter 5: Energy Efficiency of the Green Building Code. When existing equipment is replaced, it shall comply with any relevant requirements of Chapter 5 of the Green Building Code.

8.3.5 Level of Significance After Policies/Mitigation Measures – Less than Significant.

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9.2 PERSONS PREPARING AND ASSISTING IN THE PREPARATION OF THE EIR

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3. Tom Tang, CRM Tech – Cultural Resources
4. Robb Hamilton, Consulting Biologist – Biological Resources

Chapter 10.0

LIST OF ACRONYMS

Throughout this EIR, acronyms are used as abbreviations for technical terms, agencies, regulations, and public documents. When the acronym is first referenced, the EIR text provides a definition. However, for the convenience of the reader, the following lists and defines all acronyms used in this EIR:

AAQS: Ambient Air Quality Standards
ADT: Average Daily Traffic
AE: Exclusive Agriculture, current City of Victorville Zoning designation
AFC: Application for Certification
AFY: Acre feet per year
AM: Morning
AQMP: Air Quality Management Plan
BCRA: Base Closure Realignment Act
bgs: Below ground surface
BMP(s) : Best Management Practice(s)
BNSF: Burlington Northern Santa Fe Company
CAAA: Clean Air Act Amendments
CALTRANS: California Department of Transportation
CARB: California Air Resources Board
CBC: California Building Code
CCR: California Code of Regulations
CDC: California Department of Conservation
CDFG: California Department of Fish and Game
CEQA: California Environmental Quality Act
CEC: California Energy Commission
cfs: cubic feet per second
CIP: Capital Improvement Program
CMAQ: Congestion Mitigation Air Quality grant
CMP: Congestion Management Program
CNEL: Community Noise Equivalent Level
CO: Carbon Monoxide
CTP: Comprehensive Transportation Plan
CWA: Federal Clean Water Act
dB: Decibels
dBA: Average hourly decibels
du/ac: Dwelling unit per acre
DTSC: Department of Toxic Substances Control
DUs: Dwelling Units
EIR: Environmental Impact Report

EIS: Environmental Impact Statement
EPA: Environmental Protection Agency
FEMA: Federal Emergency Management Agency
FHWA: Federal Highway Administration
FMMP: California Farmland Mapping and Monitoring Program
FPPA: Farmland Protection Policy Act
FTA: Federal Transit Administration
HCM: Highway Capacity Manual
HIST-66: Historic Route 66', Route 66, or Will Rogers Highway
HOV: High occupancy vehicle travel lane
HVAC: Heating, Ventilation and Air Conditioning
H2S: Hydrogen Sulfide
I-15: Interstate Highway 15 or the Mojave Freeway
ICU: Intersection Capacity Utilization
IGR/CEQA: District 8 Intergovernmental Review/California Environmental Quality Act
Leq: Equivalent sound level
LOS: Level of Service
LST: Localized Significance Threshold
MBTA: Migratory Bird Treaty Act
MCL: Maximum Contaminant Levels
MDU: Multifamily Dwelling Unit
mg: million gallons
mgd: million gallons per day
MIS: Major Investment Study
MM: Mitigation Measure
MMRP: Mitigation Monitoring and Reporting Program
MOU: Memorandum of Understanding
MRZ: Mineral Resource Zone
MSL: Mean Sea Level
MW: Megawatt
MWA: Mojave Water Agency / Watermaster
MWD: Metropolitan Water District of Southern California
MVAQMD: Mojave Valley Air Quality Management District
NAAQS: National Ambient Air Quality Standards
NCCP: Natural Community Conservation Plan
NPDES: National Pollutant Discharge Elimination System
NOP: Notice of Preparation
NO2: Nitrogen Dioxide
NOx: Nitrogen Oxides
NRCS: Natural Resources Conservation Service
O3 :Ozone
PB: Parsons Brinckerhoff Quade & Douglas, Inc.
PM: Evening
PM2.5: Fine Particulate Matter
PM10: Respirable Particulate Matter
ppm: parts per million

PRC: Public Resources Code
PSR/PDS: Project Study Report/Project Development Support
PUD: Planned Unit Development
Q: Stormwater flow
RAQS: Regional Air Quality Strategy
RC: Rural Conservation, County of San Bernardino Land Use Plan designation
RCPG: Regional Comprehensive Plan and Guide
RL: Rural Living, County of San Bernardino Land Use Plan designation
ROC: Reactive Organic Compounds
ROG: Reactive Organic Gases
R/W: Right-of-way
RWQCB: California Regional Water Quality Control Board
RWMP: Regional Water Management Plan
SANBAG: San Bernardino Associated Governments
SCAB: South Coast Air Basin
SCAG: Southern California Association of Governments
SCE: Southern California Edison
SCH: State Clearing House
SCLA: Southern California Logistics Airport
SCS: Soil Conservation Service
SDU: Single Family Dwelling Unit
SES: Stirling Energy Systems
SIP: State Implementation Plan
SOC: Statement of Overriding Considerations
SOI: Sphere of Influence
SO₂: Sulfur Dioxide
SO_x: Sulfur Oxides
SP: Specific Plan
Sq. Ft. : Square Feet
SR-18: State Route 18
SR-60: State Route 60
SWPPP: Storm Water Pollution Prevention Plan
TDM: Transportation Demand Management
TIA: Traffic Impact Analysis report
TIF: Traffic Impact Fee
TSM: Transportation System Management
TRS: Transportation Study Report
USDA: U.S. Department of Agriculture
USGS: U.S. Geological Survey
U.S. : United States
US-394: United States Federal Highway 395
USFWS: United States Fish and Wildlife Service
V/C: Volume to Capacity
VMUS: Victorville Municipal Utility Services
VOC: Volatile Organic Compounds
VVEDA: Victor Valley Economic Development Authority

VVTA: Victor Valley Transit Authority
WRMP: Water Resources Master Plan



INITIAL STUDY

CITY OF VICTORVILLE GENERAL PLAN 2030

Prepared for:

City of Victorville
14343 Civic Drive
Victorville, CA 92393-5001
City of Victorville

Attention: Chris Borchert, Development Department

February 6, 2008

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CITY OF VICTORVILLE

GENERAL PLAN 2030

INITIAL STUDY

Executive Summary:

This Initial Study assesses the potential environmental impacts of the General Plan 2030 for the City of Victorville. The General Plan 2030 would update and supersede the City's current General Plan, which was adopted in July 1997 and subsequently amended.

Referred to within this document as the proposed "Project", General Plan 2030 plans for the City of Victorville's continued development during the next twenty years. The General Plan addresses the critical issues that will shape Victorville's future, specifically:

- The optimum type and mix of land uses that will both secure its economic solvency and maintain a high quality of life.
- Transportation systems needed to accommodate planned growth.
- Infrastructure systems need to accommodate planned growth.
- Important natural resources to be protected and integrated with planned growth.
- The community facilities needed to accommodate planned growth.
- The community amenities needed to provide a balanced and pleasing place to live, work, shop, play and learn.
- Extension of the City Sphere of Influence to accommodate the reasonable extension of the City's boundaries.

This Initial Study finds that the proposed Project may have a significant effect on the environment because of potential impacts related to Aesthetics, Agricultural Resources, Air Quality, Biological Resources, Cultural Resources, Geology/Soils, Land Use and Planning, Mineral Resources, Noise, Population and Housing, Public Services and Utilities/Service Systems. Because of these potential impacts, a Program level Environmental Impact Report (EIR) will be prepared.

Project Description:

1. **Project title:** City of Victorville General Plan 2030.
2. **Lead agency name and address:** City of Victorville, 14343 Civic Drive, Victorville, CA 92393-5001.
3. **Contact person and phone number:** Chris Borchert, Development Department (760) 955-5146.

4. **Project location:** The City of Victorville is located in southwestern San Bernardino County, in the geographic subregion of the southwestern Mojave Desert known as the Victor Valley and commonly referred to as the "High Desert" due to its approximate elevation of 2,900 feet above sea level. The Victor Valley is separated from other urbanized areas in Southern California by the San Bernardino and San Gabriel mountains. The City's regional location is shown in Figure I, *Victorville General Plan Regional Location Map*. Although the City is separated from larger urbanized areas of Southern California, it is easily accessible via Interstate 15, U.S. Highway 395, California State Highway 18 and historic Route 66.
5. **Project sponsor's name and address:** Planning Division, City of Victorville, 14343 Civic Drive, Victorville, CA 92393-5001.

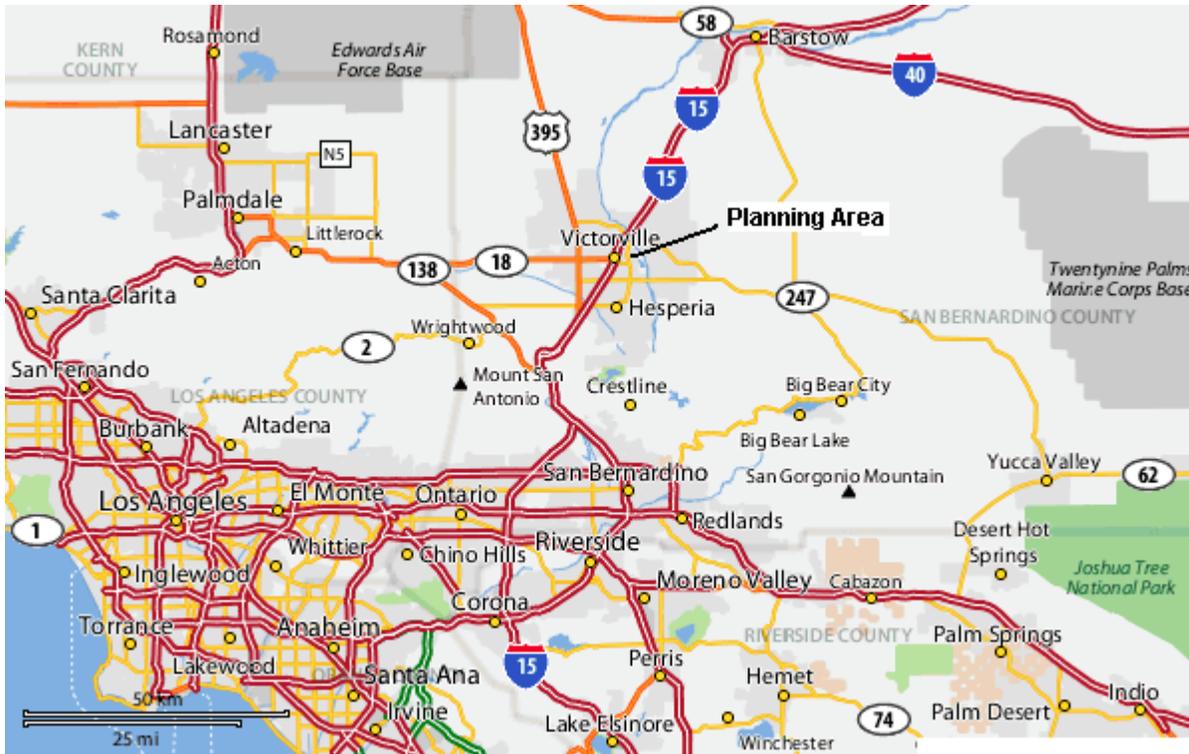


Figure I, *Victorville General Plan Regional Location Map*

6. **Description of project:** (Describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation.)

PROJECT BACKGROUND

Victorville is one of Southern California's fastest growing communities. Historically, the City's economy was largely based upon defense spending from George Air Force Base, travelers, retirees and people who preferred the Mojave Desert environment. Today, the impetus for growth is the fact that the Inland Empire's valley areas are becoming built out and the High Desert is the next place with large tracts of modestly priced land. Victorville's growth is further driven by its ready accessibility via Interstate 15, U.S. Highway 395, California State Highway 18 and historic Route 66.

The transformation of the former George Air Force Base as the Southern California Logistics Airport (SCLA) also facilitates the City's growth. SCLA located in the northwest quadrant of the City, is currently used for airplane maintenance and other airport related and industrial activities. Current City plans anticipate the continued expansion and transition of SCLA as a major air cargo and logistic center.

As of May 2007, Victorville's population is estimated to be 102,538, making it the 246th most populated city in the United States¹. Most of this growth has occurred during the past two decades. From 1990-2007, Victorville's population increased by 61,864 persons, 152%, over its 1990 population of 40,674.

Faced with this significant growth, the City of Victorville began its General Plan update process in 2004. Since that time, the City has gained input from the community through a series of workshops. This input played an important role in understanding the City's existing character and the issues that will shape its future. Focus of the workshops included:

- What kind of city should Victorville be in the year 2030?
- What types and what densities of land uses should occur?
- What types of roads are needed and where should they go?
- What types of community facilities are needed?
- What types of community amenities are desired?

In addition to the workshops, the City has been carefully examining properties surrounding its boundaries to identify appropriate areas of expansion for its Sphere of Influence. To help understand and prepare for its growth, the City has undertaken preparation of numerous technical studies, including a city-wide traffic model, water and wastewater master plan, and drainage master plan.

GENERAL PLAN CONTENTS

A General Plan is a community's planning "constitution" and is the single most important policy document in guiding land use and development decisions within the City. California law requires every general plan to cover, at minimum, seven major land use and development issues typical to most California cities and counties. These seven issues – land use, circulation, housing, conservation, open space, noise and public safety – are addressed in different chapters of a general plan commonly known as "elements."

Victorville's General Plan 2030 will distill the City's vision for the future into specific goals, policies and implementation measures that will guide the physical development of the City through the year 2030. The General Plan will cover the seven required issues in the following six elements:

- 1) Land Use Element
- 2) Circulation Element
- 3) Housing Element
- 4) Noise Element
- 5) Safety Element
- 6) Resource Element (incorporating two of the mandated elements, Open Space and Conservation).

¹ May 1, 2007 population estimate from the State of California Department of Finance.

Horizon year assumed by each element will be 2030, with the exception of the Housing Element, which has a planning horizon year of 2014 as established by the state of California Department of Housing and Urban Development. Major components of each element will be as follows:

Land Use Element:

As required by Section 65302(a) of the state Government Code, the Land Use Element will describe the proposed general distribution, location and extent of land uses within the City of Victorville, as well as their relationship to the all elements of the General Plan. Specifically, the Land Use Element will address the following issues:

- 1) Distribution of housing, business, and industry
- 2) Distribution of open space
- 3) Distribution of mineral resources and provisions for their continued availability
- 4) Distribution of recreation facilities and opportunities
- 5) Location of educational facilities
- 6) Location of public buildings and grounds
- 7) Location of future solid and liquid waste facilities
- 8) Identification of areas subject to flooding
- 9) Other categories of public and private uses of land.

Circulation Element:

As specified in California Government Code (Section 65302(b)), a Circulation Element is required to identify the general location and extent of existing and proposed major thoroughfares, transportation routes, terminals, airports and other local public utilities and facilities in the City's Planning Area. The Circulation Element is intended to provide guidance to decisions that expand and improve the transportation system for local and regional trips, and to accommodate the diverse transportation needs of the residents of the Planning Area. The element will specify the City's policies for coordination of transportation infrastructure planning with planning of public utilities and facilities, where joint benefits can be achieved.

Housing Element:

The Housing Element addresses the statewide goal of providing adequate housing for families and individuals of all economic levels. As specified in Section 65580(c) of the Government Code, the Housing Element will accomplish the following tasks:

- 1) Identify and analyze the current and projected housing needs of all economic segments of the community.
- 2) Evaluate the current and potential constraints to meeting those needs, including identifying the constraints that are due to the marketplace and those imposed by the government.
- 3) Inventory and assess the availability of land suitable for residential use.
- 4) Establish a series of goals, objectives, policies and programs aimed at responding to the identified housing needs, the market and governmental constraints, and the housing opportunities.

Safety Element:

The Safety Element is mandated by State Government Code (Section 65302(g)). It is intended to identify and, whenever possible, reduce the impact of natural and man-made hazards which may threaten the health, safety, and property of the residents living and working in the Victorville Planning Area. It emphasizes hazard reduction and accident prevention and responses for man-made hazards. In addition, the element emphasizes the importance of reducing risk, disaster prevention, and preparedness.

Natural hazards to be addressed in the Safety Element include:

- 1) Earthquakes and related ground failure hazards
- 2) Subsidence
- 3) Flooding
- 4) Slope Hazards
- 5) Release of Hazardous Materials
- 6) Aircraft Mishap
- 7) Wildland and Urban Fires
- 8) Emergency Planning (including Hazard Identification and Risk Assessment, Hazard Mitigation, and Emergency Response and Action)
- 9) Fire, Police, and Medical Services.

Resource Element:

The Resource Element functions as a guide to the protection, use and maintenance of natural resources, open spaces and cultural resources within the City. The element will encompass the state mandated topics of the Conservation Element (governed by Section 65302(d) of the Government Code) and the Open Space Element (governed by Section 65302(e) of the Government Code). Accordingly, the Resources Element will be divided into two main components:

- 1) The Conservation Plan which addresses water, geologic resources, soils, air quality, and solid waste management; and
- 2) The Open Space Plan which addresses water courses and lakes, outdoor recreational areas, open space for public health and safety, biological, paleontological/archaeological, and cultural/historical resources

Noise Element:

The Noise Element, governed by Section 65302 of the Government Code, is to be used as a guide for establishing a pattern of land uses that minimizes the exposure of community residents to excessive noise. Sources of noise to be considered in the element include:

- 1) Highways and freeways.
- 2) Primary arterials and major local streets.
- 3) Passenger and freight on-line railroad operations and ground rapid transit systems.
- 4) Commercial, general aviation, heliport, helistop, and military airport operations, aircraft overflights, jet engine test stands, and all other ground facilities and maintenance functions related to airport operation.
- 5) Local industrial plants, including, but not limited to, railroad classification yards.

- 6) Other ground stationary noise sources, including, but not limited to, military installations, identified by local agencies as contributing to the community noise environment.

NORTHERN EXPANSION SPHERE OF INFLUENCE

The City of Victorville inclusive of its existing Sphere of Influence (SOI) totals 98.5 square miles consisting of 74 square miles located within the City limits and the remainder in the unincorporated area. The General Plan 2030 recommends inclusion of the Northern Expansion Area into the City SOI. This expansion area would extend the City's northern SOI boundary to include an additional 37,000± acres, of which about 20,000 acres are developable and the remainder is open space. This SOI expansion is recommended to promote logical and orderly development, to allow a single multipurpose agency, the City, to establish community service priorities, and to promote cohesive master planning of infrastructure extension not only in the SOI expansion area but also in the City and its existing SOI. Figure 2, *Proposed Victorville Northern Expansion Area*, graphically depicts the area proposed for SOI expansion.

With the northern expansion, the City boundaries, inclusive of SOI would increase from about 63,000 acres to approximately 96,000 acres.

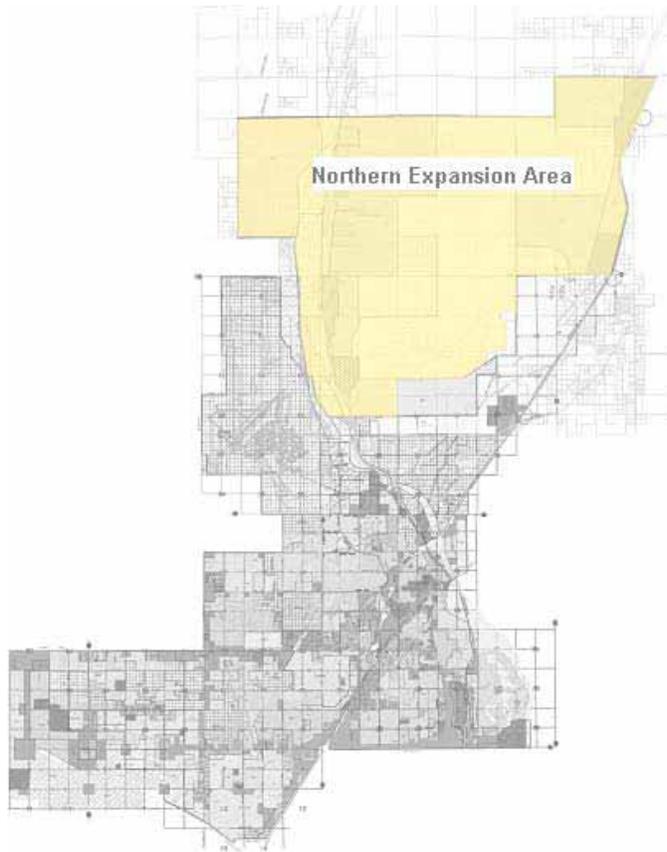


Figure 2, *Proposed Victorville Northern Expansion Area*

LAND USE PLAN

The Land Use Plan describes graphically the location and size of designated land uses. Figure 3, *Draft General Plan Land Use Map*, presents the proposed City of Victorville General Plan Land Use Plan. Boundaries of the Map include both the existing City boundaries, and existing and proposed SOI, inclusive of the Northern Expansion Area. These boundaries define the Planning Area addressed by the General Plan 2030 and this environmental document.

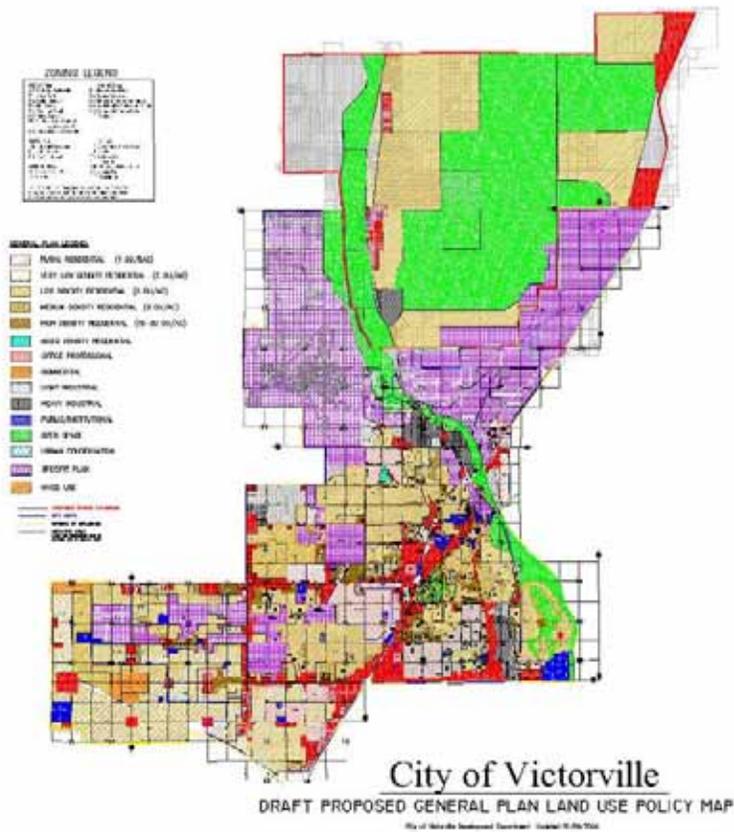


Figure 3, *Draft General Plan Land Use Map*

Table I presents the estimated area for each of the proposed land use designations within the General Plan 2030 Planning Area, inclusive of the City boundaries and existing and proposed Northern Expansion SOI.

Table 1	
City of Victorville Draft General Plan 2030 Land Use Plan Designations & Acreages For Planning Area	
Land Use Designation	Acres *
Very Low Density Residential	3,102
Low Density Residential	29,461
Medium Density Residential	333
High Density Residential	3,507
Mixed Density Residential	133
Office Professional	338
Commercial	7,306
Light Industrial	6,133
Heavy Industrial	945
Mixed Use	383
Public/Institutional	1,062
Open Space	20,289
Specific Plan	22,717
Total	95,708
<i>*Acreages are estimates that may be refined through the planning process.</i>	

PLANNING SUB-AREAS:

Given the wide range of development which presently exists and what is anticipated, the diversity of the natural environment within the Victorville Planning Area, and the large area governed by the General Plan, the proposed General Plan 2030 will divide the City and SOI areas into ten planning sub-areas. The boundaries of the ten planning sub-areas were delineated using topographic features, man-made features, and land use characteristics. The planning sub-areas are indicated in Figure 4, *City of Victorville Proposed Land Use Plan Planning Sub-Areas*.

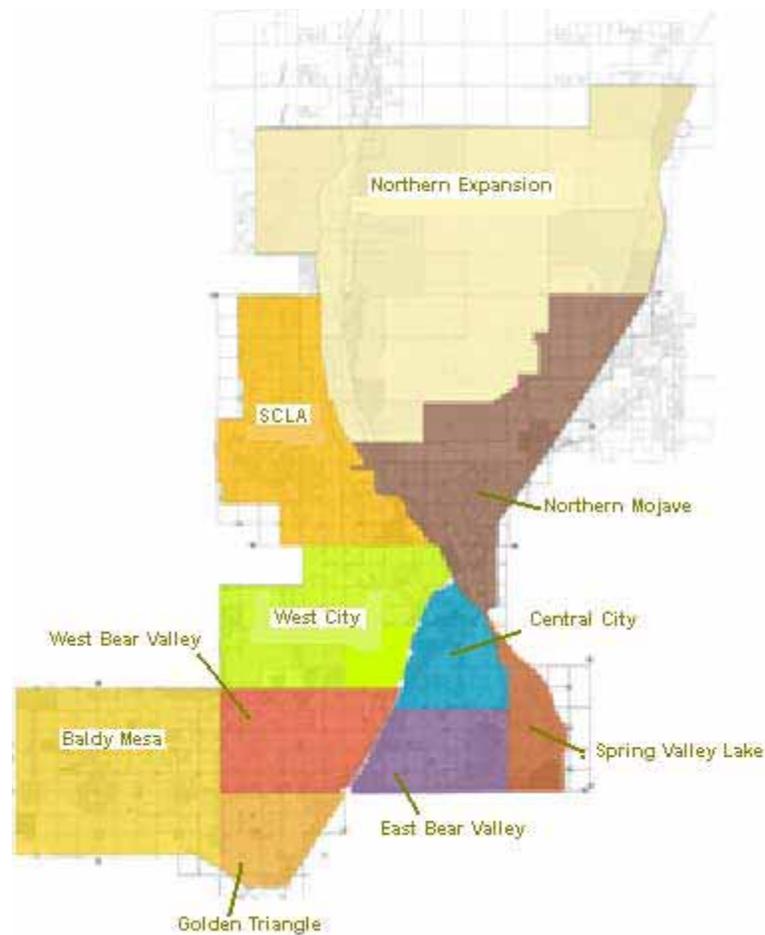


Figure 4. City of Victorville Proposed Land Use Plan Planning Sub-Areas

7. **Existing setting, including existing General Plan, land uses, circulation, infrastructure, geology, biological resources and cultural resources in the Planning Area:**

EXISTING GENERAL PLAN

Physical development in the City of Victorville is currently governed by the City's existing (1997, and as amended) General Plan. The existing General Plan disaggregates the City and its sphere of influence according to the land use designations listed in Table 2, which summarizes the current distribution of Victorville area by existing General Plan land use designation and by percent of City total acreage. Within the City boundaries are a number of unincorporated County islands; these are also summarized in the Table.

Residential is the predominant land use, comprising 22,537 acres (47.5%) of General Plan designated land plus 6736 acres (73.0%) of the Specific Plan designated land for a total of 28,272 acres or 62% of the City area. Residential also comprises over 79% of the County island land located within the City boundaries.

Specific Plan is the next prevalent land use, comprising 11,940.57 acres (25.2%) of General Plan area. Within the Specific Plan category, there are 6,735.9 acres of residential, 966.2 acres of commercial, 158.2 acres of industrial, and 1,420.9 acres of other land uses including open space and institutional uses.

Commercial, the third most prominent land use, comprises 5,602.8 acres (11.8%) of General Plan land within the City boundaries, plus 39.33 acres within the County islands.

Table 2 Existing General Plan Land Use by Designation, Acreage and % of Total Acreage				
Existing General Plan Land Use Designation	Total City Acreage	% of Total City Acreage	County Islands Acreage	% of County Islands
Rural Residential	357.15	0.8%	0.00	0.0%
Very Low Density Residential	5,259.96	11.1%	7,556.77	70.1%
Low Density Residential	14,238.79	30.0%	990.72	9.29%
Medium Density Residential	873.91	1.8%	0.00	0.0%
High Density Residential	1,723.80	3.5%	12.42	0.1%
Mixed Density Residential	83.66	0.2%	0.00	0.0%
Subtotal Residential	22,537.27	47.5%	8,559.91	79.4%
Office Professional	433	0.9%	0.00	0.0%
Commercial	5,602.80	11.8%	39.33	0.4%
Light Industrial	2,194.12	4.6%	98.17	0.9%
Heavy Industrial	1,670.99	3.5%	0.00	0.0%
Subtotal Commercial & Industrial	9,901.91	19.9%	137.50	1.3%
Public/Institutional	708.14	1.5%	175.56	1.6%
Open Space	1,404.87	3.0%	1,903.30	17.7%
Specific Plan	11,940.57	25.2%	0.00	0.0%
SP Residential	6,735.9	73.0%		
SP Commercial	966.2	10.0%		
SP Industrial	158.2	2.0%		
SP Other	1,420.9	15.0%		
Urban Conservation	974.66	2.1%	974.66	9.0%
Totals	47,466.43	100.0%	10,776.27	100.0%
<i>* % of Specific Plan area.</i>				

EXISTING LAND USES

Approximately 47.5% of the incorporated City area is currently developed. Table 3, below, summarizes the currently developed Victorville land by existing General Plan land use designation, acreage and by percent of total area currently developed.

Existing General Plan Land Use Designation	Existing Developed Acreage	% of Total Current Developed Acreage
Rural Residential	97.4	0.4%
Very Low Density Residential	4067.5	18.0%
Low Density Residential	4276	18.9%
Medium Density Residential	250.1	1.1%
High Density Residential	590.2	2.6%
Mixed Density Residential	53.0	0.2%
Subtotal	9281.2	41.3%
Office Professional	50.9	0.2%
Commercial	1403.8	6.2%
Light Industrial	130.3	0.6%
Heavy Industrial	393.8	1.7%
Public/Institutional	700.6	3.1%
Open Space	1281.8	5.7%
Specific Plan (SP)	9281.2	41.1%
Urban Conservation	0.0	0.0%
Totals	22,576.6	100.0%

CIRCULATION

The City's existing circulation system consists of freeway, roads and transit (bus). Freeways provide regional access, and include:

Interstate 15:

The I-15 provides access to and from Riverside County to the south and Barstow, continuing to Nevada, to the north. Also called the Mojave Freeway, this is a major north-south corridor having three lanes in each direction.

According to the California Department of Transportation (Caltrans), this section of the I-15 carried an annual average daily traffic (AADT) of 60,000 to 100,000 vehicles in 2005, of which, approximately 24% comprised of truck traffic. Seven full interchanges with the I-15 currently provided at the following streets:

- Bear Valley Road
- Palmdale Road (SR-18) / 7th Street
- Roy Rogers Drive / La Paz Drive
- Mojave Drive
- National Trails Highway / D Street
- E Street
- Stoddard Wells (south).

United States Federal Highway 395:

US-395 is another north-south highway that passes through the western part of the City. Predominantly a two-lane highway, this facility has a stretch of four lanes just south and north of its intersection with Palmdale Road. Caltrans traffic data shows that in 2005, this facility carried an AADT of approximately between 16,000 and 25,000 vehicles, of which about 17% was truck traffic. With the southern terminus of this facility at its junction with I-15 in the City of Hesperia, this facility connects the City of Victorville to the City of Adelanto and unincorporated northwestern San Bernardino County, before continuing onto adjacent Kern County. Currently it has five at-grade intersections with the following arterials:

- Bear Valley Road / Duncan Road
- Luna Road
- Palmdale Road (SR-18)
- Mojave Drive
- Cactus Road

State Route 18:

The existing SR-18 is a two-lane divided street with a continuous center turn lane in the Town of Apple Valley and City of Victorville (D Street), where it also called Happy Trails Highway. When SR-18 junctions with I-15, travelers must follow I-15 south to Palmdale road, where SR-18 proceeds west and is called Palmdale Road. A designated truck route within the City of Victorville, this facility carried an AADT of 17,000 to 46,000 vehicles in 2005, according to Caltrans traffic data, of which, close to 9% was truck traffic. For the City, it provides access to and from Antelope Valley to the west and the Town of Apple Valley, continuing further eastward to Lucerne Valley.

Historic Route 66:

One of the original federal routes, Route 66 or Will Rogers Highway was established in 1926. Today, from the southern limit of the City of Victorville, Route 66 follows the current alignment of I-15 to the freeway's interchange with Palmdale Road (SR-18) / 7th Street. North of this interchange, Hist-66 follows the alignment of 7th Street D Street. Continuing westward on D Street it follows National Trails Highway alignment into the community of Oro Grande on the north-western edge of the City.

Arterials/Local Roadways:

There are several different types of roadways maintained by the City of Victorville that range from two lane, undivided collectors to super arterials with six lanes and a positive separation (raised median).

- **Super Arterials:** Currently, this category includes US-395, Palmdale Road and Bear Valley Road east of Petaluma Road.
- **Parkways:** Currently, there are no streets designated as Parkways.
- **Residential Arterials:** La Mesa Road west of Amethyst Road is the only designated Residential Arterial.
- **Major Arterials:** Some of the existing facilities included in this category are Amethyst Road, El Evado Road, Green Tree Boulevard, 7th Avenue, 7th Street, Hesperia Road, La Mesa Road, Mojave Drive and parts of Bear Valley Road, west of I-15, etc.
- **Arterials:** Some of the Arterials in Victorville include Eucalyptus Street, Eagle Ranch Parkway, Mesa Linda Avenue, Topaz Road, Hook Boulevard, Village Drive, portions of El Evado Road, Bear Valley Road, etc.

Public Transportation:

Public transportation serves an alternative means of travel to the automobile and provides improved mobility choices, while making more efficient use of available roadway capacity. In comparison to the base service in 1998, transit service in the Victor Valley transit service area has expanded from providing approximately 4,480,200 passenger miles to approximately 11,055,700 passenger miles in 2003, with the number of average weekday transit trips rising from about 2,579 daily trips in 1998 to roughly 3,766 average weekday transit trips in 2003. This growth in transit services correlates to associated growth in Victorville and surrounding areas.

Passenger Rail:

Passenger rail service to the City is provided by Amtrak. Located on the north side of D Street, between 2nd Street and 6th Street, in the northeastern section of the City, the Victor Valley Transportation Center offers travelers multi-modal services and facilities. Amtrak's Southwest Chief Liner connecting Chicago, Illinois with Los Angeles, California, via Arizona, New Mexico, Colorado, Kansas and Missouri, offers daily service from the City of Victorville to Los Angeles. This train offers a morning and an evening commute to and from Los Angeles. Westbound, travelers can connect to the Coast Starlight in Los Angeles and the Pacific Surfliner in Fullerton. In addition, Amtrak Motor Coach service to and from San Joaquin trains in Bakersfield also serve Victorville with two daily round trips.

Goods Movement:

Goods movement is important to the vitality of businesses and in providing services to residents in the City of Victorville. In addition to rail freight, the basic mode of transporting goods within the City is trucking and vehicular delivery services. Pursuant to the City's General Plan, truck routes are designated on those arterials that minimize disturbance to noise sensitive land uses, such as residences, hospitals, churches, schools, etc. Chapter 12.36 of the Victorville Municipal Code institutes truck route regulations for commercial vehicles exceeding a maximum gross weight limit of 12,000 pounds. With the exception of making pickups or deliveries of goods, wares and merchandise from or to any building or structure located on non-truck routes, or for building construction or repair in these locations, trucks exceeding the specified weight limit are mandated to drive on City arterials that are clearly marked as a 'Truck Traffic Route'. The following streets are designated as truck routes within the City of Victorville:

- Air Expressway
- National Trails Highway / D Street
- Hesperia Road from Bear Valley Road to D Street
- Green Tree Boulevard from 7th Street to Hesperia Road
- Mariposa Road from Bear Valley Road to Green Tree Boulevard
- Bear Valley Road within the City limits
- Amargosa Road from Bear Valley Road to Palmdale Road.

Freight Operation:

In addition to passenger rail, the City serves as a major hub to freight transportation. The Burlington Northern Santa Fe BNSF operates freight rail services through the City of Victorville. The services offered include transporting containers, trailers, and chemical/oil tankers. Existing major inter-modal cargo loading facilities are located in ports of Long Beach and Los Angeles and in the future, with the expansion of the SCLA, the City will serve as a major hub for inter-modal cargo transfer and distribution.

EXISTING TRAFFIC CONDITIONS:

The existing City Circulation Element measures traffic levels in terms of levels of service (LOS), which is a qualitative measure of the effect of several factors, including speed and travel time, traffic interruptions, freedom to maneuver, safety, and driving comfort and convenience. Levels of service are designated by grades of A' (excellent, free flow) through 'F' (failure, jammed conditions). According to the existing Circulation Element, the accepted threshold for roadway segments is LOS C or better. A LOS C indicates that a roadway is operating at between 0.71-0.80 of capacity, and that traffic conditions are generally moderate, with freedom for vehicles to maneuver without noticeable restrictions. A LOS of E or F is typically considered unacceptable. A LOS E indicates that a roadway is operating at between 0.91-1.00 of capacity, and that traffic conditions are generally poor with extremely heavy volumes, with vehicles maneuverability poor. A LOS F indicates that a roadway is operating above 100 percent of its capacity, and that traffic conditions are extremely poor, with slow speeds, tremendous delays and increasing queue lengths.

As number of arterial segments and intersections in the City currently operate at LOS E or F during peak hours. Preliminary traffic studies conducted on behalf of the General Plan 2030 indicate that the following five intersections currently operate at deficient levels during both peak hours:

- Ridgecrest Road at Bear Valley Road
- 7th Avenue / Arrowhead Drive at Nisqualli Road
- Hesperia Road / 9th Street at D Street
- I-15 NB Ramps at Mojave Drive
- I-15 SB Ramps at Palmdale Road (SR-18).

INFRASTRUCTURE

Sewer:

The Victor Valley Wastewater Reclamation Authority (VWRA) reclamation plant which is located at the north end of Shay Road, has a current processing capacity of approximately 12.5 million gallons a day (MGD). Upgrades to the facility are currently underway to increase the capacity of the treatment plant. The VWRA expects that current improvements will increase capacity to 18 MGD. Both the VWRA and City own sewer lines that run through the City and connect to the reclamation plant.

Water:

Previously, the City of Victorville had obtained its water from the two separate districts: the Baldy Mesa Water District (BMWD) and the Victor Valley Water District (VWWD). Under the Local Agency Formation Commission (LAFCO) Agreement, the City of Victorville recently annexed these two districts and established the Victorville Water District, per Resolution No. 2959 approved and adopted by LAFCO, County of San Bernardino in May 2007.

GEOLOGY

Soils:

The prevailing soils types within the Planning Area include:

- Bryman loamy fine sand. This very deep, well drained soil is on terraces and old alluvial fans. It formed in alluvium derived dominantly from granitic material.
- Cajon sand. This very deep, somewhat excessively drained soil is on alluvial fans. It formed in alluvium derived dominantly from granitic material.
- Cajon gravelly sand. This very deep, somewhat excessively drained soil is on alluvial fans. It formed in alluvium derived dominantly from granitic material.
- Haplargids-Calciorthids complex. This map unit is on terrace escarpments, dissected hills, and terrace remnants that lie mainly between flood plains of the Mojave River and higher terraces. Most areas are dissected by shallow to deep intermittent drainages.
- Helendale loamy sand. This very deep, well drained soil is on alluvial fans and terraces. It formed in alluvium derived dominantly from granitic material.
- Kimberlina loamy fine sand, cool. This very deep, well drained soil is on alluvial fans. It formed in alluvium derived from mixed sources.
- Mojave Variant loamy sand. This very deep, well drained soil is on terraces. It formed in alluvium derived dominantly from granitic material.
- Riverwash. This map unit consists of areas in the Mojave River bed and in beds of intermittent streams. It consists of areas of unstable sandy and gravelly alluvium that is frequently removed, resorted, and redeposited.
- Rock outcrop-Lithic Torriothents complex. This map unit is on mountains and hills. Rock outcrops on mountainsides, ridges, and rugged hills and generally dominates the landscape. Lithic Torriothents are between the areas of rock outcrop in small depressional areas and on relatively stable hillsides. Slopes are hilly or steep.
- Victorville sandy loam. This very deep, moderately well drained soil is on low river terraces and on flood

plains along the Mojave River. It formed in alluvium derived dominantly from granitic material.

- Villa loamy sand. This very deep, moderately well drained soil is on flood plains and on low river terraces along the Mojave River. It formed in alluvium derived dominantly from granitic material.

Earthquakes:

Five fault systems which could affect the Victorville Planning Area include the San Andreas, Helendale, North Frontal, Landers, and San Jacinto. The San Andreas Fault is located approximately twenty-four miles south of the Planning Area and is considered most likely to produce a major earthquake within the planning period. Geologic evidence suggests that the San Andreas Fault is likely to produce a major earthquake (up to 8.3 Richter magnitude). The Helendale Fault, located approximately nine miles northeast of the Planning Area, could also be responsible for a moderate earthquake with a Richter magnitude of approximately 5.9.

A third major fault system, the San Jacinto Fault, is located approximately twenty-six miles south of the Planning Area and runs parallel to the San Andreas Fault. The North Frontal fault zone of the San Bernardino Mountains is located approximately five and one-half miles southeast of the Planning Area along the base of the Ord Mountains. This active fault has the potential to produce a moderate earthquake with a Richter magnitude of 6.2. The Landers fault is located approximately fifty miles southeast of the Planning Area. The Landers Fault was discovered as a result of a 7.4 Richter magnitude sized 1992 earthquake.

Liquefaction:

Portions of the Planning Area, especially those areas along the Mojave River, are susceptible to liquefaction. Liquefaction results when water-saturated, sandy unstable soils are subject to intense shaking, such as that caused by an earthquake. These soils lose cohesiveness, causing unreinforced structures to fail. The primary factors for increased liquefaction susceptibility include areas subject to high seismicity, shallow groundwater, and young, poorly consolidated sandy alluvium. When this type of sandy alluvium is present, liquefaction susceptibility is generally considered high if groundwater depth is less than ten feet beneath the ground surface, moderate if ground water depth is between ten and thirty feet, and low if groundwater is between thirty and fifty feet deep. Liquefaction is usually not considered a hazard if the groundwater table is greater than fifty feet in depth.

Flooding:

A major portion of the Victorville Planning Area is located on top of a gently sloping alluvial fan situated to the northeast of the San Bernardino Mountains. Local hydrology is dominated by the Mojave River which drains the mountainous areas located to the south. Several smaller intermittent streams located within the Planning Area drain into the Mojave River. The Mojave River originates in the San Bernardino Mountains and flows northeast approximately eighty miles where it empties into Soda Lake. The surface flow of the river fluctuates seasonally though it carries discharges from Lake Arrowhead, Silverwood Lake, and Mojave Forks Reservoir. The drainage area of the river is approximately 4,700 square miles. The average annual discharge is 51,440 acre feet and average monthly flow is 71 cubic feet per second near the Planning Area.

Slope Hazards:

The topography within the Victorville Planning Area varies considerably from gently sloping topography occasionally dissected by an intermittent stream channel to nearly vertical slopes adjacent to the Mojave River. The major environmental factors controlling stability of the steeper hillsides include precipitation, topography, geology, soils, vegetation, and man-made alternatives of the natural topography.

BIOLOGICAL RESOURCES

West Mojave Plan:

The West Mojave Plan is a regional strategy for conserving plant and animal species and their habitats and for defining an efficient, equitable, and cost-effective process for complying with threatened and endangered species laws. The plan consists of two components: a federal component that amends the existing 1980 California Desert Conservation Area Plan, and a Habitat Conservation Plan (HCP) that covers development on private lands. Released in December 2004, the plan is a result of a joint effort by the federal Bureau of Land Management (BLM) and 27 other federal and state agencies, cities and counties. The plan provides a comprehensive framework for the conservation of the Desert Tortoise, the Mojave Ground Squirrel, and nearly 100 other sensitive plant and wildlife species—and the natural communities of which they are a part—while providing a streamlined program for complying with the requirements of the California and federal Endangered Species Acts. The West Mojave Plan covers the 6.2 million acre West Mojave Plan Area (WMPA) including 3.2 million acres of public land and 3.0 million acres of private land in portions of San Bernardino, Inyo, Kern and Los Angeles counties. The City of Victorville lies within the WMPA.

Floral Resources:

Within the City boundaries, the following plant communities occur: Creosote Bush Scrub, Mojave Desert Saltbush Scrub, Rabbitbrush Scrub, ruderal (disturbed) communities, Joshua tree woodland, and riparian communities associated with the Mojave River and its flood plain, which includes transmontane alkali and freshwater marsh, Mojave riparian forest, and southern willow scrub. The noted riparian communities are classified as "communities of highest inventory priority" by the California Department of Fish and Game. Joshua trees are protected by the "California Desert Plant Protection Act", which requires a tag through the Department of Food and Agriculture if five or more trees are to be removed. In addition, Joshua trees are protected by Chapter 13.33 of the Victorville Municipal Code, which prohibits the destruction or removal of Joshua trees without written consent from the Director of Parks and Recreation.

Faunal Resources:

Within the City boundaries, seven wildlife species considered threatened or endangered as listed by either or both the California Department of Fish and Game (CDF&G) and the United States Fish and Wildlife Service (USF&WS) occur. Three of the species, all birds (Yellow-billed Cuckoo, Willow Flycatcher, Least Bell's Vireo), are found within the riparian habitat of the Mojave River.

The Desert Tortoise is classified as a threatened species and is covered by a federal species recovery plan (USFWS 1994). Desert Tortoises have occurred within Victorville's city limits historically, but have not been found there in recent years. The species' recovery plan recommends conservation and management of several tortoise-occupied areas covering approximately 1610 km² each, but none of the proposed areas extend into the City of Victorville.

In recent years, most biological reports completed for CEQA compliance in the City have focused on five sensitive wildlife species: Desert Tortoise, Mohave Ground Squirrel, Burrowing Owl, Sharp-shinned Hawk, and Loggerhead Shrike. This list of species of conservation concern was developed by the California Department of Fish and Game, which requested in letters responding to the City of Victorville recent Notices of Preparation for various development projects that the City concentrate on these five species.

CULTURAL RESOURCES

An estimated 178 historical/archaeological sites have been formally recorded within the Planning Area, three of which are listed as California Historical Landmarks. Ten sites in the Planning Area have been previously evaluated and determined eligible for listing in the National Register of Historic Places. Seventeen sites are recognized by the Victorville Chamber of Commerce as historic sites of local interest, all of which are located in the downtown area. A total of 50 sites are prehistoric—i.e., Native American—in nature, which occur predominantly near the banks of the Mojave River and near other natural water sources. The majority of the known sites are from the historic period, reflective of the efforts of early settlers to establish roads and homesteads in the valley and along the Mojave River. The historic-period buildings recorded in the Planning Area were notably concentrated in and near the city's historic downtown core, as would be expected.

Paleontological Resources:

The Planning Area contains ancient lake bed deposits estimated to date back to the Pleistocene Epoch (10,000 to 900,000 years ago). These lake beds contain numerous mammalian fossils, including teeth, limb fragments, phalanges and metacarpal from horses, camels and other large animals. As a result of requiring monitoring during previous earth disturbance activities, several resources have been identified and recovered. The most recent significant find was a mammoth discovered in June of 1993.

All of the Planning Area, excepting those areas above the 2,985 foot contour or below the 2,727 foot contour, is located upon fossil bearing strata. The entire Planning Area is considered to be sensitive regarding paleontological resources due to the existence of recovery sites throughout.

Archeological Resources:

Areas along the Mohave River and its tributaries, namely the Oro Grande Wash and the Bell Mountain Wash, and around the drainages and springs near Turner Springs appear to be highly sensitive for prehistoric and historic-period archaeological resources. Areas approximately 1-2 miles from these natural water sources are moderately sensitive for such resources. The valley floor, making up the balance of the Planning Area, while low in sensitivity for prehistoric archaeological remains, exhibits a moderate sensitivity for historic-period sites. The downtown area also demonstrates a moderate sensitivity for archaeological resources from the historic period, mostly due to the possibility of unknown subsurface artifact deposits that may be present.

Historic Resources:

For historic-period buildings and other features of built environment, the downtown area bounded by A, E, I st, and 11th Streets and the corridors extending southwest along 6th Street, 7th Street, Yucca Avenue, and Forrest Avenue showcase the densest concentration of early 20th century residences and historic-period commercial buildings. National Trails Highway between Air Expressway and the Interstate 15 freeway hosts a number of historic-period commercial and industrial buildings. The neighborhoods to the southwest of the downtown area feature a relatively high percentage of mixed-vintage residences from the early and mid-20th century, including some buildings that are now approaching the age threshold to be considered potentially historic.

8. ***Surrounding land uses and setting: (Briefly describe the project's surroundings)***

Areas surrounding the Planning Area are largely undeveloped and contained within the unincorporated boundaries of the County of San Bernardino. Surrounding urbanized areas include the City of Adelanto to the northwest, Town of Apple Valley to the east, City of Hesperia to the south, and the unincorporated community of Phelan to the west.

9. ***Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement.)***

Once the Project is adopted by the City, there will be no other permits necessary from other public agencies, including responsible agencies, in order for General Plan 2030 to become effective. The annexation component of the Project that encompasses the Northern Expansion Area SOI will require the approval of rezoning by the City prior to processing through the San Bernardino County Local Agency Formation Commission (LAFCO).

Environmental Factors Potentially Affected:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

- | | | |
|--|--|--|
| <input checked="" type="checkbox"/> Aesthetics | <input checked="" type="checkbox"/> Hazards & Hazard Materials | <input checked="" type="checkbox"/> Recreation |
| <input checked="" type="checkbox"/> Agriculture Resources | <input checked="" type="checkbox"/> Hydrology/Water Quality | <input checked="" type="checkbox"/> Transportation/Traffic |
| <input checked="" type="checkbox"/> Air Quality | <input checked="" type="checkbox"/> Land Use and Planning | <input checked="" type="checkbox"/> Utilities/Service Systems |
| <input checked="" type="checkbox"/> Biological Resources | <input checked="" type="checkbox"/> Mineral Resources | <input checked="" type="checkbox"/> Mandatory Findings of Significance |
| <input checked="" type="checkbox"/> Cultural Resources | <input checked="" type="checkbox"/> Noise | |
| <input checked="" type="checkbox"/> Geology/Soils (Liquefaction) | <input checked="" type="checkbox"/> Population/Housing | |
| | <input checked="" type="checkbox"/> Public Services | |

Determination: (To be completed by the Lead Agency)

On the basis of this initial evaluation:

	I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
	I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures described on the attached pages have been added to the project. A MITIGATED NEGATIVE DECLARATION will be prepared.
	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
x	I find that the proposed project MAY have a significant effect(s) on the environment; and a PROGRAM ENVIRONMENTAL IMPACT REPORT is required.
	I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable legal standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION , including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature:

Date:

Printed Name: **Chris Borchert**

Title: **Assistant Director of Planning**

Evaluation of Environmental Impacts:

An Environmental Checklist Form (Form) has been used to evaluate the potential environmental impacts associated with the proposed project. The Form has been prepared by the Resources Agency of California to assist local governmental agencies, such as the City of Victorville, in complying with the requirements of the Statutes and Guidelines for implementing the California Environmental Quality Act. In the Form, environmental effects are evaluated as follows:

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in its response. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is "Potentially Significant", "Less Than Significant With Mitigation", or "Less Than Significant". "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
4. "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from an "Earlier Analyses," as described in #5 below, may be cross-referenced).
5. Earlier analyses may be used where, pursuant to tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. In this case, a brief discussion should identify the following:
 - (a) Earlier Analysis Used. Identify and state where they are available for review.
 - (b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - (c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances).
7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
8. The explanation of each issue should identify:
 - (a) The significance criteria or threshold, if any, used to evaluate each question.
 - (b) The mitigation measure identified, if any, to reduce the impact to less than significance.

Environmental Impacts:

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
I. AESTHETICS. Would the project:				
a) Have a substantial adverse effect on a scenic vista?	X			
b) Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	X			
c) Substantially degrade the existing visual character and quality of the site and its surroundings?	X			
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	X			
<p>Explanation: I.a-d. <i>Potentially Significant.</i> Although the current General Plan does not designate scenic vistas or resources, the General Plan 2030 will expand the Planning Area and plan for new land uses, roads and open space areas. These General Plan level changes could create or identify new scenic vistas or resources, change the visual character and quality of the Planning Area and surrounding areas, and could create new potential sources of light and glare that could adversely affect day or nighttime views. The Program EIR will identify whether or not important scenic vistas and resources occur, and if so, how the General Plan 2030 would affect these resources. The EIR will also consider changes to the visual character and quality and light and glare that could result from implementation of General Plan 2030. Where appropriate, the EIR will recommend mitigation measures to reduce potential impacts to aesthetics.</p>				
II. AGRICULTURAL RESOURCES. Would the project:				
a) 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?	X			
b) Conflict with existing zoning for agricultural use, or a Williamson Act	X			

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
contract?				
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use?	X			

Explanation: II.a-c. Potentially Significant. During the late 1880s, the abundance of potable water and the availability of rich bottom lands led to agricultural development in the Planning Area. Under the proposed General Plan 2030, the only area in which agriculture would be permitted is within the Open Space designation. Although few or no active agricultural operations are expected to currently occur in Victorville, General Plan implementation could adversely impact existing Farmlands, agriculture zoning, or conversion to non-agricultural land uses should any agricultural resources exist. The Program EIR will identify whether or not the Project would impact the above-listed agricultural resource issues. Where appropriate, the EIR will recommend mitigation measures to reduce potential impacts to agricultural resources.

III. AIR QUALITY. Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan?	X			
b) Violate any air quality standard or contribute to an existing or projected air quality violation?	X			
c) 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 with exceed quantitative thresholds for ozone precursors)?	X			
d) Expose sensitive receptors to substantial pollutant concentrations?	X			
e) Create objectionable odors affecting a substantial number of people?	X			

Explanation: III.a-e. Potentially Significant. Victorville is within the Mojave Desert Air Basin (MDAB). The MDAB includes the desert portions of Los Angeles and San Bernardino counties, the eastern desert portion of Kern County and the north eastern desert portion of Riverside County. The Mojave Desert Air Quality Management District (MDAQMD) has jurisdiction over air quality issues within the MDAB. Despite implementing many strict controls, the MDAB still fails to meet the federal air quality standards for two of the monitored criteria pollutants: Ozone (O3) and

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
<p>Particulate Matter (PM10).</p> <p>By proposing to expand the Planning Area and to develop new land uses and roadways, General Plan 2030 could conflict with implementation of the MDAQMD air quality plan, violate applicable air quality standards and contribute substantially to existing O3 and PM10 air quality violations; expose sensitive receptors (including children, elderly and the infirmed) to substantial pollutant contributions; and create objectionable odors affecting substantial numbers of people. The Program EIR will identify whether or not the Project would impact the above-listed air quality issues. Where appropriate, the EIR will recommend mitigation measures to reduce potential impacts to air quality.</p>				
IV. BIOLOGICAL RESOURCES. Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modification, on any species identified as candidate, sensitive or special status species in local or regional plans, policies or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife?	X			
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife?	X			
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling hydrological interruption, or other means?	X			
d) 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?	X			
d) Interfere substantially with the movement of any native resident or	X			

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	X			
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservancy Conservation Plan, or other approved local, regional, or state habitat conservation plan?	X			
<p>Explanation: <i>IV. a-f. Potentially Significant.</i> As discussed in Section 7 of this Initial Study, the HCP policies for biological resources protection encompasses the Planning Area. Sensitive flora and fauna species potentially occur in the Planning Area. Continued development of the City and expansion into the northern SOI could potentially impact these resources. The Program EIR will identify whether or not the Project would impact the above-listed biological resource issues. Where appropriate, the EIR will recommend mitigation measures to reduce potential impacts to biological resources.</p>				
<p>V. CULTURAL AND RESOURCES. Would the project:</p>				
a) Cause a substantial adverse change in the significant of a historical resource as defined in §15064.5?	X			
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	X			
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	X			
d) Disturb any human remains including those interred outside of formal cemeteries?	X			

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
<p>Explanation: <i>V. a-d. Potentially Significant.</i> As discussed in Section 7 of this Initial Study, the Planning Area contains potential historical structures and archeological and paleontological resources. There is reasonable expectation that internment sites could exist. Continued development of the City and expansion into the northern SOI could potentially impact these resources. The Program EIR will identify whether or not the Project would impact the above-listed cultural resource issues. Where appropriate, the EIR will recommend mitigation measures to reduce potential impacts to cultural resources.</p>				
<p>VI. GEOLOGY AND SOILS. Would the project:</p>				
<p>a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:</p> <p>i) 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? Refer to Division of Mines and Geology Special Publication 42.</p>	X			
<p>ii) Strong seismic ground shaking?</p>	X			
<p>iii) Seismic-related ground failure, including liquefaction?</p>	X			
<p>iv) Landslides?</p>	X			
<p>b) Result in substantial soil erosion or the loss of topsoil?</p>	X			
<p>c) 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?</p>	X			
<p>d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?</p>	X			
<p>e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal</p>	X			

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
systems where sewers are not available for the disposal of wastewater?				
<p>Explanation: VI. a-e. <i>Potentially Significant.</i> Geographically, the Planning Area is susceptible to seismic activity, landslides, erosion, liquefaction, expansive soils. The General Plan 2030 is expected to allow septic tanks in certain large lot areas in the southwestern portion of the Planning Area. Continued development of the City and expansion into the northern SOI could potentially impact these geologic and soils conditions. The Program EIR will identify whether or not the Project would impact the above-listed geology and soils issues. Where appropriate, the EIR will recommend mitigation measures to reduce potential impacts to geology and soils.</p>				
VII. HAZARDS AND HAZARDOUS MATERIALS. Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	X			
b) 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?	X			
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	X			
d) 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, would it create a significant hazard to the public or the environment?	X			
e) 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 result in a safety hazard for people residing or working in the Project Area?	X			
f) For a project within the vicinity of a private airstrip, would the project	X			

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
result in a safety hazard for people residing or working in the Project Area?				
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	X			
h) 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?	X			
<p>Explanation: VII. a-h. <i>Potentially Significant.</i> Existing hazards in the Planning Area are expected to occur in existing industrial areas, inclusive of the SCLA, cement mining and other manufacturing and mechanical maintenance operations. The proposed General Plan 2030 anticipates expansion of rail and truck cargo hauling, and continuation of existing mining and industrial operations. Because of the substantial amount of growth anticipated in the Planning Area during the next 20 years, Project impacts relative to hazardous materials, airport safety and emergency evacuation plans could occur. Also because of the large amount of vacant undeveloped land in the Planning Area and high winds that frequently occur in the Victor Valley, there is a potential for wildland fires to occur. The Program EIR will identify whether or not the Project would impact the above-listed hazards and hazardous material issues. Where appropriate, the EIR will recommend mitigation measures to reduce potential impacts to hazards and hazardous materials.</p>				
<p>VIII. HYDROLOGY AND WATER QUALITY. Would the project:</p>				
a) Violate any water quality standards or waste discharge requirements?	X			
b) 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 which would not support existing land uses or planned uses for which permits have been granted)?	X			
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a	X			

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?				
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	X			
e) 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?	X			
f) 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?	X			
g) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	X			
h) 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?	X			
i) Inundation by seiche or mudflow?	X			

Explanation: *VIII. a-i. Potentially Significant.* Current and planned development in the Planning Area will generate substantial runoff which could impact water quality as well as existing drainage patterns. Much of the Planning Area water supply comes from groundwater. There is potential for continued growth to deplete groundwater sources or interfere with groundwater discharge. As discussed in Item #7, flood hazards occur in portions of the Planning Area. The Program EIR will identify whether or not the Project would impact the above-listed hydrology and water quality issues. Where appropriate, the EIR will recommend mitigation measures to reduce potential impacts to hydrology and water quality.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
IX. LAND USE AND PLANNING. Would the project:				
a) Physically divide an established community?	X			
b) 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?	X			
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	X			
<p>Explanation: <i>IX. a-c. Potentially Significant.</i> During the past two decades, Victorville has experienced rapid and expansive growth. The General Plan 2030 proposes to change planned land uses and expand the SOI by about 37,000 acres. These types of changes are expected to promote continued growth, and could significantly impact existing communities, conflict with applicable land use plans and policies (including zoning and regional plans) and with the HCP. The Program EIR will identify whether or not the Project would impact the above-listed land use and planning issues. Where appropriate, the EIR will recommend mitigation measures to reduce potential impacts to land use and planning.</p>				
X. MINERAL RESOURCES. Would the project:				
a) 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?	X			
b) 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?	X			
<p>Explanation: <i>VII. a-b. Potentially Significant.</i> Naturally occurring mineral resources within the City include sand, gravel or stone deposits that are suitable as sources of concrete aggregate, located primarily along the Mojave River. Changes proposed as part of the General Plan 2030 could impact these resources. The Program EIR will identify whether or not the Project would impact the above-listed mineral resources. Where appropriate, the EIR will recommend mitigation measures to reduce potential impacts to mineral resources.</p>				

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
XI. NOISE. Would the project:				
a) 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?	X			
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	X			
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	X			
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	X			
e) 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?	X			
f) 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?	X			
<p>Explanation: <i>XI. a-f. Potentially Significant.</i> Existing sources or noise in Victorville include SCLA air operations, rail, truck traffic, roadway noise, mining operations, and industrial and manufacturing operations. The General Plan 2030 proposes to change planned land uses. These changes could increase noise levels, exacerbate existing noise conflicts or create new noise conflicts. The Program EIR will identify whether or not the Project would impact the above-listed noise issues. Where appropriate, the EIR will recommend mitigation measures to reduce potential impacts to noise.</p>				
XII. POPULATION AND HOUSING. Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through	X			

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
extension of roads or other infrastructure)?				
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	X			
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	X			

Explanation: *XII. a-c. Potentially Significant.* During the past two decades, Victorville has experienced rapid and expansive growth. The General Plan 2030 proposes to change planned land uses and expand the SOI by about 37,000 acres. These changes could induce growth, and displace substantial numbers of existing housing or people. The Program EIR will identify whether or not the Project would impact the above-listed population and housing issues. Where appropriate, the EIR will recommend mitigation measures to reduce potential impacts to population and housing.

XIII. PUBLIC SERVICES. **Would the project:** result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant Environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

a) Fire protection?	X			
b) Police protection?	X			
c) Schools?	X			
d) Parks?	X			
e) Other public facilities?	X			

Explanation: *XIII. a-e. Potentially Significant.* During the past two decades, Victorville has experienced rapid and expansive growth. The General Plan 2030 proposes to change planned land uses and expand the SOI by about 37,000 acres. These types of changes could significantly impact public services, inclusive of fire protection, police protection, schools, parks and other public facilities. The Program EIR will identify whether or not the Project would impact the above-listed public service issues. Where appropriate, the EIR will recommend mitigation measures to reduce potential impacts to public services.

XIV. RECREATION:

a) Would the project 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?	X			
b) Does the project include recreational facilities or require the construction or	X			

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
expansion of recreational facilities that might have an adverse physical effect on the environment?				
<p>Explanation: XIV. <i>a-b. Potentially Significant.</i> The General Plan 2030 proposes to change planned land uses and expand the SOI by about 37,000 acres. These changes would increase population and employment and create new demands on recreational facilities. The Program EIR will identify whether or not the Project would impact the above-listed recreation issues. Where appropriate, the EIR will recommend mitigation measures to reduce potential impacts to recreation.</p>				
XV. TRANSPORTATION/ TRAFFIC. Would the project:				
a) Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	X			
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	X			
c) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	X			
d) Result in inadequate parking capacity?	X			
e) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	X			
f) Result in inadequate emergency access?	X			
g) 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?	X			

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
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Explanation: XV. *a-g. Potentially Significant.* The General Plan 2030 proposes to change planned land uses and expand the SOI by about 37,000 acres. The General Plan also proposes a new Circulation Element to develop roads and transit to support these new land uses. These changes could significantly impact roadway capacity and levels of service. The Circulation Element will also address air traffic, transit and bicycle travel. Development that would occur as a result of the General Plan will require adequate access, circulation and parking. The Program EIR will identify whether or not the Project would impact the above-listed transportation and traffic issues. Where appropriate, the EIR will recommend mitigation measures to reduce potential impacts to transportation and traffic.

XVI. UTILITIES AND SERVICE SYSTEMS. Would the project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	X			
b) 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?	X			
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project as projected demand in addition to the provider's existing commitments?	X			
d) 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?	X			
e) Have sufficient water supplies available to serve the project from existing entitlements and resources, or new or expanded entitlements needed?	X			
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	X			
g) Comply with federal, state and local statutes and regulations related to	X			

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
solid waste?				
<p>Explanation: <i>XVI. a-g. Potentially Significant.</i> The General Plan 2030 proposes to change planned land uses and expand the SOI by about 37,000 acres. These types of changes could significantly impact utilities, inclusive of wastewater treatment facilities, storm drainage facilities, water supply, and solid waste capacity and compliance with applicable regulations. The Program EIR will identify whether or not the Project would impact the above-listed utility issues. Where appropriate, the EIR will recommend mitigation measures to reduce potential impacts to utilities.</p>				
<p>XVII. MANDATORY FINDINGS OF SIGNIFICANCE</p>				
<p>A. Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or an endangered threatened species, or eliminate important examples of the major periods of California history or prehistory?</p>	X			
<p>Explanation: <i>XVII. A. Potentially Significant.</i> The Planning Area is expected to contain important biological resources and cultural resources that could be degraded by the proposed General Plan 2030. This mandatory finding of significance will be evaluated in the EIR.</p>				
<p>B. Does the project have impacts that are individually limited, but cumulatively considerable? (Are the incremental effects of the project considerable when viewed in connection with those of past projects, those of other current projects, and those of probable future projects)</p>	X			
<p>Explanation: <i>XVII. B. Potentially Significant.</i> The proposed Project could contribute to impacts that are individually limited but potentially cumulatively considerable, specifically in regard to issues such as air quality, traffic, and public services and utilities. Further analysis in the EIR will be provided to determine potential cumulative impacts from Project implementation.</p>				
<p>C. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?</p>	X			

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
<p>Explanation: XVII. C. <i>Potentially Significant.</i> The proposed Project could potentially adversely affect human beings, either directly or indirectly, specifically in regard to air quality, noise and hazards and hazardous materials. Additional analysis in the EIR will evaluate the significance of any effects on human beings in light of more detailed analyses.</p>				

Sources City in Evaluation of Environmental Impacts:

Section 15150 of the State CEQA Guidelines permits an environmental document to incorporate by reference other documents that provide relevant data. The documents outlined below are hereby incorporated by reference, and the pertinent material is summarized throughout this Initial Study where that information is relevant to the analysis of impacts of the proposed project. All documents incorporated by reference are available for review at the City of Victorville Planning Department, City of Victorville, 14343 Civic Drive, Victorville, CA 92393-5001. The office hours are Monday through Friday between 8:00 a.m. and 5:00 p.m.

1. City of Victorville General Plan (current)
2. Municipal Code of the City of Victorville (current)
3. CEQA Implementing Procedures, City of Victorville (current)
4. City of Victorville General Plan Update Baseline Transportation Analysis (Draft); Parsons Brinckerhoff Quade & Douglas, Inc.; May 7, 2007
5. City of Victorville General Plan Update Baseline Infrastructure Analysis (Draft); Parsons Brinckerhoff Quade & Douglas, Inc.; August, 2007
6. *Biological Resources Report - City of Victorville General Plan Update*; Robert A. Hamilton, Consulting Biologist; May 27, 2005.
7. *Cultural Resources Technical Report - City of Victorville General Plan Update*; CRM TECH; August 5, 2005.

List Below the Person or Persons who Prepared or Participated in the Preparation of the Initial Study:

1. Environmental Consultant: Joann Lombardo, Comprehensive Planning Services
2. City Staff: Chris Borchert, Assistant Director of Planning.



NOTICE OF PREPARATION AND PUBLIC SCOPING MEETING

TO: Ms. Terry Roberts
Governor's Office of Planning &
Research
P.O. BOX 3044
Sacramento, CA 95812-3044

FROM: City of Victorville
14343 Civic Drive
Victorville, CA 92393-5001
City of Victorville

SUBJECT: Notice of Preparation of a Draft Environmental Impact Report and Public Scoping Meeting

Notice is hereby given that the City of Victorville Development Department will be the Lead Agency and will prepare an Environmental Impact Report (EIR) for the project identified below. We need to know the views of your agency as to the scope and content of the environmental information which is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency will need to use the EIR prepared by our agency when considering your permit or other approval for the project.

A copy of the Initial Study describing the project, location, and the potential environmental effects is attached. Due to the time limits mandated by State law, your response must be sent at the earliest possible date but not later than 30 days after receipt of this notice. Please send your response to Mr. Chris Borchert, City of Victorville, 14343 Civic Drive, Victorville, CA 92393-5001. We will need the name for a contact person in your agency.

PROJECT TITLE: City of Victorville General Plan 2030.

PROJECT APPLICANT: Planning Division, City of Victorville, 14343 Civic Drive, Victorville, CA 92393-5001.

PROJECT LOCATION: The City of Victorville is located in southwestern San Bernardino County, in the geographic subregion of the southwestern Mojave Desert known as the Victor Valley and commonly referred to as the "High Desert" due to its approximate elevation of 2,900 feet above sea level. (Reference Figure 1 of attached Initial Study.)

PROJECT DESCRIPTION: The Project is the General Plan 2030 for the City of Victorville. The General Plan 2030 would update and supersede the City's current General Plan, which was adopted in July 1997 and subsequently amended. The Project includes the expansion of the City northern sphere of influence.

SCOPING MEETING: Pursuant to Section 21083.9 of the Public Resources Code, a Scoping Meeting for the general public will be held to discuss the proposed project EIR and assist the City in identifying the range of actions, alternatives, mitigation measures, and significant effects to be analyzed in depth in the EIR. The Scoping Meeting will be held at the time, date and place indicated below:

Time: 2:00 – 4:00 p.m.

Date: March 5, 2008

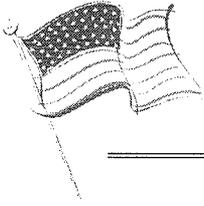
Place: Conference Room D. City Hall, 14343 Civic Drive, Victorville, CA 92393-5001.

Responsible public agencies are invited to attend the scoping meeting and/or review and comment on the attached project Initial Study.

Date: February 14, 2008

Signature: SIGNED COPY ON FILE AT CITY
Chris Borchert, Assistant Planning Director

Telephone: (760) 955-5146.



Scott B. Eckert

9358 SVL Box
Victorville CA 92395

June 15, 2008

Received

JUN 17 2008

Development Dept

City of Victorville
Chris Borchert, Asst Dir of Planning
14343 Civic Drive
Victorville CA 92393-5001

Re: General Plan 2030/Parcels 0482-042/044-xxx

Dear Mr. Borchert:

I wish to add additional comments to my previously submitted written and verbal opposition for the proposed General Plan 2030 land use changes from Office Professional to Commercial for the area involving APN 0482-042/044-xxx parcels in the *Spring Valley Lake Planning Area*. As you know, the existing land use in the surrounding area is already well established with schools, day-care centers, churches, and residential development and not consistent with Commercial/C-2 land use.

I contend that inclusion of the small, isolated parcels referenced above in the General Plan 2030 effort for changing the permissible land use from Commercial serve to obviate and diminish the public's opportunity to challenge this proposed land use change. As you are well aware, the subject parcels represent a very small percentage of the total acreage involved in the GP 2030 update. The parcels are well removed and isolated from the "North Victorville" area of the GP 2030 plan, which comprises well over 99.9% of the land involved in the GP 2030 update.

It appears to the general public that the City of Victorville is accommodating the Tamarisk Market Place developer's desire to change this land use, without a full public airing of the proposed change. Victorville is in full knowledge that an application has been submitted by Rothbart development representing Wal-Mart, Inc requesting a land use change and re-zoning of the subject parcel to Commercial/C-2 from the current office/Professional land use designation to allow development of a 24/7 Super Wal-Mart store. The City is also fully aware that there is significant opposition to this project, as over 3,000 Victor Valley residents have signed petitions opposing this development.

As you know, the GP Land use Element Policy 1.6 states the following: Victorville will make efforts to ensure that the integrity of each land use district is maintained. Imp. 1: The City will carefully consider requests for determination so that they do not vary from the intent of zone districts. Also, Land use Element Policy 1.7 states: Victorville will ensure that new development is compatible with existing developments and public infrastructure.

Neither of these General Plan Land Use policies appears to be adhered to by changing the subject parcels from Commercial/Professional to Commercial/C-2.

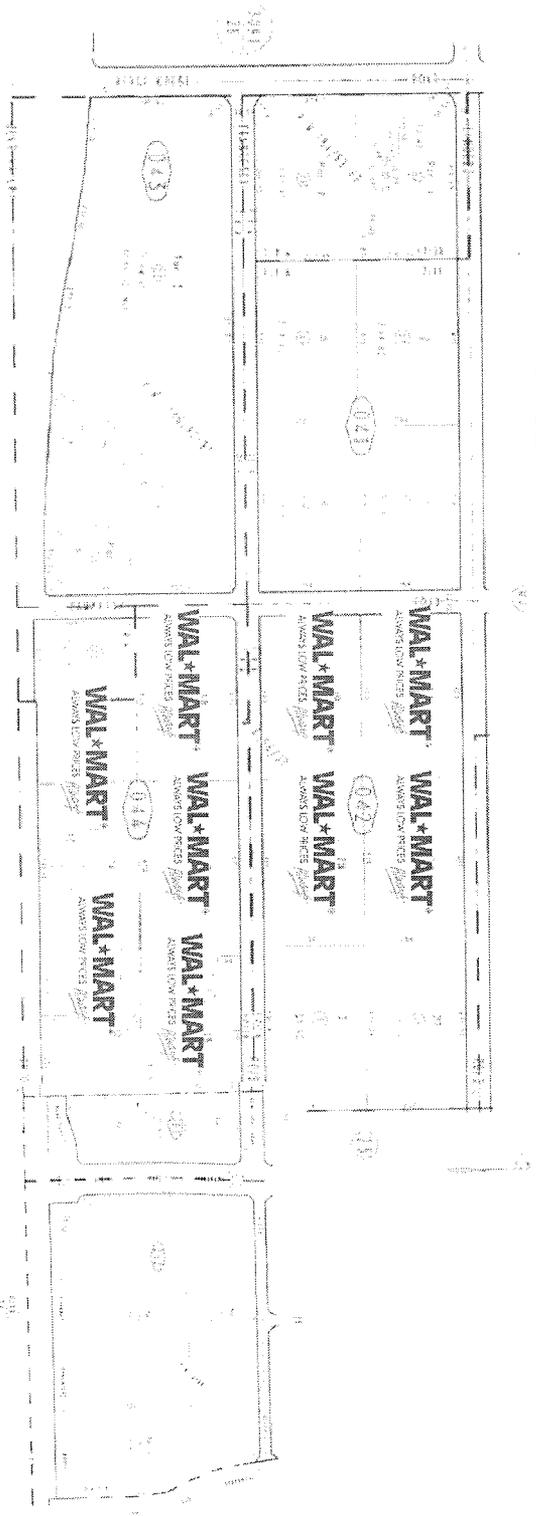
In summary, the land use changes requested by Rothbart/Wal-Mart for the subject parcels and included in the City's proposed General Plan 2030 should be considered separately as part of the future Tamarisk Market Place public hearings and review process and not included as part of the General Plan 2030. Including this developer-requested change in the General Plan has the appearance of subterfuge on the part of Victorville, especially given the city's knowledge of wide-spread opposition to the Tamarisk Market Place project.

Thank you.


Scott Eckert

WAL*MART = Wal-Mart owned parcel

APN 0482-041 thru -044



DEPARTMENT OF TRANSPORTATION

DISTRICT 8

PLANNING AND LOCAL ASSISTANCE (MS 725)

464 WEST 4th STREET, 6th FLOOR

SAN BERNARDINO, CA 92401-1400

PHONE (909) 383-4557

FAX (909) 383-5936

TTY (909) 383-6300

*Flex your power!
Be energy efficient!*

March 26, 2008

Mr. Chris Borchert
City of Victorville
14343 Civic Drive,
Victorville, CA 92393-5001

Received
MAR 28 2008
Development Dep

**Comments for the Notice of Preparation of a Draft Environmental Impact Report for the
Victorville General Plan 2030**

Dear Mr. Borchert:

We have completed the review of the Notice of Preparation of a Draft Environmental Impact Report and have the following comments:

1. Connect street systems that are designed to balance auto, pedestrian and bicycle movement.
2. Encourage mixed-use development, preferably near transit service and in the Old Town Community.
3. Build mixed-density and mixed-income housing.
4. Promote the choices for transportation modes.
5. Connect open space, parks and trails into a connective system.
6. Provide noise mitigation measure along I-15, United States Highway 395, State Route 18, and Historic Route 66.

The Caltrans Office of Community Planning was established to address a statewide need for community-sensitive approaches to transportation decision-making. Our primary goal is to enhance Caltrans leadership role in the development of community based transportation planning which leads in economic growth, job and housing balance, and consistency with community values.

Mr. Chris Borchert
March 26, 2008
Page 2

Thank you for providing us the opportunity to review this proposed project and provide comments. If you have any questions regarding this letter, please contact John Chiu, the Community Planner, at (909) 388-7139 for assistance.

Sincerely,

A handwritten signature in cursive script that reads "Daniel Kopulsky".

Daniel Kopulsky
Office Chief
Community Planning/IGR-CEQA
Division of Planning



DEPARTMENT OF CONSERVATION

DIVISION OF LAND RESOURCE PROTECTION

801 K STREET • MS 18-01 • SACRAMENTO, CALIFORNIA 95814

PHONE 916 / 324-0850 • FAX 916 / 327-3430 • TDD 916 / 324-2555 • WEBSITE conservation.ca.gov

March 21, 2008

Mr. Chris Borchert
City of Victorville
14343 Civic Drive
P.O. Box 5001
Victorville, CA 92393-5001

Received
MAR 24 2008
Development Dep

RE: Notice of Preparation (NOP) for Draft Environmental Impact Report (DEIR)
Victorville General Plan 2030 – SCH# 2008021086

Dear Mr. Borchert:

The Department of Conservation's (Department) Division of Land Resource Protection (Division) has reviewed the NOP for the referenced project. The Division monitors farmland conversion on a statewide basis and administers the California Land Conservation (Williamson) Act and other agricultural land conservation programs. We offer the following comments and recommendations with respect to the project's impacts on agricultural land and resources.

Project Description

The project is an update to the City's current general plan which was adopted in July 1997 and expansion of the City's sphere of influence. The General Plan 2030 will guide the City's land use and development during the next twenty years. The NOP indicates that the estimated area for open space use within the General Plan 2030 is 20,289 acres.

Agricultural Setting of the Project

The DEIR should describe the project setting in terms of the actual and potential agricultural productivity of the land. The Division's Important Farmland Map for San Bernardino County should be utilized to identify land within the project site and surrounding land that may be impacted. Acreages for each land use designation should be identified for both areas. Likewise, the County's Williamson Act Map should be utilized to identify potentially impacted contract, Farmland Security Zone (FSZ) and agricultural preserve land by acreage and whether it is prime or nonprime agricultural land according to definition in Government Code §51201(c). Maps of the Important Farmland and Williamson Act land should be included in the DEIR.

Williamson Act Lands

The Department recommends that the following information be included in the environmental document regarding Williamson Act land impacted by the project.

- Pursuant to Government Code §51243, if a city annexes land under Williamson Act contract, the city must succeed to all rights, duties and powers of the county under the contract unless conditions in §51243.5 apply to give the city the option to not succeed to the contract. A Local Agency Formation Commission (LAFCO) must notify the Department within 10 days of a city's proposal to annex land under contract (Government Code §56753.5). A LAFCO must not approve annexation of contracted land to a city unless specified conditions apply (Government Code §51296.3, §56749 and §56856.5).
- An agricultural preserve is a zone authorized by the Williamson Act, and established by the local government, to designate land qualified to be placed under contract. Preserves are also intended to create a setting for contract-protected lands that is conducive to continuing agricultural use. Therefore, the uses of agricultural preserve land must be restricted by zoning or other means so as not to be incompatible with the agricultural use of contracted land within the preserve (Government Code §51230). The environmental document should also discuss any proposed general plan designation or zoning within agricultural preserves affected by the project.

Mitigation Measures

The Department encourages the use of agricultural conservation easements on land of at least equal quality and size as partial compensation for the direct loss of agricultural land. If a Williamson Act contract is terminated, or if growth inducing or cumulative agricultural impacts are involved, we recommend that this ratio be increased. We highlight this measure because of its acceptance and use by lead agencies as mitigation under CEQA. It follows a rationale similar to that of wildlife habitat mitigation. The loss of agricultural land represents a permanent reduction in the State's agricultural land resources. Agricultural conservation easements will protect a portion of those remaining resources and lessen project impacts in accordance with CEQA Guideline §15370.

Mitigation using agricultural conservation easements can be implemented by at least two alternative approaches: the outright purchase of easements or the donation of mitigation fees to a local, regional or statewide organization or agency whose purpose includes the acquisition and stewardship of agricultural conservation easements. The conversion of agricultural land should be deemed an impact of at least regional significance, and the search for replacement lands conducted regionally or statewide, and not limited strictly to lands within the project's surrounding area.

March 14, 2008

Client-Matter: 29255-060

BY FACSIMILE (760) 269-0070 AND U.S. MAIL

Mr. Chris Borchert
Assistant Director of Planning
City of Victorville
14343 Civic Center Drive
Victorville, CA 92393-5001

Received
MAR 19 2008
Development Dep

Re: Comments on the General Plan 2030 Notice of Preparation and Initial Study

Dear Mr. Borchert:

These comments on the City's Notice of Preparation and Public Scoping Meeting ("NOP") and the scope of the proposed Environmental Impact Report ("EIR") for the City's General Plan 2030 (the "Project") are submitted on behalf of Niles, LLC, the owner of approximately 200 acres of land located in Northern Expansion Area of the City of Victorville. Niles, LLC is also the owner of other property in the Victorville/Apple Valley region and is very interested in the continued growth and development in the high desert area.

Although our request for a copy of the City's NOP and its referenced Initial Study was never responded to by the City, we were able to obtain a copy of the NOP and the Initial Study and have prepared comments that we request be considered in preparing the EIR for the Project. We would like to be added to the list of individuals receiving notices regarding the General Plan 2030, any associated Specific Plans, and the General Plan 2030 Draft EIR.

At the outset, we believe that the NOP circulated by the City fails to meet the requirements of Section 15082 of the CEQA Guidelines (14 Cal. Code of Regulations ("CCR") § 15082) to provide "sufficient information describing the project and the potential environmental effects to enable the responsible agencies to make a meaningful response." The NOP (1) fails to provide an adequate description of the project because it was too vague; and (2) fails to disclose the probable environmental effects of the Project. The purpose of a NOP "is to solicit guidance from [Responsible Agencies, Trustee Agencies, the Office of Planning and Research, and involved federal agencies] as to the scope and content of the environmental information to be included in the EIR." (14 CCR § 15375.) At a minimum, a NOP must include a description of the project, the location of the project, and the probable environmental effects of the project. (CEQA Guidelines Section 15082.) Where a detailed description of the project is not provided in the NOP itself, "a copy of the initial study may be sent with the notice to supply the necessary

Chris Borchert
March 14, 2008
Page 2

information.” (*Id.*) The Initial Study was not attached to the NOP, but reviewers were instead directed to obtain a copy from the City of Victorville Planning Department. (As noted above, however, our correspondence to City personnel requesting a copy of the Initial Study went unanswered.)

With hardly a nod toward the required NOP elements, the project description from the General Plan NOP reads, in full, as follows: “*The Project is the General Plan 2030 for the City of Victorville. The General Plan 2030 would update and supersede the City’s current General Plan, which was adopted in July 1997 and subsequently amended. The Project includes the expansion of the City [sic] northern sphere of influence.*” NOPs also must furnish “responsible and trustee agencies and the Office of Planning and Research with sufficient information describing the project *and the potential environmental effects* to enable the responsible agencies to make a meaningful response.” (CEQA Guidelines § 15082, Emphasis added.) Here, there was simply no discussion of the project’s potential environmental effects. This unquestionably fails to meet the standards set forth in the CEQA Guidelines.

Had reviewers been provided a copy of the Initial Study with the NOP, they would have been informed that the City is proposing to undertake land use planning for an additional 37,000 acres, including 20,000 acres of development, resulting in a 30% increase in the geographic size of the City and substantial increases in the amount of development proposed, the potential effects of this land plan were not fully disclosed. For example, the acreage of land designated for low density development would expand by over 15,000 acres, and the high density residential would double in size to over 3,500 acres. Commercial-designated land would increase by almost 2,000 and areas covered by Specific Plans will increase by 11,000 acres.

In short, the proposed changes that would occur under General Plan 2030 represent a substantial change in the intensity and extent of development in this area – none of which is evident from the NOP. The truncated description of the project in the NOP does not promote the public consultation and information policies of CEQA. A new, legally adequate NOP must be circulated to remedy these deficiencies and to provide the public with usable, accurate information regarding the full scope of the Project. Absent that information, the public cannot meaningfully comment on the scope of the Draft EIR under preparation by the City.

The superficial project description in the Initial Study also fails to provide the public with the full scope of changes contemplated by the General Plan 2030. As described above, the Project proposes substantial increases in the sheer acreage of land that is proposed to be designated for development under the General Plan. But in so doing, the Initial Study fails to describe the amount of development those land use designations would permit. As an affected landowner, we were provided with a copy of what was referred to as the Desert Gateway Conceptual Land Use Plan, dated November 5, 2007 and attached as Exhibit A. Within this

Chris Borchert

March 14, 2008

Page 3

discrete area of the City alone, the General Plan 2030 will permit 19,280 dwelling units, and 17,200,000 square feet of commercial/industrial development. We question what other land use changes are proposed for the remainder of the City and the magnitude of development that would be envisioned by the City under the General Plan 2030. We also understand that the City's General Plan 2030 Draft EIR will cover both proposed amendments to the General Plan as well as a Specific Plan for the Desert Gateway area. The fact that the Draft EIR was intended to cover both General Plan amendments and Specific Plan adoption was not disclosed in either the NOP or the Initial Study.

To be legally adequate, the General Plan 2030 EIR itself must evaluate the impact areas and alternatives discussed below:

- The EIR must evaluate the full range of “past, present, and probable future projects.” (CEQA Guidelines §§ 15130(b)(1)(A), 15355.) At a minimum, the list of related projects must include projects located in the cities of Victorville, Adelanto, Apple Valley, and Hesperia and the County of San Bernardino. Moreover, given the extent of development proposed under the City's General Plan 2030, we believe that an adequate analysis of impacts must include the potential effect of the proposed land use changes on regional needs and the surrounding regional environment – and not be limited to just Victorville alone.
- The EIR must thoroughly analyze potential impacts relating to global climate change and greenhouse gases. Among other things, this analysis must include (1) the quantity of Project emissions as compared to State- and nation-wide emission standards; (2) Project emissions compared to what would otherwise be permitted in the absence of General Plan 2030; and (3) the Project's potential to interfere with the State's efforts to comply with AB 32. As you may know, the State Attorney General has been very focused on reviewing Draft EIRs prepared for General Plan updates and recently settled litigation with the County of San Bernardino over its General Plan update. Therefore, we would recommend that the City carefully review the measures agreed by the County of San Bernardino to address potential global climate change impacts, and that these issues be addressed in the City's General Plan 2030 Draft EIR.
- A Water Supply Assessment (“WSA”) must be prepared in connection with the Project. Senate Bill 610, codified at California Water Code § 10631 *et seq.*, requires that lead agencies demonstrate that sufficient water supplies are available for large development and subdivision projects in the form of a WSA. Furthermore, California Water Code Section 10910 *et seq.* also requires that a lead agency request preparation

Chris Borchert
March 14, 2008
Page 4

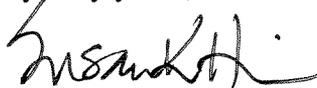
of a WSA from the local water supplier so that water supply issues can be properly taken into consideration and analyzed in an EIR prepared pursuant to CEQA for certain delineated projects. General Plan 2030 is a project of sufficient size to require preparation of a WSA.

- The EIR should analyze a reasonable range of alternatives to the Project. Alternatives that should be considered include alternative locations of the High Desert Corridor, especially where it intersects with Interstate 15, as well as alternative land uses for the Northern Expansion Area. We note that only 358 acres of mixed-use development is proposed in the entire City. Mixed-use is one of the most frequently-used development designations because of the flexibility it provides and the tremendous benefits to both achieving housing and commercial objectives. We request that the Niles, LLC property in the Northern Expansion Area be analyzed in the Draft EIR for mixed-use development as an alternative. Both are reasonable alternatives that could offer substantial environmental advantages over the Project while still accomplishing the Project's basic objectives.

Conclusion

The General Plan 2030 NOP fails the basic requirement that NOPs contain "sufficient information describing the project and the potential environmental effects to enable the responsible agencies to make a meaningful response." A new NOP that contains all required information—including the proposed dwelling unit count and cumulative development square footages—must be circulated before the Project moves forward so that the public and agencies can meaningfully comment on the scope of the Draft EIR. Additionally, we want to ensure that the full scope of environmental issues described in the Initial Study Checklist, and in this letter be addressed in the Draft EIR. We reiterate our request to be added to the distribution list for all notices regarding General Plan 2030, the Gateway Specific Plan, other associated specific plans, and the General Plan 2030 Draft EIR. We appreciate your consideration of these comments.

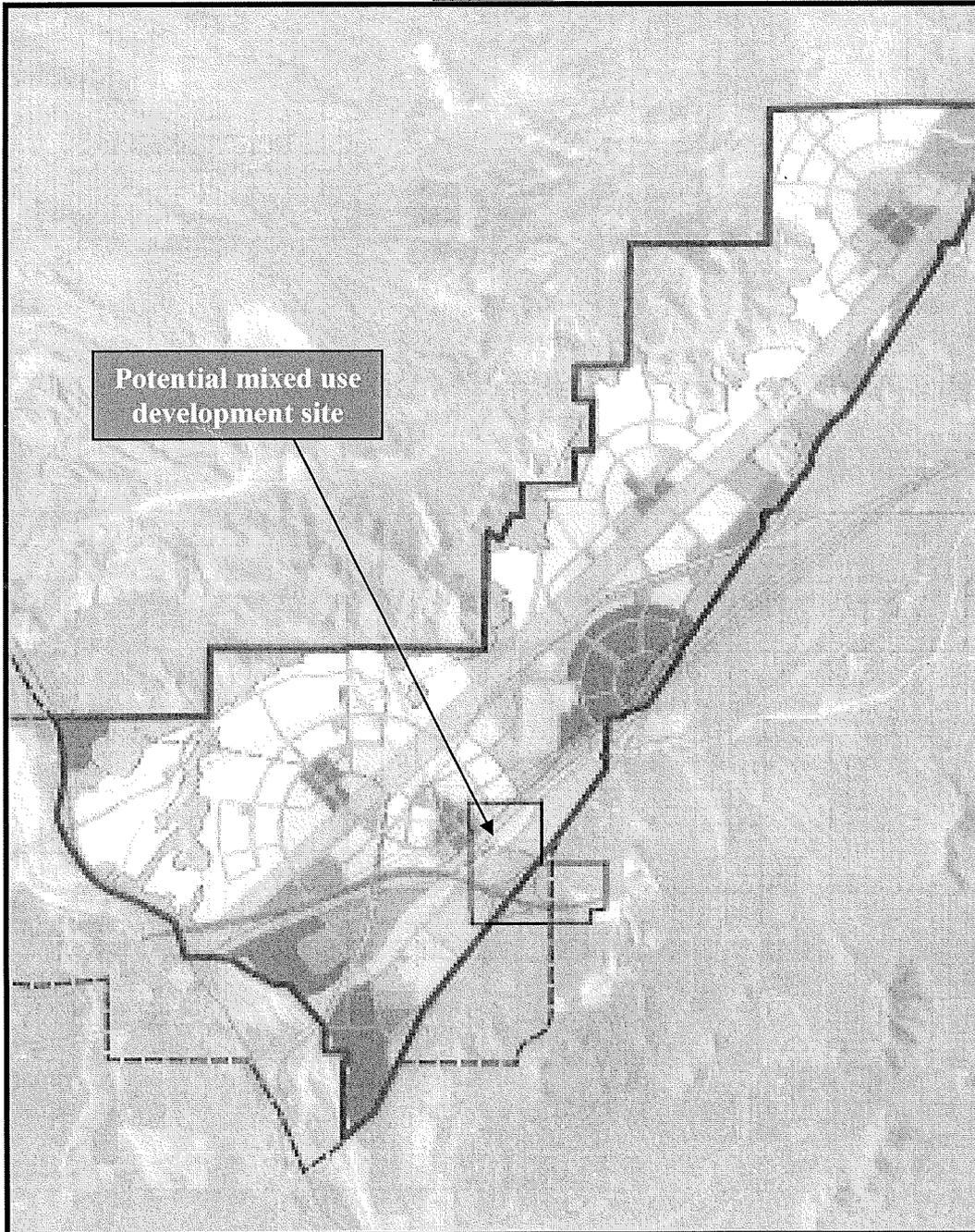
Very truly yours,



Susan K. Hori
Manatt, Phelps & Phillips, LLP

Chris Borchert
March 14, 2008
Page 6

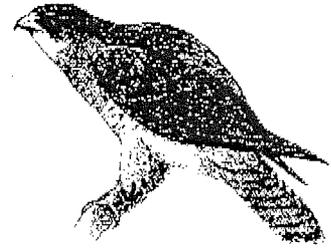
Exhibit B





DEPARTMENT OF FISH AND GAME

Mojave River Hatchery
12550 Jacaranda Ave
Victorville, CA 92395
(Mailing address only: Not a Public Office)
(760) 955-8139 phone
(760) 245-9142 fax



FACSIMILE TRANSMITTAL SHEET

TO:	Chris Borchert	FROM:	Tonya Moore
COMPANY:	City of Victorville	DATE:	MARCH 18, 2008
FAX NUMBER:	(760) ²⁶⁹ 955 -0073	TOTAL NO. OF PAGES INCLUDING COVER:	5
PHONE NUMBER:	(760) 955-5135	SENDER'S REFERENCE NUMBER:	
RE:	NOP Comments	YOUR REFERENCE NUMBER:	SCH # 2088021086

URGENT FOR REVIEW PLEASE COMMENT PLEASE REPLY PLEASE RECYCLE

NOTES/COMMENTS:

Received
MAR 19 2008
Development Dep



DEPARTMENT OF FISH AND GAME

<http://www.dfg.ca.gov>
Inland Deserts Region (IDR)
407 West Line Street
Bishop, CA 93514
(760) 872-1171



March 18, 2008

Mr. Chris Borchert
City of Victorville
PO Box 5001
Victorville, CA 92393-5001

Subject: Notice of Preparation (NOP) for Victorville General Plan 2030 Notice of Preparation (NOP) (SCH# 2008021086)

Dear Mr. Borchert:

The Department of Fish and Game (Department) has reviewed the Notice of Preparation (NOP) for the Draft Environmental Impact Report (DEIR) for the proposed adoption of the 2030 City General Plan. The project includes the expansion of the City's northern sphere of influence.

The Department is providing comments on this NOP as the State agency, which has the statutory and common law responsibilities with regard to fish and wildlife resources and habitats. California's fish and wildlife resources, including their habitats, are held in trust for the people of the State by the Department (Fish and Game Code §711.7). The Department has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and the habitats necessary for biologically sustainable populations of those species (Fish and Game Code §1802). The Department's Fish and wildlife management functions are implemented through its administration and enforcement of Fish and Game Code (Fish and Game Code §702). The Department is a trustee agency for fish and wildlife under the California Environmental Quality Act (see CEQA Guidelines, 14 Cal. Code Regs. §15386(a)). The Department is providing these comments in furtherance of these statutory responsibilities, as well as its common law role as trustee for the public's fish and wildlife.

In order for Department staff to adequately review and comment on the proposed project the following information should be included in the DEIR:

1. A complete assessment of the flora and fauna within and adjacent to the project area, with particular emphasis upon identifying endangered, threatened and sensitive species and sensitive habitats.
 - a. If appropriate habitat for any listed species occurs on the site, including surface waters potentially containing any fish species, have qualified biologist conduct focused surveys according USFWS and /or Department protocols (guidelines).
 - b. Have a qualified botanist conduct a focused rare plant survey during the

Conserving California's Wildlife Since 1870

- appropriate time of year following USFWS and/or Department protocols.
 - c. Have a qualified biologist conduct focused surveys for burrowing owl following the 1993 Burrowing Owl Consortium protocol guidelines. Survey guidelines can be obtained for the Department. The mitigation measures presented in the guidelines should be included in the DEIR and/or DEIS.
 - d. If any listed species will potentially be impacted by the proposed project, consultation with the Department and the USFWS will be required to establish appropriate avoidance, minimization and mitigation measures. An Incidental Take Permit may be required by the Department pursuant to Fish and Game Code Section 2080 *et. seq.*
 - e. The Department requests that impacts to State and Federally-listed species and potential avoidance, alternative and mitigation measures be addressed in the CEQA document and not solely in subsequent negotiations between the applicant and the agencies.
- 2. A thorough discussion of direct, indirect and cumulative impacts expected to adversely affect biological resources, with specific measures to offset such impacts.
 - a. CEQA Guidelines, 15125(a), state that knowledge of the regional setting is critical to an assessment of environmental impacts and that special emphasis should be placed on resources that are rare or unique to the region.
 - b. Project impacts should be analyzed relative to their effects on off-site habitats. Specifically, this should include nearby public lands, open space, adjacent natural habitats and riparian ecosystems. Impacts to and maintenance of wildlife corridor/movement areas, including access to undisturbed habitat in adjacent areas, should be fully evaluated and provided. This includes impacts to wildlife from increased raven populations.
 - 1) The zoning of areas for development projects or other uses that are nearby or adjacent to natural areas may inadvertently contribute to wildlife-human interactions. A discussion of possible conflicts and mitigation measures to reduce these conflicts should be included in the environmental document.
 - 2) A cumulative effects analysis should be developed as described under CEQA Guidelines, 15130. General and specific plans, as well as past, present, and anticipated future projects, should be analyzed relative to their impacts on similar plant communities and wildlife habitats.
- 3. A range of alternatives should be analyzed to ensure that alternatives to the proposed project are fully considered and evaluated. A range of alternatives, which avoid or otherwise minimize impacts to sensitive biological resources should be included. Specific alternative locations should also be evaluated in

areas with lower resource sensitivity, where appropriate.

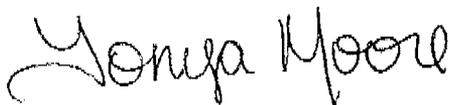
- a. Mitigation measures for project impacts to sensitive plants, animals and habitats should emphasize evaluation and selection of alternatives which avoid or otherwise minimize project impacts. Off-site compensation for unavoidable impacts through acquisition and protection of high-quality habitat elsewhere should be addressed.
 - b. The Department considers Rare Natural Communities as threatened habitats having regional and local significance. Thus, these communities should be fully avoided and otherwise protected from project-related impacts.
 - c. A California Endangered Species Act (CESA) Permit must be obtained, if the project has the potential to result in "take" of species of plants or animals listed under CESA, either during construction or over the life of the project. CESA Permits are issued to conserve, protect, enhance and restore State-listed threatened or endangered species and their habitats. Early consultation is encouraged, as substantial modification to the proposed project and mitigation measures may be required in order to obtain a CESA Permit. Revisions to the Fish and Game Code, effective January 1998, requires that the Department issue a separate CEQA document for the issuance of a CESA permit unless the project CEQA document addresses all project impacts to listed species and specifies a mitigation monitoring and reporting program that will meet the requirements of a CESA permit. For these reasons, the following information is requested:
 - 1) Biological mitigation monitoring and reporting proposals and a raven control plan should be of sufficient detail and resolution to satisfy the requirements of a CESA Permit. The Department recommends early consultation with the Department to discuss appropriate measures to avoid, minimize, and/or compensate for impacts.
 - 2) A Department-approved Mitigation Agreement and Mitigation Plan are required for plants listed as rare under the Native Plant Protection Act.
4. Under Section 1600 *et. seq* of the Fish and Game Code, the Department requires the project applicant to notify the Department of any activity that will divert, obstruct or change the natural flow of the bed, channel or bank (which includes associated riparian habitat) or a river, stream or lake, or use material from a streambed prior to the applicant's commencement of the activity. Streams include, but are not limited to, intermittent and ephemeral streams, rivers, creeks, dry washes, sloughs, blue-line streams and watercourses with subsurface flow. The Department, as a responsible agency under CEQA, may consider the local jurisdiction's (Lead Agency) Negative Declaration of EIR for the project. However, if the EIR does not fully identify potential impacts to lakes, streams and

associated resources (including, but not limited to, riparian and alluvial fan sage scrub habitat) and provide adequate avoidance, mitigation, monitoring and reporting commitments, additional CEQA documentation will be required prior to execution (signing) of the Streambed Alteration Agreement. In order to avoid delays or repetition of the CEQA process, potential impacts to a lake or stream, as well as avoidance and mitigation measures need to be discussed within this CEQA document. The Department recommends the following measures to avoid subsequent CEQA documentation and project delays:

- a. Incorporate all information regarding impacts to lakes, streams and associated habitat within the DEIR. Information that needs to be included within the document includes: (a) a delineation of lakes, streams and associated habitat that will be directly or indirectly impacted by the proposed project; (b) details on the biological resources (flora and fauna) associated with the lakes and/or streams; (c) identification of the presence or absence of sensitive plants, animals or natural communities; (d) a discussion of environmental alternatives; (e) a discussion of avoidance measures to reduce project impacts; and (f) a discussion of potential mitigation measures required to reduce the project impacts to a level of insignificance. The applicant and lead agency should keep in mind that the State also has a policy of no net loss of wetlands.
5. The Department recommends that the project applicant and/or lead agency consult with the Department to discuss potential project impacts, avoidance and mitigation measures. Early consultation with the Department is recommended, since modification of the proposed project may be required to avoid or reduce impacts to fish and wildlife resources.

In conclusion, the requested biological survey information should be submitted to 12550 Jacaranda Avenue, Victorville, CA 92395, for review in order to adequately determine the potential impacts of the project. Questions regarding this letter and further coordination on these issues should be directed to Eric Weiss (760) 246-8828.

Sincerely,



Tonya Moore
Senior Environmental Scientist

cc: Mr. Eric Weiss, DFG
State Clearinghouse



LOCAL AGENCY FORMATION COMMISSION

215 North "D" Street, Suite 204 • San Bernardino, CA 92415-0490
(909) 383-9900 • Fax (909) 383-9901
E-mail: lafco@lafco.sbcounty.gov • www.sbclafco.org

Established by the State of California to serve the Citizens, Cities, Special Districts and the County of San Bernardino

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City Member

MARK NUAIMI
City Member

RICHARD P. PEARSON
Public Member

March 14, 2008

Chris Borchert
Assistant Director of Planning
City of Victorville
14343 Civic Drive
Victorville, CA 92393-5001

Received
MAR 18 2008
Development Dep

RE: Notice of Preparation of a Draft Environmental Impact Report
for the City of Victorville General Plan 2030

ALTERNATES

JAMES V. CURATALO
Special District

BRAD MITZELFELT
Board of Supervisors

A.R. "TONY" SEDANO
Public Member

DIANE WILLIAMS
City Member

Dear Mr. Borchert:

The Local Agency Formation Commission (LAFCO) received the abovementioned document on February 20, 2008. A copy of this document has also been forwarded to the Commission's Environmental Consultant, Tom Dodson and Associates, who may respond under a separate cover. After reviewing the document, LAFCO has the following comments and/or concerns on the Initial Study:

EXECUTIVE SUMMARY (PAGE 1)

STAFF

KATHLEEN ROLLINGS-McDONALD
Executive Officer

SAMUEL MARTINEZ
LAFCO Analyst

MICHAEL TUERPE
LAFCO Analyst

ANNA M. RAEF
Clerk to the Commission

ANGELA M. SCHELL
Deputy Clerk to the Commission

REBECCA LOWERY
Deputy Clerk to the Commission

At its March 2007 Commission hearing, LAFCO separated, expanded and continued the City's request for a Sphere of Influence expansion. That application is now identified as LAFCO 3082 with the title identified as "Sphere of Influence Review (Expansions) for the City of Victorville and Victorville Water District. The final bullet in this section needs to be amended to reflect the title of the action and to identify that discussion of the Victorville Water District expansion needs to be included in the document.

Also it was the understanding of LAFCO staff, in prior conversation with City staff, that the evaluation of this proposal would include the "pre-zoning" of the City's existing sphere and the northern expansion area. This will need to be identified in the summary and the initial study.

LEGAL COUNSEL

CLARK H. ALSOP

NORTHERN EXPANSION SPHERE OF INFLUENCE (Page 6):

As noted above, this section needs to be modified to address the expansion of both the City and the Water District spheres of influence. The paragraph indicates "The General Plan 2030 recommends inclusion of the North Expansion Area into the City SOI"; however, it does not identify the process for review and consideration of the item. The process for consideration should be included in this section for the reader's information.

Land Use Plan

Figure 3 on Page 7 is not legible on the document received. In the LAFCO staff opinion, this map should be of sufficient scale to allow for reading the land use designations.

Infrastructure

On page 15 under Infrastructure there is listed two facilities – sewer and water. Under Sewer the document identifies that the City owns the sewer lines. At this time, the lines are owned by the Victorville Sanitary District who also operates the collection and transportation system for wastewater. LAFCO is currently processing a proposal for dissolution of this subsidiary district, but no timeline for completion of that process has been made.

Under Water the discussion of the consolidation of the Baldy Mesa and Victor Valley Water Districts is inaccurate. It is suggested that the following language be inserted following the first sentence:

With approval of the consolidation proposal by the Local Agency Formation Commission (LAFCO) and completion of the process, the Baldy Mesa and Victor Valley Water Districts were consolidated into the Victorville Water District and established as a subsidiary district of the City of Victorville. As an independent special district, the water services for the existing City and portions of its existing sphere of influence are served by the Victorville Water District. Extension of water service to the northern sphere of influence expansion area is to be provided by the Victorville Water District.

Other Public Agencies

On page 19 under Other Public Agencies it is stated that no other permit would be required in order for the General Plan to be effective. It should be noted that the land use designations applied to the existing sphere of influence and the expansion proposed would only become effective upon annexation. In addition, this section makes no reference to the process necessary to expand the sphere of influence.

This section also discusses the “annexation component of the project”. This is the only reference to annexation in the document. This would relate to my first question regarding the issue of pre-zoning and the evaluation of that process in the EIR.

INITIAL STUDY:

Item XIII – Public Services

The explanation should identify that the existing service providers for park and recreation and fire protection services are the subsidiary districts. On balance LAFCO staff agrees with the identification of impacts to be evaluated.

Item XIV – Recreation

On page 33 of the initial study the materials should identify that the Victorville Recreation and Park District is currently proposed to be dissolved and that the City of Victorville as the successor agency would be required to contract to continue to provide these services within the boundaries of the agency. Those boundaries include the sphere of influence territory of Spring Valley Lake and Mountain View Acres. For the balance of the explanation, LAFCO staff agrees with the identification of impacts to be evaluated

Item XVI – Utilities and Service Systems

LAFCO staff believes that the discussion of this item should also include a description that the sphere of influence expansion includes the Victorville Water District so that the service issues are discussed. In addition, the explanation should identify that the existing wastewater collection and transportation authority is the Victorville Sanitary District, a subsidiary district of the City.

If you have any questions concerning the information outlined above, please do not hesitate to contact me at (909) 383-9900. Please maintain LAFCO on your distribution list to receive further information related to this application.

Sincerely,



KATHLEEN ROLLINGS-McDONALD
Executive Officer

cc: Tom Dodson, Tom Dodson & Associates, LAFCO Environmental Consultant
John Roberts, City Manger
Doug Roberston, Deputy City Manager
Bill Webb, Director of Planning and Development
Reggie Lamson, Director, Victorville Water District

PUBLIC UTILITIES COMMISSION

320 WEST 4TH STREET, SUITE 500
LOS ANGELES, CA 90013



March 13, 2008

Chris Borchert
City of Victorville
P.O. Box 5001
Victorville, CA 92393-5001

Dear Mr. Borchert:

Re: SCH# 2008021086; Victorville General Plan Update

The California Public Utilities Commission (Commission) has jurisdiction over the safety of highway-rail crossings (crossings) in California. The California Public Utilities Code requires Commission approval for the construction or alteration of crossings and grants the Commission exclusive power on the design, alteration, and closure of crossings.

Commission staff is in receipt of the *Notice of Completion & Environmental Document Transmittal-NOP* from the State Clearinghouse. As the state agency responsible for rail safety within California, we recommend that the City add language to the General Plan so that any future planned development adjacent to or near BNSF Railway Company's right-of-way be planned with the safety of the rail corridor in mind. New developments may increase traffic volumes not only on streets and at intersections, but also at at-grade highway-rail crossings. This includes considering pedestrian circulation patterns/destinations with respect to railroad right-of-way.

Mitigation Measures to consider include, but are not limited to, the planning for grade separations for major thoroughfares, improvements to existing at-grade highway-rail crossings due to increase in traffic volumes and continuous vandal resistant fencing or other appropriate barriers to limit the access of trespassers onto the railroad right-of-way.

Please advise us on the status of the project. If you have any questions in this matter, please contact me at (213) 576-7078 or at rxm@cpuc.ca.gov.

Sincerely,


Rosa Muñoz, PE
Utilities Engineer
Rail Crossings Engineering Section
Consumer Protection & Safety Division

Received
MAR 17 2008
Development Dep.

C: John Shurson, BNSF

DEPARTMENT OF TRANSPORTATION

DIVISION OF AERONAUTICS – M.S.#40
1120 N STREET
P. O. BOX 942873
SACRAMENTO, CA 94273-0001
PHONE (916) 654-4959
FAX (916) 653-9531
TTY 711



*Flex your power!
Be energy efficient!*

Chris Borchert
City of Victorville
14343 Civic Drive
Victorville, CA 92393-5001

Received
MAR 17 2008
Development Dep

March 10, 2008

Dear Chris Borchert:

City of Victorville's Notice of Preparation of a Draft Environmental Impact Report for the Victorville General Plan 2030; SCH# 2008021086

The California Department of Transportation (Caltrans), Division of Aeronautics (Division), reviewed the above-referenced document with respect to airport-related noise and safety impacts and regional aviation land use planning issues pursuant to the California Environmental Quality Act (CEQA). The Division has technical expertise in the areas of airport operations safety and airport land use compatibility. We are a funding agency for airport projects, and we have permit authority for public-use and special-use airports and heliports.

The proposal is for an update to the Victorville General Plan. Southern California Logistics Airport (SLCA) is one of the Proposed Land Use Plan Planning Sub-Areas for the general plan.

Government Code Section 65302.3 (a) requires general plans, specific plans and amendments shall be consistent with the adopted airport land use plans adopted or amended pursuant to Section 21675 of the Public Utilities Code. In accordance with Public Utilities Code Section 21676, general plans must be consistent with the adopted airport land use compatibility plans developed by the City of Victorville, which represents the Airport Land Use Commission (ALUC) for the Airport.

General plans and elements must clearly demonstrate intent to adhere to ALUC policies to ensure compliance with compatibility criteria. Direct conflicts between mapped land use designations in a general plan and the ALUC criteria must be eliminated. A general plan needs to include (at the very least) policies committing the county to adopt compatibility criteria essential to ensuring that such conflicts will be avoided. There are a number of ways for a city or county to address the airport consistency issue, including:

- Incorporating airport compatibility policies into the update.
- Adopting an airport-combining zoning ordinance.
- Adopting an "Airport Element" into the general plan.
- Adopting the airport compatibility plan as a "stand alone" document or as a specific plan.

The general plan must acknowledge that until ALUC compatibility criteria are incorporated into the general plan, proposals within the airport influence area must be submitted to the ALUC for review. These provisions must be included in the general plan at a minimum for it to be considered consistent with the airport compatibility land use plan.

The proposal should also be coordinated with SCLA staff to ensure its compatibility with future as well as existing airport operations.

CEQA, Public Resources Code 21096, requires the Caltrans Airport Land Use Planning Handbook (Handbook) be utilized as a resource in the preparation of environmental documents for projects within airport land use compatibility plan boundaries or if such a plan has not been adopted, within two nautical miles of an airport. The Handbook provides a "General Plan Consistency Checklist" in Table 5A and a "Possible Airport Combining Zone Components" in Table 5B. The Handbook is a resource that should be applied to all public use airports and is available on-line at <http://www.dot.ca.gov/hq/planning/aeronaut/htmlfile/landuse.php>.

Since communities vary greatly in size and character from urban to rural, the level of noise deemed acceptable in one community is not necessarily the same for another community. Federal and State regulations regarding aircraft noise do not establish mandatory criteria for evaluating the compatibility of proposed land use development around airports (with the exception of the 65 dB CNEL "worst case" threshold established in the State Noise Standards for the designated "noise problem" airports). For most airports in California, 65 dB CNEL is considered too high a noise level to be appropriate as a standard for land use compatibility planning. This is particularly the case for evaluating new development in the vicinity of the airport. The 60 dB CNEL, or even 55 dB CNEL, may be more suitable for new development around most airports. Consideration should also be given to cumulative noise impacts associated with the project site's proximity to roadways and railway lines.

Sound insulation, buyer notification and avigation easements are typical noise mitigation measures. These measures, however, do not change exterior aircraft noise levels. It is likely that some future homeowners and tenants will be annoyed by aircraft noise in this area. Noise mitigation measures are not a substitute for good land use compatibility planning for new development.

The planned height of buildings, antennas, and other objects should be checked with respect to Federal Aviation Regulation (FAR) Part 77 criteria if development is close to the airport, particularly if situated within the runway approach corridors. General plans must include policies restricting the heights of structures to protect airport airspace. To ensure compliance with FAR Part 77 "Objects Affecting Navigable Airspace" submission of a Notice of Proposed Construction or Alteration (Form 7460-1) to the Federal Aviation Administration (FAA) may be required. Form 7460-1 is available on-line at <https://oeaaa.faa.gov/oeaaa/external/portal.jsp> and should be submitted electronically.

Education Code Section 17215 requires a school site investigation by the Division prior to acquisition of land for a proposed school site located within two miles of an airport runway. Our recommendations are submitted to the State Department of Education for use in determining acceptability of the site. The Division's school site evaluation criteria is available on-line at <http://www.dot.ca.gov/hq/planning/aeronaut/htmlfile/regulations.php>.

Business and Professions Code Section 11010 and Civil Code Sections 1102.6, 1103.4, and 1353 address buyer notification requirements for lands around airports and are available on-line at <http://www.leginfo.ca.gov/calaw.html>. Any person who intends to offer land for sale or lease within an airport influence area is required to disclose that fact to the person buying the property.

Chris Borchert
March 10, 2008
Page 3

Land use practices that attract or sustain hazardous wildlife populations on or near airports can significantly increase the potential for wildlife-aircraft collisions. The Federal Aviation Administration (FAA) recommends that landfills, wastewater treatment facilities, surface mining, wetlands and other uses that have the potential to attract wildlife, be restricted in the vicinity of an airport. FAA Advisory Circular (AC150/5200-33B) entitled "Hazardous Wildlife Attractants on or Near Airports" addresses these issues. For further information, please refer to the FAA website http://wildlife-mitigation.tc.faa.gov/public_html/index.html.

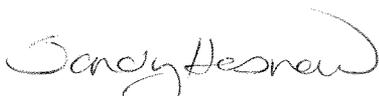
Aviation plays a significant role in California's transportation system. This role includes the movement of people and goods within and beyond our state's network of over 250 airports. Aviation contributes nearly 9 percent of both total state employment (1.7 million jobs) and total state output (\$110.7 billion) annually. These benefits are discussed in the study "Aviation in California: Benefits to Our Economy and Way of Life" available on-line at <http://www.dot.ca.gov/hq/planning/aeronaut/>. Aviation improves mobility, generates tax revenue, saves lives through emergency response, medical and fire fighting services, annually transports air cargo valued at over \$170 billion and generates over \$14 billion in tourist dollars, which in turn improves our economy and quality of life.

The protection of airports from incompatible land use encroachment is vital to California's economic future. SCLA is an economic asset that should be protected through effective airport land use compatibility planning and awareness. Although the need for compatible and safe land uses near airports in California is both a local and a state issue, airport land use commissions and airport land use compatibility plans are key to protecting an airport and the people residing and working in the vicinity of an airport. Consideration given to the issue of compatible land uses in the vicinity of an airport should help to relieve future conflicts between airports and their neighbors.

These comments reflect the areas of concern to the Division with respect to airport-related noise and safety impacts and regional airport land use planning issues. We advise you to contact our Caltrans District 8 office concerning surface transportation issues.

Thank you for the opportunity to review and comment on this proposal. If you have any questions, please call me at (916) 654-5314.

Sincerely,



SANDY HESNARD
Aviation Environmental Specialist

c: State Clearinghouse, SCLA

March 13, 2008

Mr. Chris Borchert
City of Victorville
Planning Department
14343 Civic Drive
Victorville, CA 92393

Received
MAR 14 2008
Development Dep

Via FAX: 760-269-0070

Dear Mr. Borchert:

As a concerned resident of Victorville, I would like to address the issue of the possible re-zoning of the Tamarisk-Bear Valley property from "Office/Professional" to "Commercial" which would allow the development of a Wal-Mart Super Center.

To allow the re-zoning and building of a Wal-Mart (or any form of a large retail store) would be a complete disregard for the adjacent communities to the Tamarisk/Bear Valley property. This location is, primarily, a **residential** area and is **NOT** conducive to a large retail development. The proposed re-zoning site is inclusive of several schools, a retirement center, a church and an Alzheimer facility. The communities of Spring Valley Lake and Spring Valley Ridge would be dramatically affected by a large retail store being allowed to build on the subject property. The added traffic burden on Bear Valley Road would be next to impossible – as it is now, traffic backs up both east and west from Victor Valley College to Industrial and beyond. Should this property be re-zoned to accommodate a large retail store, the added traffic from delivery vehicles and consumers would severely impact the current congestion.

I am aware of the fact that Wal-Mart currently owns a portion of the Tamarisk property that is being considered for re-zoning, but I am sure that it is not out of the question for them to be able to sell the land back to the

city and develop elsewhere. A far more suitable location for a Super Center would be on the vacant property north east of Hesperia and Nisquali Roads – a far less congested traffic area and not in the middle of residential communities. Has there been any thought for a Super Center being built at the current locale of the Wal-Mart on Bear Valley Road and Balsam? There is abundant vacant property just behind the existing Wal-Mart along Balsam Road.

In general, I am not opposed to Wal-Mart and, occasionally, patronize them. The Tamarisk site is just not a suitable location for this type of store – to “plunk” a Wal-Mart Super Center in the middle of **established** residential communities would be a grave, and very unpopular, mistake on the city’s part.

It is my sincere hope that the city of Victorville chooses to “do the right thing” for its citizens and **not** allow the re-zoning of the Tamarisk property to accommodate commercial development of any kind.

Respectfully,

A handwritten signature in cursive script that reads "Carole L. Runne-Burdick".

Carole L. Runne-Burdick

Wednesday, March 12, 2008

City of Victorville
14343 Civic Drive
Victorville, CA 92393
Attn: C. Borchert

To whom it may concern,

We are expressing extreme concern that The City of Victorville Officials are considering a re-zoning to allow commercial building on land located near Tamarisk and Bear Valley Rd. Concerns are:

1. Traffic

It should be observed that we have Victor Valley College and several schools located adjacent this property. Traffic congestion would be a nightmare.

2. Crime

If approved commercial, and let's say, Wal-Mart decides to build, I feel there would be increased crime as evidence by the crime at our current Bear Valley Wal-Mart. This issue should be studied and investigated.

3. Noise and lights

What about the large tractor trailers making 24/7 deliveries.

There are many concerns that an EIR should investigate. I trust that our City Officials will serve the public better than they did when approving the Nutro Plant. The concerns for the citizens of the High Desert should come first. Please consider the safety of the general public.

Joe and Jean Suderno
7635 SVL Box
Victorville, CA 92395

Received
MAR 14 2008
Development Dep

JENNIFER MEDEIROS
9428 SVL Box, Victorville, CA 92395
(760) 245-4034

March 14, 2008 - Hand Delivered

Received
MAR 14 2008
Development Dep

CITY OF VICTORVILLE
ATTN: CHRIS BORCHERT
14343 Civic Drive
Victorville, CA 92395

RE: CHANGES TO CITY OF VICTORVILLE GENERAL PLAN 2030

I was present at the EIR scoping meeting for changes to the City of Victorville General Plan held on March 5, 2008. I made verbal comments on the record at the meeting and I am requesting that those verbal comments continue to be considered along with this writing.

All of the following comments are with regard to the parcels of land on Tamarisk near Bear Valley Road which is currently zoned office/professional but is proposed to be changed to commercial.

I am requesting that you consider the EIR areas of impact for this specific site separately, rather than considering all of the proposed changes to the 2030 general plan as a whole. The proposed change in zoning to these parcels warrant their own site specific EIR review of traffic, air quality, noise, etc. and especially existing land use compatibility with the neighboring property owners for this specific site. Potential increases in crime in the surrounding residential areas should also be investigated since it is reasonable to expect a crime increase in a commercial area compared to professional use of the land.

The traffic on Bear Valley Road between Peach Avenue and Hesperia Road is graded "F" currently and has been for several years. No additional lanes have been built here to relieve the traffic burden and we have experienced a huge increase in the population in this area. Further, Bear Valley Road is an arterial highway leading to Interstate 15. Tens of thousands of residents use Bear Valley Road to get to Interstate 15 daily, which is our only main access route out of the High Desert. Not only are Victorville residents using this main road, but residents of Apple Valley, Hesperia, Spring Valley Lake, Lucerne Valley, Big Bear, etc are dependent on Bear Valley Road between Peach and Hesperia Road to get to and from their homes, school and work everyday. No additional commercial development should be done in this area of Bear Valley

Road/Tamarisk as it would only add to the traffic burden. Victorville cannot responsibly make the decision to change the zoning in this area to commercial without first seeking the input of residents and neighboring cities and areas that would be affected by an additional increase of thousands of cars to this part of Bear Valley Road.

With regard to land use compatibility, you must consider the impact a large commercial area will have on the Sterling Inn, a senior care facility and Sterling Commons, a senior care facility for Alzheimers patients. These facilities are directly next to the proposed zone change. My mother-in-law currently resides at Sterling Inn along with approximately 150 other seniors. The residents are now able to take regular walks around their residential facility. I am concerned for her safety and the safety of other residents with regard to the increased traffic that this large commercial center will bring. There are also single family residences next door to the parcel that would be adversely affected.

One existing church and one other longtime church landowner who plans to build their church home are also next to the parcels. It is not appropriate to have a large commercial center next to their place of worship.

A privately owned daycare center for very young children is also nearby the parcel as well as a neighboring public elementary school. These two facilities serve hundreds of children whose parents entrust the schools with their safety. A large commercial zoned area will infringe on their right to play outside safely due to security. Their safety during their drive to and from school will be impacted too due to the traffic increases the change in zoning will bring.

The public Junior High School which sits immediately behind this parcel is set to open August, 2008. It will be hugely affected by the change in zoning to commercial in terms of traffic and safety of their students. The proposed commercial area will become a magnet for those young teens to gravitate before, during and after school. The safety of the kids in terms of crime and traffic will be a huge issue. The safety of the students on their campus will also be compromised by being so accessible and visible to the thousands of people a large commercial center will attract.

Excelsior, another middle school through high school campus is also very close to the site and their students should also be considered in terms of traffic and safety.

Victor Valley College, just across from the proposed zoning change will also be affected in terms of traffic, crime and safety. The college, our only campus for higher education in this community serving the entire High Desert already has traffic congestion

City of Victorville
March 14, 2008
Page three

problems on Bear Valley Road at certain times of the day and evening. The enrollment at the college is rapidly multiplying due to the High Desert's increased population. My daughters and I attend classes at the college and enjoy using the facilities. This proposed commercial zoning will impact our use and enjoyment of the college campus. We will no longer be able to feel safe since an increase in cars and people will also equate to an increase in crime.

These school campuses, that thousands of students attend, are already built here. They cannot be moved. This is clearly not an area to expand Victorville's commercial presence, but rather it is an area to protect for the children of the High Desert.

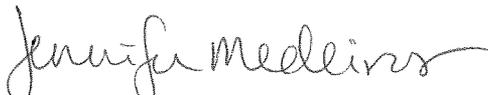
The City of Victorville has a duty to make responsible decisions when it comes to the safety of residents, especially their youngest residents, our children and students, who cannot speak out to protect themselves.

I urge you to consider the above in the EIR and to conclude that this area's zoning should not be changed.

Lastly, yesterday I received a copy of the notice of publication I requested from Mr. Chris Borchert in which the public notice of the March 5, 2008 scoping meeting was published in the Daily Press. This publication was done on February 20, 2008. The publication states that comments are due no later than 30 days after receipt of this notice. Since the date of receipt can be no sooner than the publication date of February 20, 2008, your deadline for comments of March 14, 2008 should be extended to March 21, 2008. Thank you for your cooperation in this matter.

Thank you for your cooperation in this matter. Please contact me at the above phone number should you have any questions.

Sincerely,



Jennifer Medeiros

Jennifer Medeiros

THE MACK LAW OFFICES

74-075 El Paseo, Suite A2
Palm Desert, California 92260
Tel: (760) 346-1800 Fax: (760) 340-1650

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Louis Barry Mack
Attorney at Law

Marie A. Mack
Attorney at Law

Jeannie A. Lynch
Paralegal

David G. Tennison
Paralegal

FAX TRANSMISSION

Date:	March 14, 2008	Pages:	3
TO:	Chris Bochart, Asst. Planning Director	FROM:	Marie A. Mack, Esq.
Fax :	760-269-0070	Fax:	760-340-1650
Tel:		Tel:	760-346-1800
RE:	Letter from SVLA - Scope of EIR for General Plan Update 2030		

Received
MAR 14 2008
Development Dep

**IF YOU DO NOT RECEIVE ALL PAGES, PLEASE CALL US AS SOON AS POSSIBLE:
(760) 346-1800**

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THE MACK LAW OFFICES

74-075 El Paseo, Suite A2
Palm Desert, California 92260
Tel: (760) 346-1800 Fax: (760) 340-1650

March 14, 2008

Mr. Chris Bochert
Assistant Director of Planning
City of Victorville
Planning Department
14343 Civic Drive
Victorville, CA 92393-5001

via email and fax delivery

Re: General Plan Revision EIR Scoping Meeting - Public Comment

To the Planning Department, City of Victorville:

This law firm represents Spring Valley Lake Association ("SVLA"). This letter is in addition to my letter of March 5, 2008, delivered to the clerk at the scoping meeting on that date.

SVLA requests that the EIR prepared in connection with the proposed project, "General Plan 2030," include consideration and analysis of the possible environmental effects of potential urban decay that may result as a consequence of proposed changes in zone in General Plan 2030. In particular, SVLA is interested in focusing upon particular contemplated zone changes along Bear Valley Road (East Bear Valley Planning Area and Spring Valley Lake Planning Area).

If the forecasted economic or social effects of a proposed project will directly or indirectly result in adverse physical changes in the environment, then CEQA requires disclosure and analysis of these resulting physical impacts. The CEQA Guidelines provide that when the economic or social effects of a project cause a physical change, this change is to be regarded as a significant effect in the same manner as any other physical change resulting from the project. (Bakersfield Citizens for Local Control v. City of Bakersfield (2004) 124 Cal.App.4th 1184, 1205(Bakersfield)); CEQA Guidelines, § 15064, subd. (e).) CEQA Guidelines, section 15131, subdivision (a) provides: "An EIR may trace a chain of cause and effect from a proposed decision on a project through anticipated economic or social changes resulting from the project to physical changes caused in turn by the economic or social changes. The intermediate economic or social changes need not be analyzed in any detail greater than necessary to trace the chain of cause and effect. The focus of the analysis shall be on the physical changes."

Currently, the non-residential zones in the vicinity of SVLA along Bear Valley Road are limited to office/professional and school zones. Any change contemplated change in zone or in the General Plan with respect to development of such areas should consider the possible urban decay impacts.

THE MACK LAW OFFICES

March 14, 2008

Chris Bochert
Planning Department
City of Victorville

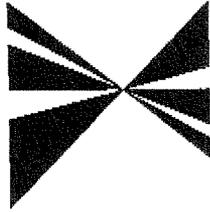
Re: Scope of EIR - General Plan 2030

Additionally, many SVLA residents have school aged children who attend the schools in within the Spring Valley Lake Planning Area. That area is zoned public/institutional. General Plan 2030 contemplates re-zoning adjacent areas from office/professional to commercial, and adjacent to existing commercial-zoned property to create a larger and more concentrated commercial zone. The EIR should closely examine all negative impacts of expanding the commercial use in that location upon the existing school uses, including traffic, air quality, noise and light pollution, water, wastewater disposal, etc.

Sincerely,

A handwritten signature in black ink, appearing to read 'Marie A. Mack', with a stylized flourish at the end.

Marie A. Mack



SOUTHERN CALIFORNIA ASSOCIATION of GOVERNMENTS

Los Angeles Office: 818 W. 7th Street, 12th Floor, Los Angeles, CA 90017 • 213.236.1800
Inland Empire Office: 3600 Lime Street, Suite 216, Riverside, CA 92501 • 951.784.1513

FAX COVER SHEET

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FAX # 213.630.1475

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Budget & Grants/
Contracts/Business
Operations
FAX # 213.236.1825

Planning & Policy
FAX # 213.236.1963

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Technology/Modeling
FAX # 213.236.1962

.....

Inland Office
FAX # 951.784.3925

To: Chris Borchert Date: 03/14/08

Location: Planning Div, City of Victorville Fax #: (760) 269-0070

Number of pages (including cover): 8

From: Christine Fernandez Phone #: (213) 236-1923

Note: If you do not receive all the pages, please call (213) 236-1923

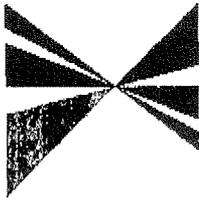
URGENT FOR REVIEW FYI

Comments:

Comments on NOP of DEIR for City of Victorville General Plan 2030.

Received
MAR 14 2008
Development Dep

SOUTHERN CALIFORNIA

ASSOCIATION OF
GOVERNMENTS**Main Office**

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Alan D. Wapner, Ontario

March 11, 2008

Mr. Chris Borchert
 Assistant Director of Planning
 City of Victorville Development Department
 14343 Civic Drive
 Victorville, CA 92393-5001

RE: **SCAG Comments on the Notice of Preparation of a Draft Environmental Impact Report for the City of Victorville General Plan 2030 - SCAG No. I20080110**

Dear Mr. Borchert,

Thank you for submitting the **Notice of Preparation (NOP) of a Draft Environmental Impact Report for the City of Victorville General Plan 2030 - SCAG No. I20080110**, to the Southern California Association of Governments (SCAG) for review and comment. SCAG is the authorized regional agency for Inter-Governmental Review of Programs proposed for federal financial assistance and direct development activities, pursuant to Presidential Executive Order 12372 (replacing A-95 Review). Additionally, pursuant to Public Resources Code Section 21083(d) SCAG reviews Environmental Impacts Reports of projects of regional significance for consistency with regional plans per the California Environmental Quality Act Guidelines, Sections 15125(d) and 15206(a)(1). SCAG is also the designated Regional Transportation Planning Agency and as such is responsible for both preparation of the Regional Transportation Plan (RTP) and Regional Transportation Improvement Program (RTIP) under California Government Code Section 65080 and 65082.

SCAG staff has reviewed the aforementioned NOP and has determined that the proposed project is regionally significant per the California Environmental Quality Act (CEQA) Guidelines (Section 15125(d) and 15206). The proposed project is intended to replace the City's current 1997 General Plan. CEQA requires that EIRs discuss any inconsistencies between the proposed project and applicable general plans and regional plans (Section 15125 [d]). If there are inconsistencies, an explanation and rationalization for such inconsistencies should be provided. We expect the DEIR to specifically cite all SCAG policies and address the manner in which the project is consistent, not-consistent, or not applicable to these policies and provide supportive analysis as to why it is consistent, not-consistent, or not applicable to these policies.

Policies of SCAG's Regional Comprehensive Plan and Guide (RCPG), Regional Transportation Plan (RTP), and Compass Growth Vision (CGV) that may be applicable to your project are outlined in the attachment. The RCPG, RTP and CGV can be found on the SCAG web site at: <http://scag.ca.gov/igr>. For ease of review, we would encourage you to use a side-by-side comparison of all SCAG policies with a discussion of the consistency, non-consistency or non-applicability of the policy and supportive analysis in a table format (example attached).

The attached detailed comments are meant to provide guidance for considering the proposed project within the context of our regional goals and policies. **Please provide a minimum of 45 days for SCAG to review the DEIR and associated plans when these documents are available.** If you have any questions regarding the attached comments, please contact Christine Fernandez at (213) 236-1923. Thank you.

Sincerely,

Sylvia Patsaouras, Manager
 Environmental Planning Division

DOCS# 144568v1

March 11, 2008
Mr. Chris Borchert

SCAG No. I20080110

**COMMENTS ON THE NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT
REPORT FOR THE CITY OF VICTORVILLE GENERAL PLAN 2030 - SCAG NO. I20080110**

PROJECT DESCRIPTION

The General Plan 2030 would update and supersede the City of Victorville's current General Plan, which was adopted in July 1997 and subsequently amended. The City inclusive of its existing Sphere of Influence (SOI) totals 98.5 square miles consisting of 74 square miles located within the City limits and the remainder in the unincorporated area. The project includes expansion of the City northern sphere of influence.

CONSISTENCY WITH REGIONAL COMPREHENSIVE PLAN AND GUIDE POLICIES

The Growth Management Chapter (GMC) of the Regional Comprehensive Plan and Guide (RCPG) contains the following policies that are particularly applicable and should be addressed in the Draft EIR for the General Plan Update.

- 3.01** *The population, housing, and jobs forecasts, which are adopted by SCAG's Regional Council and that reflect local plans and policies shall be used by SCAG in all phases of implementation and review.*

Regional Growth Forecasts

The DEIR should reflect the most current SCAG forecasts, which are the 2004 RTP (April 2004) Population, Household and Employment forecasts. The forecasts for your region, subregion, and cities are as follows:

Adopted SCAG Regionwide Forecasts

	2010	2015	2020	2025	2030
Population	19,208,661	20,191,117	21,137,519	22,035,416	22,890,797
Households	6,072,578	6,463,402	6,865,355	7,263,519	7,660,107
Employment	8,729,192	9,198,618	9,659,847	10,100,776	10,527,202

Adopted SANBAG Forecasts

	2010	2015	2020	2025	2030
Population	2,059,420	2,229,700	2,397,709	2,558,729	2,713,149
Households	618,782	686,584	756,640	826,669	897,739
Employment	770,877	870,491	972,243	1,074,861	1,178,890

Adopted SANBAG Unincorporated Area Forecasts

	2010	2015	2020	2025	2030
Population	329,293	357,214	384,773	411,188	436,515
Households	104,352	116,091	128,197	140,270	152,477
Employment	77,387	84,619	92,000	99,448	106,997

Adopted City of Victorville Forecasts ¹

	2010	2015	2020	2025	2030
Population	81,592	92,548	103,353	113,711	123,641
Households	24,762	28,621	32,567	36,490	40,427
Employment	47,362	57,873	68,611	79,439	90,415

1. The 2004 RTP growth forecast at the regional, county and subregional level was adopted by RC in April, 2004. City totals are the sum of small area data and should be used for advisory purposes only.

March 11, 2008
Mr. Chris Borchert

SCAG No. I20080110

The Draft 2008 RTP Baseline Growth Forecast (built upon subregion/local jurisdiction input) was released on November 1, 2007 by the Community, Economic and Human Development Committee (CEHD) along with the Draft 2008 RTP and RCP for public review and comment. You may wish to review these forecasts to determine compatibility with any Project Forecasts. The following 2035 forecasts are provided for your reference for the City of Victorville, SANBAG (Unincorporated and COG), and SCAG Region. The forecasts for the intervening years (2010, 2015, 2020, 2025, and 2030) will be included in the 2008 RTP Baseline Growth Forecast.

2035 Forecasts ¹	Population	Households	Employees
City of Victorville	182,272	56,877	84,336
SANBAG -- Unincorporated Area	487,698	163,943	128,681
SANBAG	3,133,797	972,565	1,254,752
SCAG Region	24,056,000	7,710,000	10,287,000

1. Source: Draft 2008 RTP Baseline Growth Forecast
(http://scag.ca.gov/forecast/downloads/RTP_baseline_forecasts_1001.xls)

- 3.03 *The timing, financing, and location of public facilities, utility systems, and transportation systems shall be used by SCAG to implement the region's growth policies.*

GMC POLICIES RELATED TO THE RCPG GOAL TO IMPROVE THE REGIONAL STANDARD OF LIVING

The Growth Management goals to develop urban forms that enable individuals to spend less income on housing cost, that minimize public and private development costs, and that enable firms to be more competitive, strengthen the regional strategic goal to stimulate the regional economy. The evaluation of the proposed project in relation to the following policies would be intended to guide efforts toward achievement of such goals and does not infer regional interference with local land use powers.

- 3.04 *Encourage local jurisdictions' efforts to achieve a balance between the types of jobs they seek to attract and housing prices.*
- 3.05 *Encourage patterns of urban development and land use which reduce costs on infrastructure construction and make better use of existing facilities.*
- 3.06 *Support public education efforts regarding the costs of various alternative types of growth and development.*
- 3.09 *Support local jurisdictions' efforts to minimize the cost of infrastructure and public service delivery, and efforts to seek new sources of funding for development and the provision of services.*
- 3.10 *Support local jurisdictions' actions to minimize red tape and expedite the permitting process to maintain economic vitality and competitiveness.*

GMC POLICIES RELATED TO THE RCPG GOAL TO IMPROVE THE REGIONAL QUALITY OF LIFE

The Growth Management goals to attain mobility and clean air goals and to develop urban forms that enhance quality of life, that accommodate a diversity of life styles, that preserve open space and natural resources, and that are aesthetically pleasing and preserve the character of communities, enhance the regional strategic goal of maintaining the regional quality of life. The evaluation of the proposed project in relation to the following policies would be intended to provide direction for plan implementation, and does not allude to regional mandates.

March 11, 2008
Mr. Chris Borchert

SCAG No. I20080110

- 3.11 Support provisions and incentives created by local jurisdictions to attract housing growth in job-rich subregions and job growth in housing-rich subregions.
- 3.12 Encourage existing or proposed local jurisdictions' programs aimed at designing land uses which encourage the use of transit and thus reduce the need for roadway expansion, reduce the # of auto trips and vehicle miles traveled, and create opportunities for residents to walk and bike.
- 3.13 Encourage local jurisdictions' plans that maximize the use of existing urbanized areas accessible to transit through infill and redevelopment.
- 3.14 Support local plans to increase density of future development located at strategic points along the regional commuter rail, transit systems, and activity centers.
- 3.15 Support local jurisdictions' strategies to establish mixed-use clusters and other transit-oriented developments around transit stations and along transit corridors.
- 3.16 Encourage developments in and around activity centers, transportation corridors, underutilized infrastructure systems, and areas needing recycling and redevelopment.
- 3.17 Support and encourage settlement patterns, which contain a range of urban densities.
- 3.18 Encourage planned development in locations least likely to cause adverse environmental impact.
- 3.19 Support policies and actions that preserve open space areas identified in local, state, and federal plans.
- 3.20 Support the protection of vital resources such as wetlands, groundwater recharge areas, woodlands, production lands, and land containing unique and endangered plants and animals.
- 3.21 Encourage the implementation of measures aimed at the preservation and protection of recorded and unrecorded cultural resources and archaeological sites.
- 3.22 Discourage development, or encourage the use of special design requirements, in areas with steep slopes, high fire, flood, and seismic hazards.
- 3.23 Encourage mitigation measures that reduce noise in certain locations, measures aimed at preservation of biological and ecological resources, measures that would reduce exposure to seismic hazards, minimize earthquake damage, and to develop emergency response and recovery plans.

GMC POLICIES RELATED TO THE RCPG GOAL TO PROVIDE SOCIAL, POLITICAL, AND CULTURAL EQUITY

The Growth Management goals to develop urban forms that avoid economic and social polarization promotes the regional strategic goal of minimizing social and geographic disparities and of reaching equity among all segments of society. The evaluation of the proposed project in relation to the policy stated below is intended guide direction for the accomplishment of this goal, and does not infer regional mandates and interference with local land use powers.

- 3.24 Encourage efforts of local jurisdictions in the implementation of programs that increase the supply and quality of housing and provide affordable housing as evaluated in the Regional Housing Needs Assessment.
- 3.25 Encourage the efforts of local jurisdictions, employers and service agencies to provide adequate training and retraining of workers, and prepare the labor force to meet the future challenges of the regional economy.
- 3.26 Encourage employment development in job-poor localities through support of labor force retraining programs and other economic development measures.
- 3.27 Support local jurisdictions and other service providers in their efforts to develop sustainable communities and provide, equally to all members of society, accessible and effective services such as: public education, housing, health care, social services, recreational facilities, law enforcement, and fire protection.

March 11, 2008
Mr. Chris Borchert

SCAG No. I20080110

AIR QUALITY CHAPTER

The Air Quality Chapter core actions related to the proposed project include:

- 5.07 *Determine specific programs and associated actions needed (e.g., indirect source rules, enhanced use of telecommunications, provision of community-based shuttle services, provision of demand management based programs, or vehicle-miles-traveled/emission fees) so that options to command and control regulation can be assessed.*
- 5.11 *Through the environmental document review process, ensure that plans at all levels of government (regional, air basin, county, subregional, and local) consider air quality, land use, transportation, and economic relationships to ensure consistency and minimize conflicts*

HAZARDOUS WASTE MANAGEMENT CHAPTER

The Hazardous Waste Management Chapter goals related to the proposed project include:

- 7.01 *Every county in the region should accept responsibility for the management of hazardous wastes in the region in an amount proportional to the hazardous wastes generated within the county.*
- 7.03 *Waste reduction goals and programs should be included in each of the county plans.*

OPEN SPACE AND CONSERVATION CHAPTER

The Open Space and Conservation Chapter goals related to the proposed project include:

- 9.01 *Provide adequate land resources to meet the outdoor recreation needs of the present and future residents in the region.*
- 9.02 *Increase the accessibility to open space lands for outdoor recreation.*
- 9.03 *Promote self-sustaining regional recreation resources and facilities.*
- 9.04 *Maintain open space for adequate protection to lives and properties against natural and manmade hazards.*
- 9.05 *Minimize potentially hazardous developments in hillsides, canyons, areas susceptible to flooding, earthquakes, wildfire and other known hazards, and areas with limited access for emergency equipments.*
- 9.08 *Develop well-managed viable ecosystems or known habitats of rare, threatened and endangered species, including wetlands.*

WATER QUALITY CHAPTER RECOMMENDATIONS AND POLICY OPTIONS

The Water Quality Chapter goals related to the proposed project include:

- 11.02 *Encourage "watershed management" programs and strategies, recognizing the primary role of local governments in such efforts.*
- 11.05 *Support regional efforts to identify and cooperatively plan for wetlands to facilitate both sustaining the amount and quality of wetlands in the region and expediting the process for obtaining wetland permits.*
- 11.07 *Encourage water reclamation throughout the region where it is cost-effective, feasible, and appropriate to reduce reliance on imported water and wastewater discharges. Current administrative impediments to increased use of wastewater should be addressed.*

March 11, 2008
Mr. Chris Borchert

SCAG No. I20080110

REGIONAL TRANSPORTATION PLAN

The 2004 Regional Transportation Plan (RTP) also has goals and policies that are pertinent to this proposed project. This RTP links the goal of sustaining mobility with the goals of fostering economic development, enhancing the environment, reducing energy consumption, promoting transportation-friendly development patterns, and encouraging fair and equitable access to residents affected by socio-economic, geographic and commercial limitations. The RTP continues to support all applicable federal and state laws in implementing the proposed project. Among the relevant goals and policies of the RTP are the following:

Regional Transportation Plan Goals:

- RTP G1** *Maximize mobility and accessibility for all people and goods in the region.*
- RTP G2** *Ensure travel safety and reliability for all people and goods in the region.*
- RTP G3** *Preserve and ensure a sustainable regional transportation system.*
- RTP G4** *Maximize the productivity of our transportation system.*
- RTP G5** *Protect the environment, improve air quality and promote energy efficiency.*
- RTP G6** *Encourage land use and growth patterns that complement our transportation investments.*

GROWTH VISIONING

The fundamental goal of the **Compass Growth Visioning** effort is to make the SCAG region a better place to live, work and play for all residents regardless of race, ethnicity or income class. Thus, decisions regarding growth, transportation, land use, and economic development should be made to promote and sustain for future generations the region's mobility, livability and prosperity. The following "Regional Growth Principles" are proposed to provide a framework for local and regional decision making that improves the quality of life for all SCAG residents. Each principle is followed by a specific set of strategies intended to achieve this goal.

A portion of the City of Victorville is located within a Compass 2% Strategy Area where development is intended to balance employment, housing, and services to reduce vehicle trips and emissions, enhance livability, expand prosperity, and increase sustainability. Please discuss how the Updated General Plan does or does not support these principles. More information and maps can be found at <http://www.compassblueprint.org/2percent/areas>.

Principle 1: Improve mobility for all residents.

- GV P1.1** *Encourage transportation investments and land use decisions that are mutually supportive.*
- GV P1.2** *Locate new housing near existing jobs and new jobs near existing housing.*
- GV P1.3** *Encourage transit-oriented development.*
- GV P1.4** *Promote a variety of travel choices*

Principle 2: Foster livability in all communities.

- GV P2.1** *Promote infill development and redevelopment to revitalize existing communities.*
- GV P2.2** *Promote developments, which provide a mix of uses.*
- GV P2.3** *Promote "people scaled," walkable communities.*
- GV P2.4** *Support the preservation of stable, single-family neighborhoods.*

Principle 3: Enable prosperity for all people.

- GV P3.1** *Provide, in each community, a variety of housing types to meet the housing needs of all income levels.*
- GV P3.2** *Support educational opportunities that promote balanced growth.*
- GV P3.3** *Ensure environmental justice regardless of race, ethnicity or income class.*
- GV P3.4** *Support local and state fiscal policies that encourage balanced growth*
- GV P3.5** *Encourage civic engagement.*

March 11, 2008
Mr. Chris Borchert

SCAG No. I20080110

Principle 4: Promote sustainability for future generations.

- GV P4.1 *Preserve rural, agricultural, recreational, and environmentally sensitive areas.*
 GV P4.2 *Focus development in urban centers and existing cities.*
 GV P4.3 *Develop strategies to accommodate growth that uses resources efficiently, eliminate pollution and significantly reduce waste.*
 GV P4.4 *Utilize "green" development techniques*

CONCLUSION

All feasible measures needed to mitigate any potentially negative regional impacts associated with the proposed project should be implemented and monitored, as required by CEQA.

Suggested Side by Side Format - Comparison Table of SCAG Policies

For ease of review, we would encourage the use of a side-by-side comparison of all SCAG policies with a discussion of the consistency, non-consistency or not applicable of the policy and supportive analysis in a table format. All policies and goals must be evaluated as to impacts. Suggested format is as follows:

SCAG RCPG (RTP and/or CGV) Policies Growth Management Chapter		
Policy Number	Policy Text	Statement of Consistency, Non-Consistency, or Not Applicable
3.01	The population, housing, and jobs forecasts, which are adopted by SCAG's Regional Council and that reflect local plans and policies shall be used by SCAG in all phases of implementation and review.	Consistent: Statement as to why Not-Consistent: Statement as to why Not Applicable: Statement as to why
3.02	In areas with large seasonal population fluctuations, such as resort areas, forecast permanent populations. However, appropriate infrastructure systems should be sized to serve high-season population totals.	Consistent: Statement as to why Not-Consistent: Statement as to why Not Applicable: Statement as to why
3.03	The timing, financing, and location of public facilities, utility systems, and transportation systems shall be used by SCAG to implement the region's growth policies.	Consistent: Statement as to why Not-Consistent: Statement as to why Not Applicable: Statement as to why
Etc.	Etc.	Etc.



Mojave Desert Air Quality Management District

14306 Park Avenue, Victorville, CA 92392-2310

760.245.1661 • fax 760.245.2699

Visit our web site: <http://www.mdaqmd.ca.gov>

Eldon Heaston, Executive Director

February 20, 2008

Chris Borchert, Assistant Director of Planning
City of Victorville
14343 Civic Drive
Victorville, CA 92393-5001

City of Victorville General Plan 2030

Dear Mr. Borchert:

The Mojave Desert Air Quality Management District (District) has received the Notice of Preparation (NOP) for a Draft Environmental Impact Report for the City of Victorville General Plan 2030.

The District has reviewed the NOP for the plan and has no special comments or information that would be necessary to the environmental review process. District attainment plans are located at http://www.mdaqmd.ca.gov/rules_plans/rules-plans.htm for your information and review.

Thank you for the opportunity to review this planning document. If you have any questions regarding this letter, please contact me at (760) 245-1661, extension 6726, or Tracy Walters at extension 6122.

Sincerely,

A handwritten signature in black ink, appearing to read "Alan J. De Salvio".

Alan J. De Salvio
Supervising Air Quality Engineer

Cc: Russell Williams

TW/AJD

Victorville GP 2030

Received
FEB 29 2008
Development Dept



GOVERNOR'S OFFICE OF EMERGENCY SERVICES
DISASTER ASSISTANCE PROGRAMS BRANCH
3650 SCHRIEVER AVENUE
MATHER, CALIFORNIA 95655
PHONE: (916) 845-8101 FAX: (916) 845-8381



February 26, 2008

Chris Borchert
City of Victorville
14343 Civic Drive
Victorville, CA 92393-5001

RE: Notice of Preparation for a Draft Environmental Impact Report for the Victorville General Plan 2030, SCH# 2008021086

Dear Ms. Borchert:

Thank you for the opportunity to comment on your Notice of Preparation for a Draft Environmental Impact Report (DEIR) for the city's general plan update. In preparing the general plan and accompanying DEIR, the city should examine the sections of state planning law that involve potential hazards the city may face. For your information, I have underlined specific sections of state planning law where identification and analysis of hazards are discussed (see Attachment A).

Prior to the release of the draft general plan or within the DEIR, city staff or your consultants should examine each of the requirements in state planning law and determine if there are hazard issues within the community which the general plan should address. A table in the DEIR (or general plan) which identifies these specific issues and where they are addressed in the general plan would be helpful in demonstrating the city has complied with these requirements. If the DEIR determines that state planning law requirements have not been met, it should recommend that these issues be addressed in the general plan as a mitigation measure.

We note that state planning law includes a requirement for consultations with state agencies in regard to information related to hazards. OES would be happy to share all available information at our disposal to facilitate the city's ability to comply with state planning and environmental laws.

If you have any questions about these comments, please contact Andrew Rush at (916) 845-8269 or andrew.rush@OES.ca.gov.

Sincerely,

A handwritten signature in cursive script that reads "Dennis Castrillo".

Dennis Castrillo
Environmental Officer

Received
FEB 29 2008
Development Dep

Attachment A

Hazards and State Planning Law Requirements

(All citations are from the Government Code)

65302. Seven mandated elements

The general plan shall consist of a statement of development policies and shall include a diagram or diagrams and text setting forth objectives, principles, standards, and plan proposals. The plan shall include the following elements:

(a) A land use element which designates the proposed general distribution and general location and extent of the uses of the land for housing, business, industry, open space, including agriculture, natural resources, recreation, and enjoyment of scenic beauty, education, public buildings and grounds, solid and liquid waste disposal facilities, and other categories of public and private uses of land. The land use element shall include a statement of the standards of population density and building intensity recommended for the various districts and other territory covered by the plan. The land use element shall identify areas covered by the plan that are subject to flooding and shall be reviewed annually with respect to those areas. The land use element shall designate, in a land use category that provides for timber production, those parcels of real property zoned for timberland production pursuant to the California Timberland Productivity Act of 1982, Chapter 6.7 (commencing with Section 51100) of Part 1 of Division 1 of Title 5.

(g) A safety element for the protection of the community from any unreasonable risks associated with the effects of seismically induced surface rupture, ground shaking, ground failure, tsunami, seiche, and dam failure; slope instability leading to mudslides and landslides; subsidence, liquefaction and other seismic hazards identified pursuant to Chapter 7.8 (commencing with Section 2690) of the Public Resources Code, and other geologic hazards known to the legislative body; flooding; and wildland and urban fires. The safety element shall include mapping of known seismic and other geologic hazards. It shall also address evacuation routes, peakload water supply requirements, and minimum road widths and clearances around structures, as those items relate to identified fire and geologic hazards. Prior to the periodic review of its general plan and prior to preparing or revising its safety element, each city and county shall consult the Division of Mines and Geology of the Department of Conservation and the Office of Emergency Services for the purpose of including information known by and available to the department and the office required by this subdivision.

(d) A conservation element for the conservation, development, and utilization of natural resources including water and its hydraulic force, forests, soils, rivers and other waters, harbors, fisheries, wildlife, minerals, and other natural resources. That portion of the conservation element including waters shall be developed in coordination with any countywide water agency and with all district and city agencies which have developed, served, controlled or conserved water for any purpose for the county or city for which the plan is prepared. Coordination shall include the discussion and evaluation of any water supply and demand information described in Section 65352.5, if that information has been submitted by the water agency to the city or county. The conservation element may also cover:

- (1) The reclamation of land and waters.
- (2) Prevention and control of the pollution of streams and other waters.
- (3) Regulation of the use of land in stream channels and other areas required for the accomplishment of the conservation plan.
- (4) Prevention, control, and correction of the erosion of soils, beaches, and shores.
- (5) Protection of watersheds.
- (6) The location, quantity and quality of the rock, sand and gravel resources.
- (7) Flood control.

65302.3. Consistency with airport land use plans

(a) The general plan, and any applicable specific plan prepared pursuant to Article 8 (commencing with Section 65450), shall be consistent with the plan adopted or amended pursuant to Section 21675 of the Public Utilities Code.

65302.6. Development of a local hazard mitigation plan

(a) A city, county, or a city and county may adopt with its safety element pursuant to subdivision (g) of Section 65302 a local hazard mitigation plan (HMP) specified in the federal Disaster Mitigation Act of 2000 (P. L. 106-390). The hazard mitigation plan shall include all of the following elements called for in the federal act requirements:

- (1) An initial earthquake performance evaluation of public facilities that provide essential services, shelter, and critical governmental functions.
- (2) An inventory of private facilities that are potentially hazardous, including, but not limited to, multiunit, soft story, concrete tilt-up, and concrete frame buildings.
- (3) A plan to reduce the potential risk from private and governmental facilities in the event of a disaster.

65560. Definitions (Open-Space Lands)

(a) "Local open-space plan" is the open-space element of a county or city general plan adopted by the board or council, either as the local open-space plan or as the interim local open-space plan adopted pursuant to Section 65563.

(b) "Open-space land" is any parcel or area of land or water which is essentially unimproved and devoted to an open-space use as defined in this section, and which is designated on a local, regional or state open-space plan as any of the following:

- (1) Open space for the preservation of natural resources including, but not limited to, areas required for the preservation of plant and animal life, including habitat for fish and wildlife species; areas required for ecologic and other scientific study purposes; rivers, streams, bays and estuaries; and coastal beaches, lakeshores, banks of rivers and streams, and watershed lands.

(2) Open space used for the managed production of resources, including but not limited to, forest lands, rangeland, agricultural lands and areas of economic importance for the production of food or fiber; areas required for recharge of ground water basins; bays, estuaries, marshes, rivers and streams which are important for the management of commercial fisheries; and areas containing major mineral deposits, including those in short supply.

(3) Open space for outdoor recreation, including but not limited to, areas of outstanding scenic, historic and cultural value; areas particularly suited for park and recreation purposes, including access to lakeshores, beaches, and rivers and streams; and areas which serve as links between major recreation and open-space reservations, including utility easements, banks of rivers and streams, trails, and scenic highway corridors.

(4) Open space for public health and safety, including, but not limited to, areas which require special management or regulation because of hazardous or special conditions such as earthquake fault zones, unstable soil areas, flood plains, watersheds, areas presenting high fire risks, areas required for the protection of water quality and water reservoirs and areas required for the protection and enhancement of air quality.

DEPARTMENT OF PUBLIC WORKS

FLOOD CONTROL • SOLID WASTE MGMT • SURVEYOR • TRANSPORTATION

COUNTY OF SAN BERNARDINO
PUBLIC AND SUPPORT
SERVICES GROUP



825 East Third Street • San Bernardino, CA 92415-0835 • (909) 387-8104
Fax (909) 387-8130

VANA R. OLSON
Director of Public Works

February 21, 2008

File #10(ENV)-4.01

City of Victorville
Attn: Chris Borchert, Assistant Director of Planning
14343 Civic Drive
Victorville, CA 92393-5001

RE: NOTICE OF PREPARATION OF DRAFT EIR FOR CITY OF VICTORVILLE GENERAL PLAN 2030

Dear Mr. Borchert:

Thank you for giving the San Bernardino County Department of Public Works the opportunity to comment on the above-referenced project.

After reviewing the submitted document, our Department has determined that we would like to receive a copy of the environmental document and any technical reports/studies that will be prepared for this project, when they become available. At that time, our Department will review the project and provide comments.

Sincerely,

A handwritten signature in black ink that reads "Frank Molina".

FRANK MOLINA, Supervising Planner
Environmental Management Division

FM:mb/CEQA Rec'd_Victorville_Victorville GP 2030_EIR Reqst'd

cc: Naresh P. Varma
VRO/MK Reading File

Received
FEB 26 2008
Development Dep:

MARK H. UFFER
County Administrative Officer

NORMAN A. KANOLD
Assistant County Administrator
Public and Support
Services Group

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

NATIVE AMERICAN HERITAGE COMMISSION

915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-6251
Fax (916) 657-5390
www.nahc.ca.gov
ds_nahc@pacbell.net



February 22, 2008

Received
FEB 25 2008
Development Dep

Mr. Chris Borchert

CITY OF VICTORVILLE

14343 Civic Drive; P.O. 5001
Victorville, CA 92393-5001

Re: SCH# 2008021086; CEQA Notice of Preparation (NOP) draft Environmental Impact Report (DEIR) for the City of Victorville General Plan 2030; San Bernardino County, California

Dear Mr. Borchert:

Thank you for the opportunity to comment on the above-referenced document. The Native American Heritage Commission is the state agency designated for the protection of California's Native American cultural resources. The California Environmental Quality Act (CEQA) requires that any project that causes a substantial adverse change in the significance of an historical resource, that includes archeological resources, is a 'significant effect' requiring the preparation of an Environmental Impact Report (EIR per the California Code of Regulations § 15064.5(b)(c) (CEQA Guidelines). In order to comply with this provision, the lead agency is required to assess whether the project will have an adverse impact on these resources within the 'area of potential effect (APE),' and if so, to mitigate that effect. To adequately assess the project-related impacts on historical resources, the Commission recommends the following action:

- √ Contact the appropriate California Historic Resources Information Center (CHRIS). Contact information for the 'Information Center' nearest you is available from the State Office of Historic Preservation in Sacramento (916/653-7278). The record search will determine:
 - If a part or the entire (APE) has been previously surveyed for cultural resources.
 - If any known cultural resources have already been recorded in or adjacent to the APE.
 - If the probability is low, moderate, or high that cultural resources are located in the APE.
 - If a survey is required to determine whether previously unrecorded cultural resources are present.
- √ If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
 - The final report containing site forms, site significance, and mitigation measurers should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for public disclosure.
 - The final written report should be submitted within 3 months after work has been completed to the appropriate regional archaeological Information Center.
- √ Contact the Native American Heritage Commission (NAHC) for:
 - * A Sacred Lands File (SLF) search of the project area and information on tribal contacts in the project vicinity who may have information on cultural resources in or near the APE. Please provide us site identification as follows: USGS 7.5-minute quadrangle citation with name, township, range and section. This will assist us with the SLF.
 - Also, we recommend that you contact the Native American contacts on the attached list to get their input on the effect of potential project (e.g. APE) impact. In many cases a culturally-affiliated Native American tribe or person will be the only source of information about the existence of a cultural resource.
- √ Lack of surface evidence of archeological resources does not preclude their subsurface existence.
 - Lead agencies should include in their mitigation plan provisions for the identification and evaluation of accidentally discovered archeological resources, per California Environmental Quality Act (CEQA) §15064.5 (f) of the California Code of Regulations (CEQA Guidelines). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American, with knowledge in cultural resources, should monitor all ground-disturbing activities.
 - Lead agencies should include in their mitigation plan provisions for the disposition of recovered artifacts, in consultation with culturally affiliated Native Americans.

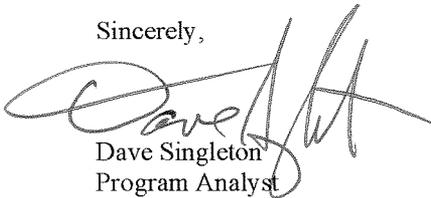
√ Lead agencies should include provisions for discovery of Native American human remains or unmarked cemeteries in their mitigations plans.

- CEQA Guidelines §15064.5(d) requires the lead agency to work with the Native Americans identified by this Commission if the Initial Study identifies the presence or likely presence of Native American human remains within the APE. CEQA Guidelines provide for agreements with Native American groups, identified by the NAHE, to ensure the appropriate and dignified treatment of Native American human remains and any associated grave goods.
- Health and Safety Code §7050.5, Public Resources Code §5097.98 and CEQA Guidelines §15064.5(d) mandate procedures to be followed in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery.

√ Lead agencies should consider avoidance, as defined in CEQA Guidelines §15370 when significant cultural resources are discovered during the course of project planning or execution.

Please feel free to contact me at (916) 653-6251 if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Dave Singleton". The signature is stylized and written over the printed name and title.

Dave Singleton
Program Analyst

Attachment: Native American Contact List.

Cc: State Clearinghouse

**Native American Contacts
San Bernardino County
February 22, 2008**

Cahuilla Band of Indians
Anthony Madrigal, Jr., Chairperson
P.O. Box 391760 Cahuilla
Anza , CA 92539
tribalcouncil@cahuilla.net
(951) 763-2631

(951) 763-2632 Fax

Ramona Band of Mission Indians
Joseph Hamilton, vice chairman
P.O. Box 391670 Cahuilla
Anza , CA 92539
admin@ramonatribe.com
(951) 763-4105
(951) 763-4325 Fax

San Manuel Band of Mission Indians
Henry Duro, Chairperson
26569 Community Center Drive Serrano
Highland , CA 92346
(909) 864-8933
(909) 864-3724 - FAX
(909) 864-3370 Fax

Chemehuevi Reservation
Charles Wood, Chairperson
P.O. Box 1976 Chemehuevi
Chemehuevi Valley , CA 92363
chemehuevit@yahoo.com
(760) 858-4301
(760) 858-5400 Fax

Fort Mojave Indian Tribe
Tim Williams, Chairperson
500 Merriman Ave Mojave
Needles , CA 92363
(760) 629-4591
(760) 629-5767 Fax

San Fernando Band of Mission Indians
John Valenzuela, Chairperson
P.O. Box 221838 Fernandefio
Newhall , CA 91322 Tataviam
tsen2u@msn.com Serrano
(661) 753-9833 Office Vanyume
(760) 885-0955 Cell Kitanemuk
(760) 949-1604 Fax

AhaMaKav Cultural Society, Fort Mojave Indian Tribe
Linda Otero, Director
P.O. Box 5990 Mojave
Mohave Valley , AZ 86440
ahamakav@citlink.net
(928) 768-4475
(928) 768-7996 Fax

Morongo Band of Mission Indians
Cultural Resources-Project Manager
49750 Seminole Drive Cahuilla
Cabazon , CA 92230 Serrano
britt_wilson@morongo.org
(951) 755-5206
(951) 755-5200/323-0822-cell
(951) 922-8146 Fax

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native American with regard to cultural resources for the proposed SCH#2008021086; cEQA Notice of Preparation (NOP); draft Environmental Impact Report (DEIR) for the City of Victorville General Plan 2030; San Bernardino County, California.

**Native American Contacts
San Bernardino County
February 22, 2008**

San Manuel Band of Mission Indians
Ann Brierty, Environmental Department
101 Pure Water Lane Serrano
Highland, CA 92346
abrierty@sanmanuel-nsn.gov
(909) 863-5899 EXT-4321

(909) 862-5152 Fax

Morongo Band of Mission Indians
Robert Martin, Chairperson
11581 Potrero Road Cahuilla
Banning, CA 92220 Serrano
Robert.Martin@morongo.org
(951) 849-8807
(951) 755-5200
(951) 922-8146 Fax

Serrano Nation of Indians
Goldie Walker
6588 Valaria Drive Serrano
Highland, CA 92346
(909) 862-9883

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native American with regard to cultural resources for the proposed SCH#2008021086; cEQA Notice of Preparation (NOP); draft Environmental Impact Report (DEIR) for the City of Victorville General Plan 2030; San Bernardino County, California.

Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: C:\Documents and Settings\Sara\Application Data\Urbemis\Version9a\Projects\Victorville GP 2005.urb924

Project Name: Victorville GP 2005

Project Location: San Bernadino County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	1,840.77	551.04	1,217.67	0.05	3.46	3.43	679,688.60

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	13,081.03	21,752.18	151,093.54	192.53	15,037.46	3,180.27	9,253,414.47

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	14,921.80	22,303.22	152,311.21	192.58	15,040.92	3,183.70	9,933,103.07

8/1/2008 11:19:02 AM

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
Natural Gas	41.03	540.63	294.77	0.01	1.02	1.01	678,206.08
Hearth - No Summer Emissions							
Landscape	166.49	10.41	922.90	0.04	2.44	2.42	1,482.52
Consumer Products	1,312.61						
Architectural Coatings	320.64						
TOTALS (lbs/day, unmitigated)	1,840.77	551.04	1,217.67	0.05	3.46	3.43	679,688.60

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOX</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM25</u>	<u>CO2</u>
Single family housing	3,409.53	5,440.82	38,750.47	48.35	3,764.51	796.85	2,329,279.70
Apartments mid rise	703.51	1,110.65	7,910.24	9.87	768.46	162.66	475,482.20
Non-Residential	8,967.99	15,200.71	104,432.83	134.31	10,504.49	2,220.76	6,448,652.57
TOTALS (lbs/day, unmitigated)	13,081.03	21,752.18	151,093.54	192.53	15,037.46	3,180.27	9,253,414.47

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	6,868.33	10.21	dwelling units	20,605.00	210,377.05	2,125,397.27
Apartments mid rise	131.11	8.62	dwelling units	4,982.00	42,944.84	433,863.12
Non-Residential		28.23	1000 sq ft	23,421.89	661,199.96	5,932,947.01
					914,521.85	8,492,207.40

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	45.5	3.3	96.3	0.4
Light Truck < 3750 lbs	10.2	6.9	87.2	5.9
Light Truck 3751-5750 lbs	20.9	1.9	97.6	0.5
Med Truck 5751-8500 lbs	11.3	1.8	97.3	0.9
Lite-Heavy Truck 8501-10,000 lbs	2.3	0.0	73.9	26.1
Lite-Heavy Truck 10,001-14,000 lbs	0.8	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	1.1	9.1	18.2	72.7
Heavy-Heavy Truck 33,001-60,000 lbs	2.2	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	4.3	83.7	16.3	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	1.2	8.3	83.4	8.3

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.0	9.5	13.3	7.4	8.9
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Non-Residential				2.0	1.0	97.0

Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name:

Project Name: Victorville GP Construction 2020

Project Location: San Bernadino County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>	<u>CO2</u>
2020 TOTALS (lbs/day unmitigated)	454.56	71.91	230.01	0.67	1,390.82	4.26	1,393.38	290.46	3.80	292.81	68,934.31
2020 TOTALS (lbs/day mitigated)	409.99	68.86	230.01	0.67	128.94	3.18	129.33	26.93	2.80	27.29	68,934.31

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>	<u>CO2</u>
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Time Slice 1/1/2020-3/31/2020 Active Days: 65	9.57	66.29	43.97	0.00	<u>1,390.82</u>	2.56	<u>1,393.38</u>	<u>290.46</u>	2.35	<u>292.81</u>	13,741.04
Mass Grading 01/01/2020-03/31/2020	9.57	66.29	43.97	0.00	1,390.82	2.56	1,393.38	290.46	2.35	292.81	13,741.04
Mass Grading Dust	0.00	0.00	0.00	0.00	1,390.80	0.00	1,390.80	290.45	0.00	290.45	0.00
Mass Grading Off Road Diesel	9.53	66.20	42.35	0.00	0.00	2.55	2.55	0.00	2.34	2.34	13,342.76
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.04	0.08	1.62	0.00	0.02	0.01	0.03	0.01	0.01	0.02	398.28
Time Slice 4/1/2020-5/29/2020 Active Days: 43	8.69	41.14	211.64	0.58	2.51	2.78	5.29	0.90	2.43	3.33	58,162.21
Building 04/01/2020-12/31/2020	8.69	41.14	211.64	0.58	2.51	2.78	5.29	0.90	2.43	3.33	58,162.21
Building Off Road Diesel	1.71	10.50	12.03	0.00	0.00	0.50	0.50	0.00	0.46	0.46	2,259.28
Building Vendor Trips	2.42	21.52	25.39	0.13	0.46	0.88	1.34	0.16	0.80	0.95	13,091.67
Building Worker Trips	4.56	9.13	174.22	0.46	2.05	1.40	3.45	0.74	1.18	1.92	42,811.25
Time Slice 6/1/2020-11/30/2020 Active Days: 131	<u>454.56</u>	41.43	217.08	0.59	2.58	2.82	5.40	0.92	2.47	3.39	59,497.17
Building 04/01/2020-12/31/2020	8.69	41.14	211.64	0.58	2.51	2.78	5.29	0.90	2.43	3.33	58,162.21
Building Off Road Diesel	1.71	10.50	12.03	0.00	0.00	0.50	0.50	0.00	0.46	0.46	2,259.28
Building Vendor Trips	2.42	21.52	25.39	0.13	0.46	0.88	1.34	0.16	0.80	0.95	13,091.67
Building Worker Trips	4.56	9.13	174.22	0.46	2.05	1.40	3.45	0.74	1.18	1.92	42,811.25
Coating 06/01/2020-11/30/2020	445.86	0.28	5.43	0.01	0.06	0.04	0.11	0.02	0.04	0.06	1,334.96
Architectural Coating	445.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.14	0.28	5.43	0.01	0.06	0.04	0.11	0.02	0.04	0.06	1,334.96

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Time Slice 12/1/2020-12/31/2020 Active Days: 23	28.24	<u>71.91</u>	<u>230.01</u>	<u>0.67</u>	2.83	<u>4.26</u>	7.09	1.00	<u>3.80</u>	4.80	<u>68,934.31</u>
Asphalt 12/01/2020-12/31/2020	19.54	30.77	18.37	0.09	0.31	1.49	1.80	0.10	1.37	1.47	10,772.11
Paving Off-Gas	15.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	1.70	10.53	9.66	0.00	0.00	0.82	0.82	0.00	0.75	0.75	1,418.81
Paving On Road Diesel	1.99	20.21	8.09	0.09	0.31	0.66	0.97	0.10	0.61	0.71	9,200.11
Paving Worker Trips	0.02	0.03	0.62	0.00	0.01	0.01	0.01	0.00	0.00	0.01	153.18
Building 04/01/2020-12/31/2020	8.69	41.14	211.64	0.58	2.51	2.78	5.29	0.90	2.43	3.33	58,162.21
Building Off Road Diesel	1.71	10.50	12.03	0.00	0.00	0.50	0.50	0.00	0.46	0.46	2,259.28
Building Vendor Trips	2.42	21.52	25.39	0.13	0.46	0.88	1.34	0.16	0.80	0.95	13,091.67
Building Worker Trips	4.56	9.13	174.22	0.46	2.05	1.40	3.45	0.74	1.18	1.92	42,811.25

Phase Assumptions

Phase: Mass Grading 1/1/2020 - 3/31/2020 - Default Mass Site Grading/Excavation Description

- Total Acres Disturbed: 556.34
- Maximum Daily Acreage Disturbed: 139.08
- Fugitive Dust Level of Detail: Default
- 10 lbs per acre-day
- On Road Truck Travel (VMT): 0
- Off-Road Equipment:
 - 2 Graders (174 hp) operating at a 0.61 load factor for 8 hours per day
 - 1 Plate Compactors (8 hp) operating at a 0.43 load factor for 8 hours per day
 - 2 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day
 - 5 Scrapers (313 hp) operating at a 0.72 load factor for 8 hours per day
 - 1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day
 - 2 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Paving 12/1/2020 - 12/31/2020 - Default Paving Description

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Acres to be Paved: 139.08

Off-Road Equipment:

- 1 Pavers (100 hp) operating at a 0.62 load factor for 8 hours per day
- 2 Paving Equipment (104 hp) operating at a 0.53 load factor for 8 hours per day
- 2 Rollers (95 hp) operating at a 0.56 load factor for 6 hours per day

Phase: Building Construction 4/1/2020 - 12/31/2020 - Default Building Construction Description

Off-Road Equipment:

- 1 Cranes (399 hp) operating at a 0.43 load factor for 7 hours per day
- 3 Forklifts (145 hp) operating at a 0.3 load factor for 8 hours per day
- 1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day
- 3 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day
- 1 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

Phase: Architectural Coating 6/1/2020 - 11/30/2020 - Default Architectural Coating Description

- Rule: Residential Interior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 100
- Rule: Residential Interior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 50
- Rule: Residential Exterior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 250
- Rule: Residential Exterior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 100
- Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250
- Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Construction Mitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Mitigated

<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>	<u>CO2</u>
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Time Slice 1/1/2020-3/31/2020 Active Days: 65	9.57	56.36	43.97	0.00	<u>128.94</u>	0.39	<u>129.33</u>	<u>26.93</u>	0.36	<u>27.29</u>	13,741.04
Mass Grading 01/01/2020-03/31/2020	9.57	56.36	43.97	0.00	128.94	0.39	129.33	26.93	0.36	27.29	13,741.04
Mass Grading Dust	0.00	0.00	0.00	0.00	128.92	0.00	128.92	26.92	0.00	26.92	0.00
Mass Grading Off Road Diesel	9.53	56.27	42.35	0.00	0.00	0.38	0.38	0.00	0.35	0.35	13,342.76
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.04	0.08	1.62	0.00	0.02	0.01	0.03	0.01	0.01	0.02	398.28
Time Slice 4/1/2020-5/29/2020 Active Days: 43	8.69	39.67	211.64	0.58	2.51	2.39	4.90	0.90	2.08	2.97	58,162.21
Building 04/01/2020-12/31/2020	8.69	39.67	211.64	0.58	2.51	2.39	4.90	0.90	2.08	2.97	58,162.21
Building Off Road Diesel	1.71	9.03	12.03	0.00	0.00	0.11	0.11	0.00	0.10	0.10	2,259.28
Building Vendor Trips	2.42	21.52	25.39	0.13	0.46	0.88	1.34	0.16	0.80	0.95	13,091.67
Building Worker Trips	4.56	9.13	174.22	0.46	2.05	1.40	3.45	0.74	1.18	1.92	42,811.25
Time Slice 6/1/2020-11/30/2020 Active Days: 131	<u>409.99</u>	39.96	217.08	0.59	2.58	2.43	5.01	0.92	2.11	3.03	59,497.17
Building 04/01/2020-12/31/2020	8.69	39.67	211.64	0.58	2.51	2.39	4.90	0.90	2.08	2.97	58,162.21
Building Off Road Diesel	1.71	9.03	12.03	0.00	0.00	0.11	0.11	0.00	0.10	0.10	2,259.28
Building Vendor Trips	2.42	21.52	25.39	0.13	0.46	0.88	1.34	0.16	0.80	0.95	13,091.67
Building Worker Trips	4.56	9.13	174.22	0.46	2.05	1.40	3.45	0.74	1.18	1.92	42,811.25
Coating 06/01/2020-11/30/2020	401.29	0.28	5.43	0.01	0.06	0.04	0.11	0.02	0.04	0.06	1,334.96
Architectural Coating	401.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.14	0.28	5.43	0.01	0.06	0.04	0.11	0.02	0.04	0.06	1,334.96

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Time Slice 12/1/2020-12/31/2020 Active Days: 23	28.24	<u>68.86</u>	<u>230.01</u>	<u>0.67</u>	2.83	<u>3.18</u>	6.00	1.00	<u>2.80</u>	3.80	<u>68,934.31</u>
Asphalt 12/01/2020-12/31/2020	19.54	29.19	18.37	0.09	0.31	0.79	1.10	0.10	0.72	0.83	10,772.11
Paving Off-Gas	15.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	1.70	8.95	9.66	0.00	0.00	0.12	0.12	0.00	0.11	0.11	1,418.81
Paving On Road Diesel	1.99	20.21	8.09	0.09	0.31	0.66	0.97	0.10	0.61	0.71	9,200.11
Paving Worker Trips	0.02	0.03	0.62	0.00	0.01	0.01	0.01	0.00	0.00	0.01	153.18
Building 04/01/2020-12/31/2020	8.69	39.67	211.64	0.58	2.51	2.39	4.90	0.90	2.08	2.97	58,162.21
Building Off Road Diesel	1.71	9.03	12.03	0.00	0.00	0.11	0.11	0.00	0.10	0.10	2,259.28
Building Vendor Trips	2.42	21.52	25.39	0.13	0.46	0.88	1.34	0.16	0.80	0.95	13,091.67
Building Worker Trips	4.56	9.13	174.22	0.46	2.05	1.40	3.45	0.74	1.18	1.92	42,811.25

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Mass Grading 1/1/2020 - 3/31/2020 - Default Mass Site Grading/Excavation Description

For Soil Stabilizing Measures, the Apply soil stabilizers to inactive areas mitigation reduces emissions by:

PM10: 84% PM25: 84%

For Soil Stabilizing Measures, the Replace ground cover in disturbed areas quickly mitigation reduces emissions by:

PM10: 5% PM25: 5%

For Soil Stabilizing Measures, the Water exposed surfaces 3x daily watering mitigation reduces emissions by:

PM10: 61% PM25: 61%

For Unpaved Roads Measures, the Reduce speed on unpaved roads to less than 15 mph mitigation reduces emissions by:

PM10: 44% PM25: 44%

For Unpaved Roads Measures, the Manage haul road dust 3x daily watering mitigation reduces emissions by:

PM10: 61% PM25: 61%

For Graders, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:

PM10: 85% PM25: 85%

For Graders, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

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For Rubber Tired Dozers, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:

PM10: 85% PM25: 85%

For Rubber Tired Dozers, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

For Scrapers, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:

PM10: 85% PM25: 85%

For Scrapers, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

For Tractors/Loaders/Backhoes, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:

PM10: 85% PM25: 85%

For Tractors/Loaders/Backhoes, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

For Water Trucks, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:

PM10: 85% PM25: 85%

For Water Trucks, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

For Plate Compactors, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:

PM10: 85% PM25: 85%

For Plate Compactors, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

The following mitigation measures apply to Phase: Paving 12/1/2020 - 12/31/2020 - Default Paving Description

For Pavers, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:

PM10: 85% PM25: 85%

For Pavers, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

For Paving Equipment, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:

PM10: 85% PM25: 85%

For Paving Equipment, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

For Rollers, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:

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PM10: 85% PM25: 85%

For Rollers, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

The following mitigation measures apply to Phase: Building Construction 4/1/2020 - 12/31/2020 - Default Building Construction Description

For Cranes, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:

PM10: 85% PM25: 85%

For Cranes, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

For Forklifts, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:

PM10: 85% PM25: 85%

For Forklifts, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

For Generator Sets, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:

PM10: 85% PM25: 85%

For Generator Sets, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

For Tractors/Loaders/Backhoes, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:

PM10: 85% PM25: 85%

For Tractors/Loaders/Backhoes, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

The following mitigation measures apply to Phase: Architectural Coating 6/1/2020 - 11/30/2020 - Default Architectural Coating Description

For Residential Architectural Coating Measures, the Residential Exterior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 10%

For Residential Architectural Coating Measures, the Residential Interior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 10%

For Nonresidential Architectural Coating Measures, the Nonresidential Exterior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 10%

For Nonresidential Architectural Coating Measures, the Nonresidential Interior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 10%

Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: C:\Documents and Settings\Sara\Application Data\Urbemis\Version9a\Projects\Victorville GP 2035.urb924

Project Name: Victorville GP 2035

Project Location: San Bernadino County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	5,758.87	1,763.69	3,599.42	0.14	10.28	10.19	2,179,424.43

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	9,258.99	9,709.92	92,953.23	298.99	47,433.72	9,232.81	30,041,269.48

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	15,017.86	11,473.61	96,552.65	299.13	47,444.00	9,243.00	32,220,693.91

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
Natural Gas	131.60	1,733.77	944.27	0.02	3.26	3.23	2,175,160.48
Hearth - No Summer Emissions							
Landscape	479.57	29.92	2,655.15	0.12	7.02	6.96	4,263.95
Consumer Products	4,449.04						
Architectural Coatings	698.66						
TOTALS (lbs/day, unmitigated)	5,758.87	1,763.69	3,599.42	0.14	10.28	10.19	2,179,424.43

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOX</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM25</u>	<u>CO2</u>
Single family housing	2,160.36	2,162.44	21,330.07	67.23	10,598.47	2,065.97	6,748,318.59
Apartments mid rise	852.01	839.43	8,280.02	26.10	4,114.17	801.98	2,619,597.97
Non-Residential Uses	6,246.62	6,708.05	63,343.14	205.66	32,721.08	6,364.86	20,673,352.92
TOTALS (lbs/day, unmitigated)	9,258.99	9,709.92	92,953.23	298.99	47,433.72	9,232.81	30,041,269.48

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	19,803.33	10.21	dwelling units	59,410.00	606,576.10	6,128,117.04
Apartments mid rise	718.84	8.62	dwelling units	27,316.00	235,463.92	2,378,844.86
Non-Residential Uses		28.23	1000 sq ft	74,732.21	2,109,690.28	18,930,250.12
					2,951,730.30	27,437,212.02

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	43.2	0.0	100.0	0.0
Light Truck < 3750 lbs	10.1	0.0	100.0	0.0
Light Truck 3751-5750 lbs	22.3	0.0	100.0	0.0
Med Truck 5751-8500 lbs	12.4	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	2.2	0.0	81.8	18.2
Lite-Heavy Truck 10,001-14,000 lbs	0.7	0.0	57.1	42.9
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	2.3	0.0	0.0	100.0
Other Bus	0.0	0.0	0.0	0.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	3.6	33.3	66.7	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	2.1	0.0	90.5	9.5

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.0	9.5	13.3	7.4	8.9
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Non-Residential Uses				2.0	1.0	97.0

**EXPANDED BIOLOGICAL RESOURCES REPORT
CITY OF VICTORVILLE GENERAL PLAN UPDATE
INCLUDING THE NORTHERN SPHERE EXPANSION AREA**

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INTRODUCTION

The City of Victorville (City) covers approximately 74 square miles (47,400 acres) in southwestern San Bernardino County, California, in the Victor Valley of the southwestern Mojave Desert. The City's Sphere of Influence (SOI) includes an additional 24.5 square miles (15,700 acres) of unincorporated land. Comprehensive Planning Services retained Robert A. Hamilton to provide professional biological consulting services associated with updating the City's 1997 General Plan. I prepared a biological resources report dated 23 June 2005 that (1) summarized relevant portions of the 1997 General Plan, (2) briefly reviewed the area's climate, topography, soils, and natural communities, (3) provided more detailed information on the plant and wildlife species that are of potential conservation concern within the City and its SOI, and (4) proposed resource management goals to be considered for incorporation into the Resource Element of the General Plan. The City now proposes to add approximately 57.8 square miles (37,000 acres) to the existing SOI in what is called the "Northern Sphere Expansion" area. Taken together, the City, the existing SOI, and the proposed Northern Sphere Expansion area are referred to herein as the "Study Area."

METHODS

The literature search for this report included a variety of information sources. Chief among these was the West Mojave Plan, described on pages 37- 38 of this report, under "Summary of Resource Protection Regulations." The Final Environmental Impact Report and Statement (FEIR/FEIS) for the West Mojave Plan was published in January 2005 with the BLM as federal lead agency and the County of San Bernardino and City of Barstow as state lead agencies. The West Mojave Plan Area covers 9.4-million acres in portions of San Bernardino, Inyo, Kern and Los Angeles counties, including the Study Area treated in this report. Since the West Mojave Plan is a recent planning document that provides detailed information on the sensitive biological resources present in and around the Study Area, the Plan forms the backbone of this biological technical report. At this time, the City is not a signatory to the West Mojave Plan, and so the Plan is being used mainly as a document that provides useful technical information on the plants, wildlife, and natural communities present in the Study Area, as well as some recommendations regarding the potential conservation of certain sensitive resources.

Other literature reviewed during the preparation of this report includes:

- ▶ The Biological Resources section of the City's existing (1997) General Plan.
- ▶ A report from the California Natural Diversity Data Base (Data Base) dated 31 December 2007 covering the Victorville U.S. Geological Survey (USGS) topographic quadrangle plus the surrounding eight USGS topographic quadrangles.
- ▶ In January 2008, queries of the California Native Plant Society (CNPS) On-line Inventory (<http://cnps.web.aplus.net/cgi-bin/inv/inventory.cgi>) covering the Victorville USGS topographic quadrangle plus the surrounding eight USGS topographic quadrangles.

- ▶ In January 2008, queries of the data base maintained by the Consortium of California Herbaria (<http://ucjeps.berkeley.edu/consortium>) for herbarium records from Victorville, Barstow, and Quartzite Mountain.
- ▶ A biological resources assessment dated 31 October 2003 prepared by Tom Dodson & Associates for the 3000-acre Southern California Logistics Airport (SCLA) Specific Plan Amendment.
- ▶ Various governmental reports and abstracts from biological symposiums published on the internet.

Robert A. Hamilton conducted a field reconnaissance survey within the City limits (not including the Northern Sphere Expansion area) on 10 May 2005. This was essentially a “windshield survey” conducted from within a vehicle for the purpose of gaining familiarity with the range of natural resources present within City limits.

RESULTS

SUMMARY OF THE CITY’S 1997 GENERAL PLAN

Section 3.1.3.14 of the West Mojave Plan provides the following concise summary:

Resource management goals identified within the General Plan indicate that the City would monitor new information regarding the status of sensitive floral and faunal species to revise its biotic inventory; would continue to require preservation of native Joshua tree woodlands and specimens where possible; would continue to require preservation of the Mojave River riparian habitat; would continue to participate in a cooperative effort with other agencies to monitor and review the management of resources; and would continue to cooperate and consult with federal, state, county and local agencies in resolving regional resource management issues. (City of Victorville General Plan—Resource Element at pages 48 through 52.) The City has designated areas along the Mojave River as Open Space. The General Plan indicates that the City requires that a survey be conducted by a qualified biologist to determine whether tortoise habitat exists prior to issuance of grading permits for undisturbed sites. (Id. at page 44.) The plan further indicates that the City has established a “no survey” area within the City based on the results of 370 completed biological surveys. This “no survey” area was established after consultation with the USFWS [U.S. Fish and Wildlife Service].

Rockview Nature Park: A small but important educational facility operated by the City of Victorville is located at the Lower Narrows of the Mojave River. School classes are hosted for educational programs, and the site protects rocky outcrops, Joshua tree woodland, and a portion of the Mojave River riparian habitat. Trails are present providing access to the river.

The City has made progress toward meeting most of the resource management goals enunciated above, but does not maintain a biotic inventory and does not formally monitor new information regarding the status of sensitive floral and faunal species. In recent years, most biological reports completed for CEQA compliance in the City have focused on five

sensitive wildlife species: Desert Tortoise, Mohave Ground Squirrel, Burrowing Owl, Sharp-shinned Hawk, and Loggerhead Shrike. This list of species of conservation concern was developed by the California Department of Fish and Game, which requested—in letters responding to the City’s Notices of Preparation for various recent development projects—that the City concentrate on these five species. The current updating of the General Plan represents an opportunity to identify the full range of biologically “sensitive” plant and wildlife species that potentially occur within the Study Area, or in other nearby areas that may be affected by City land-use decisions, and to develop guidelines to help ensure that conservation of these species is taken into account during the planning of future development in the Study Area.

CLIMATE

The Study Area lies within the southwestern Mojave Desert, a climatic and biotic region that encompasses approximately 25,000 square miles in southeastern California and parts of Nevada, Arizona, and Utah. The western Mojave, with elevations that range primarily between 3000 and 6000 feet above sea level, is sometimes referred to as southern California’s “high desert.” The Sonoran Desert is the “low desert” to the south, with lower average elevations and higher average temperatures than the Mojave. The cooler and higher Great Basin region lies to the north, and the Mojave may be regarded as a transition zone between the Sonoran and Great Basin regions. The Mojave Desert is situated in the rainshadow of the Transverse Ranges, and receives an average of four or five inches of rain per year on average, nearly all of it from late fall through early spring. Winters may bring freezing temperatures, whereas summer temperatures may reach 110°F, with low humidity and often high winds. In Victorville, the mean summer temperature is 88°F and the mean winter temperature is 49°F. Although some authorities do not recognize the Mojave Desert as a distinctive biome, nearly one quarter of all Mojave Desert plants are endemic species found nowhere else on earth, implying a substantial degree of differentiation from surrounding biomes.

TOPOGRAPHY

Page 3-55 of the West Mojave Plan describes the geomorphology of the West Mojave planning area as follows:

The geomorphology of the province is dominated by broad basins filled with sediments shed from adjacent highlands and mountains, burying the old topography. The region may once have been a part of the Basin and Range province until separated from it when the Garlock Fault became active in the early to mid Tertiary Period. Although Paleozoic and early Mesozoic-age rocks are present, the desert itself is a Cenozoic-age feature, formed as early as the Oligocene, presumably from movements related to the San Andreas and the Garlock faults. During the Pleistocene (Ice Ages) this region of California had a cooler average temperature and lesser evaporation rate than present. While never a wet climate, it nonetheless once contained many small lakes, and the Mojave River still had water in it. The majority of the surface in the planning area is covered by Quaternary-age unconsolidated surficial deposits. These deposits are comprised primarily of alluvial, fluvial, lacustrine and aeolian derived material.

The City of Victorville is generally characterized by a relatively flat topography that ranges between approximately 2600 and 2875 feet above sea level. The North Sphere Expansion Area is dominated by Quartzite Mountain, which rises to 4025 feet above sea level. Victorville is situated in the Victor Valley, a geologically active area that lies only a few miles west of the Helendale Fault and approximately 15-20 miles northeast of the San Andreas and San Jacinto Fault Zones. Victorville occupies the broad surface of a large alluvial fan referred to as the Cajon Fan (or Victorville Fan). The Mojave River runs along the fan's eastern margin and is the City's most notable topographic feature. This river is very unusual in that it flows from south to north, conveying runoff out of the San Gabriel and San Bernardino Mountains. The river's natural floodplain is up to a mile wide, and its waters flow below the surface for most of its length except following storms. At Mojave Narrows, however, the river encounters an impenetrable layer of bedrock that forces water to the surface even during dry periods. The artificial Spring Valley Lake (which lies outside of the Study Area's limits) appears to have been established in the river's historic bed. Oro Grande Wash, the City's second-largest drainage course, conveys flows only following intense storms. It parallels Interstate 15 and crosses beneath the freeway in a culvert between La Mesa Road and Olivera Road. The wash becomes channelized at Bear Valley Road passes through the Victorville Municipal Golf Course in a culvert, and is eventually dispatched into an underground culvert in Center Street Park, near Hesperia Road at Verde Street. Finally, the Los Angeles Department of Water and Power's California Aqueduct conveys water toward Los Angeles through the southwestern quadrant of the City.

SOILS

As reported by Tom Dodson & Associates (2003), the U.S. Department of Agriculture soil survey for San Bernardino County California, Mojave River Area, lists the following soils in the Victorville area (descriptions truncated):

- ▶ **Bryman loamy fine sand.** This very deep, well drained soil is on terraces and old alluvial fans. It formed in alluvium derived dominantly from granitic material.
- ▶ **Cajon sand.** This very deep, somewhat excessively drained soil is on alluvial fans. It formed in alluvium derived dominantly from granitic material.
- ▶ **Cajon gravelly sand.** This very deep, somewhat excessively drained soil is on alluvial fans. It formed in alluvium derived dominantly from granitic material.
- ▶ **Haplargids-Calciorthids complex.** This map unit is on terrace escarpments, dissected hills, and terrace remnants that lie mainly between flood plains of the Mojave River and higher terraces. Most areas are dissected by shallow to deep intermittent drainages.
- ▶ **Helendale loamy sand.** This very deep, well drained soil is on alluvial fans and terraces. It formed in alluvium derived dominantly from granitic material.

- ▶ **Kimberlina loamy fine sand, cool.** This very deep, well drained soil is on alluvial fans. It formed in alluvium derived from mixed sources.
- ▶ **Mojave Variant loamy sand.** This very deep, well drained soil is on terraces. It formed in alluvium derived dominantly from granitic material.
- ▶ **Riverwash.** This map unit consists of areas in the Mojave River bed and in beds of intermittent streams. It consists of areas of unstable sandy and gravelly alluvium that is frequently removed, resorted, and redeposited.
- ▶ **Rock outcrop-Lithic Torriothents complex.** This map unit is on mountains and hills. Rock outcrops on mountainsides, ridges, and rugged hills and generally dominates the landscape. Lithic Torriothents are between the areas of rock outcrop in small depressional areas and on relatively stable hillsides. Slopes are hilly or steep.
- ▶ **Victorville sandy loam.** This very deep, moderately well drained soil is on low river terraces and on flood plains along the Mojave River. It formed in alluvium derived dominantly from granitic material.
- ▶ **Villa loamy sand.** This very deep, moderately well drained soil is on flood plains and on low river terraces along the Mojave River. It formed in alluvium derived dominantly from granitic material.

NATURAL COMMUNITIES

The West Mojave Plan identified 32 distinct plant communities in the western Mojave Desert, but also noted that just two of these—Creosote Bush scrub and saltbush scrub—occupy 75% of the planning area's natural lands. The large-scale vegetation map in the West Mojave Plan (Map 3-23) suggests that Creosote Bush scrub accounts for all of Victorville's undeveloped uplands, but in fact much of this area supports Joshua Trees, and therefore may be classified as Joshua Tree woodland. In addition, the 1997 Victorville General Plan identified the occurrence of desert saltbush scrub and rabbitbrush scrub, as well as ruderal (non-native, weedy) vegetation that results from soil disturbance. The only other natural communities known to occur within the Study Area are riparian associations that occur along the Mojave River. Each of these associations is described in general terms below, with the riparian areas described in greater detail due to their generally high conservation value.

Creosote Bush Scrub

This characteristic community of the western Mojave Desert is dominated by Creosote Bush (*Larrea tridentata*). Other native species often present include the smaller Burrobush (*Ambrosia dumosa*) and a robust species of native grass, Big Galleta (*Pleuraphis rigida*), as well as various annual grasses and wildflowers.

Mojave Desert Saltbush Scrub

This widespread vegetative association is dominated by three species of saltbush: Allscale (*Atriplex polycarpa*), Shadscale (*A. confertifolia*), and Desert Holly (*A. hymenelytra*).

Rabbitbrush Scrub

This low-growing native community is dominated by Rubber Rabbitbrush (*Chrysothamnus nauseosus*) and may contain other species of *Chrysothamnus* along with other low-growing plants.

Joshua Tree Woodland

Joshua Trees (*Yucca brevifolia*) are distributed on gentle slopes and on valley floors of upper bajadas and sandy areas. The understory of this highly variable community typically includes Creosote Bush and/or species of saltbush. The Joshua Tree is an archetypal plant of the Mojave Desert that may live several hundred years and that provides valuable habitat for a variety of native wildlife species. Off-road vehicle use and illegal dumping appear to have adverse effects on the health of Joshua Trees, which are afforded special protection under Chapter 13.33 of the Victorville Municipal Code.

Mojave River Riparian Communities

The Mojave River forms a regionally important corridor of natural open space between the San Bernardino Mountains to the south and natural open spaces that lie within and north of the Study Area. It is to be expected that various large and medium-sized mammals use the river and associated flood plain as a travel route. Lines and Bilhorn (1996) conducted detailed mapping of the vegetation along a 100-mile segment of the Mojave River in 1995, including the segment that passes through Study Area. They found that Mojave Narrows Regional Park supports extensive native riparian woodlands dominated by Fremont Cottonwood (*Populus fremontii*), Black Willow (*Salix gooddingii*), and Honey Mesquite (*Prosopis glandulosa*). Other native tree species found locally include Sandbar Willow (*Salix exigua*), White Alder (*Alnus rhombifolia*), and California Sycamore (*Platanus racemosa*). Desert Willow (*Chilopsis linearis*) grows along the river's drier ephemeral reaches. The other native communities that they mapped along the river include cottonwood-willow woodland, monotypic cottonwood woodland, mesquite bosque, a willow-baccharis streamside community, and hydrophytes.

The most widespread and prevalent plant species that Lines and Bilhorn (1996) identified in the Mojave River riparian zone is the non-native Saltcedar (*Tamarix ramosissima*). As reported by Smith (1999), Saltcedar progressively desiccates and salinizes floodplains due to its salt exudation and high transpiration rates. Moreover, dry Saltcedar is highly flammable, and burning of Saltcedar-invaded stands usually favors regeneration of Saltcedar over native species.

Webb et al. (2001) compared historical photographs of the river from the late 19th and early 20th centuries with photos taken at the same locations in the year 2000, and demonstrated that the extent of well-developed riparian woodland has increased substantially over the course of several decades. As discussed below, the main causes of the increase appear to be increased urban runoff into the Mojave River combined with a decrease in major flood events due to damming of the river. The largest increases in riparian vegetation have occurred in the area that now is Mojave Narrows Regional Park, upstream of the Upper Narrows between Victorville and Apple Valley. Black Willows dominated this area in 1917, but the larger Fremont Cottonwoods are now most abundant there. Sandbar Willow was the prevalent woody plant in the Lower Narrows in 1917, but by 2000 this area supported stands of Fremont Cottonwood and California Sycamore, as well as the exotic saltcedar.

Webb et al. (2001) characterized water flows in the Mojave River as follows:

The river has a highly variable annual flood series, with some years having either base flow or zero discharge and other years having floods as high as 70,600 cubic feet per second. . . The largest flood in the gaging record occurred in 1938, which was not an El Niño year; other years with large floods include 1891, 1905, and 1916, all of which were El Niño years. In recent decades, the relation between flooding and El Niño has strengthened, with large floods in 1978, 1983, 1993, and 1998. The Mojave River only flows continuously from its source to its terminus in the Silver Lake Playa during these years.

The Mojave River and its tributaries have three dams that store water and provide some flood control for the reaches in the Mojave Desert. The Mojave River Forks Reservoir and Silverwood Lake reservoir, both completed in 1971, likely attenuate flood peaks, although they have no effect on annual runoff volume (Lines 1996). The presence of these reservoirs may be the reason why the size of floods appears to have declined in the latter part of the 20th century, although this decline also could be the result of climatic fluctuations. Lake Arrowhead reservoir, built in 1922, provides only minimal flow regulation.

Artificial discharges to the Mojave River have had local effects on riparian vegetation. Water circulated through fish hatcheries, as well as municipal effluent, is released into the river in varying amounts in the reaches above and below Victorville. Of lesser significance is water imported from the California Aqueduct that is stored in Silverwood Lake and released into the Mojave River, and water released from the Mojave Water Agency's Morongo Basin Pipeline 5 miles below the Mojave River Forks Reservoir (Lines 1996). Although base flow and smaller annual floods recharge water to the alluvial aquifer along the Mojave River, larger floods play a greater role in maintenance of the riparian ecosystem. Germination of riparian species occurs in the wet sediments deposited during floods, and the sequence of floods, as well as the amount of time between them, determines whether establishment occurs. Large floods also supply a greater quantity of water to trees on the distal margins of floodplains, aiding their survival. These floods also destroy smaller plants, and lateral channel change may undercut larger trees. Significant floods have occurred about every 5 years in recent decades and may have contributed to the increases in riparian vegetation in some reaches.

As summarized by Lines (1999), the extent and health of the Mojave River's riparian woodlands depend largely on the maintenance of adequate groundwater levels:

The riparian vegetation is heavily dependent on ground water in the capillary fringe just above the water table, and the vertical distribution of roots (observed in trenches) allows for seasonal water-table fluctuations of 2 to 3 feet. However, sustained water-table declines and

associated declines of the capillary fringe of only a few feet can cause high mortality of riparian vegetation. Along one reach of the Mojave River, channel incision and lowering of the water table in the flood-plain aquifer by 5 feet resulted in mortality of 60-95 percent in the cottonwood-willow woodland. Where the water-table decline was less than 5 feet, stand mortality was 7-13 percent; however, trees exhibited significant loss of leaf area (Auble et al. 1998).

Along another reach of the Mojave River where water-table depths are normally 10 to 15 ft below land surface, sustained water-table declines (caused by ground-water pumping) of about 10 feet have resulted in mortality of 70 percent in a mesquite bosque; declines of about 20 feet have resulted in stand mortality greater than 95 percent. In areas where the mesquite mortality was greatest, the surviving mesquite now grows as small plants 1 to 3 feet tall and probably is relying on meager soil moisture for survival. Similar declines in mesquite (*Prosopis velutina*) stature have been observed in Arizona where pumping also has lowered the water table (Stromberg 1991). The mesquite bosques have been transformed from a riparian plant community to a xeric community.

In a January 2004 presentation to a working group of desert land managers¹, Larry LaPré (one of the BLM biologists most involved in preparing the West Mojave Plan) provided the following overview of the Mojave River and its biological importance:

The Mojave River is in many ways the most prominent landscape feature of the West Mojave desert. The central and southeastern regions reflect the Pleistocene history of the Mojave River, which flows from the San Bernardino Mountains north to Barstow, then east to Soda Lake and the Mojave National Preserve. In the last Ice Age, extending from 30,000 to 10,000 years ago, the Mojave River discharged to the south into the Mojave Valley, Lavi Lake, Dale Lake, Bristol Lake, and other playas extending nearly to the Colorado River. The now-dry river and playas supported species of invertebrates, fish, amphibians, and pond turtles, and attracted migratory birds dependent on water. Remnant populations of these animals are still present today, and comprise many of the rare species in need of conservation. The ancient river and lakes formed sandy beaches and prevailing winds carried the finer particles to the east, forming hummocks and dunes. These blowsand areas now support unique species of insects, plants, and reptiles, including the Mojave fringe-toed lizard, whose entire distribution can be traced to the former path of the ancient Mojave River and Amargosa River.

The Mojave River has been substantially altered within the past 100 years by two primary human-dependent uses: 1) flood control provided by the Mojave Forks dam, and 2) groundwater extraction within the basin. The effects on wildlife habitat are primarily the reduction in the extent of the riparian woodland and forest along the banks, but also include fragmentation of habitat for the arroyo toad, interruption of ecosystem processes associated with infrequent flooding, and drying of associated wetlands, as at Turner Springs near Victorville. In addition, introduction of non-native species, including fish, bullfrogs, cowbirds, and starlings, has displaced some of the species targeted for protection in the West Mojave Plan.

Despite these changes, the Mojave River remains an outstanding desert stream, supporting abundant wildlife where the groundwater surfaces at the upper and lower narrows and downstream at Camp Cady and Afton Canyon. Endemic species, including the Mojave River vole, the Mojave shoulderband snail, and the Mojave fringe-toed lizard are found along the

¹ Presentation outline published at <http://dmg.gov/documents/mojaveriver-overview.doc>; downloaded on 20 May 2005.

river. Limited-range species, primarily birds dependent on the riparian habitat, are a major wildlife feature. These birds are either limited to desert riparian habitats, disjuncts with a wider overall range, or species at the edge of their distribution. A disjunct population of the San Emigdio blue butterfly is known from the edge of the river near Victorville. The river also serves as a water source for wide-ranging species, including bats, which are abundant in certain locations. Approximately 10,000 bats of several species were detected under the Interstate 15 bridge crossing in Victorville.

The river is used as a flyway stopover for some migratory birds, most notably turkey vultures and Swainson's hawks. These raptors can be seen in the spring and fall using the Regional Park as a night roost.

The Mojave River near Victorville is a West Mojave hotspot, containing over fifteen of the species addressed by the Plan. It is also a center of endemism, being the sole locality for the Mojave River vole and the Mojave shoulderband snail and formerly for the Mojave tui chub.

The West Mojave Plan characterizes Mojave Narrows Regional Park (on the City's border) as a "biological hotspot." The park is owned by the state Wildlife Conservation Board and is operated by San Bernardino County Department of Regional Parks. It comprises 850 acres, with 450 acres devoted to habitat. Under an approved West Mojave Plan, groundwater levels would be monitored and maintained in a manner specifically designed to conserve biological resources along the Mojave River¹, which could affect land use decisions within the Study Area. Also, the City's conceptual "Riverwalk" project could also affect biological resources along the Mojave River.

SENSITIVE SPECIES

Sensitive species are plants and animals occurring or potentially occurring within the study area that are endangered or rare, as those terms are used in CEQA and its Guidelines, or that are of current local, regional, or state concern. Legal protection for sensitive species varies widely, from the relatively comprehensive protection extended to listed threatened/endangered species to no legal status at present. The California Department of Fish & Game (CDFG) publishes quarterly its lists of "Special Vascular Plants, Bryophytes, and Lichens" and "Special Animals." The Special Plants list incorporates continually updated information from the California Native Plant Society (CNPS), an independent organization that maintains an online inventory of taxa that its botanists regard as rare, declining, or insufficiently known. In addition, recently published findings and preliminary results of ongoing research provide a basis for consideration of species that are candidates for state and/or federal listing. The Data Base includes historic records of the following species, which are not covered in this biological technical report:

- ▶ **Southern Skullcap (*Scutellaria bolanderi* ssp. *austromontana*).** The Data Base lists this CNPS List 1B plant as having been collected by Parish in 1915 at "Victorville, Mohave Desert." An 1886 collection by the same botanist along the "banks of the

¹ Page 2-77 of the West Mojave Plan specifies that groundwater levels would be maintained in accordance with the Mojave Basin Adjudication (Physical Solution/Stipulated Judgment & Interlocutory) of April 1993.

Mohave River” is attributed to the same site. This population is regarded as having been extirpated and the species is otherwise unknown from San Bernardino County (CNPS 2001).

- ▶ **California Red-legged Frog (*Rana aurora draytonii*).** This amphibian, federally listed as threatened and a California Species of Special Concern, once occupied the Mojave River, but is believed to have disappeared from the entire watershed during catastrophic floods in the winter of 1968/1969 (Jennings and Hayes 1994). Therefore, it is not treated herein.

The Mojave Tui Chub (*Gila bicolor mohavensis*), a fish listed as endangered by federal and state governments, formerly occurred along the Mojave River in the Study Area, but is now relegated to a small number of manmade refugia. Since it no longer occurs in the wild, this species is not addressed in this report.

This report follows the lead of CDFG in not recognizing “federal species of concern,” an informal designation developed in the Sacramento office of the U.S. Fish and Wildlife Service. Most such species are former Category 1 and Category 2 candidates for federal listing. As reported by CDFG¹, “the list was seldom updated and generated only from Sacramento without review by other FWS offices.”

Table A lists each sensitive species known to occur in the Study Area or adjacent areas, or that is otherwise judged to have at least moderate potential to occur in the Study Area. Additional sensitive plants or animals could conceivably occur in the Study Area, but such occurrences would be exceptional or limited to the passage of migrants. The last column indicates the species currently expected to be covered under the West Mojave Plan Habitat Conservation Plan (HCP); see the discussion on pages 37- 38 of this report. Species accounts discuss the known status and distribution of the taxa included in Table A.

TABLE A – SENSITIVE SPECIES

SPECIES	STATUS			TO BE COVERED IN WEST MOJAVE PLAN HCP
	USFWS	CDFG	CNPS	
LISTED/PROPOSED SPECIES				
<i>Amphibians</i>				
Arroyo Toad				
<i>Bufo microscaphus californicus</i>	E	CSC	–	No
<i>Reptiles</i>				
Desert Tortoise				
<i>Gopherus agassizii</i>	T	T	–	Yes

¹ <http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/SPPlants.pdf>

SPECIES	STATUS			TO BE COVERED IN WEST MOJAVE PLAN HCP
	USFWS	CDFG	CNPS	
Birds				
Bald Eagle <i>Haliaeetus leucocephalus</i>	—	E	—	No
Yellow-billed Cuckoo <i>Coccyzus americana</i>	—	E	—	No
Willow Flycatcher <i>Empidonax traillii</i>	E	E	—	No
Least Bell's Vireo <i>Vireo bellii pusillus</i>	E	E	—	No
Mammals				
Mohave Ground Squirrel <i>Spermophilus mohavensis</i>	—	T	—	Yes
SPECIES NOT LISTED OR PROPOSED FOR LISTING				
Plants				
Chaparral Sand-Verbena <i>Abronia villosa var. aurita</i>	—	—	List 1B.1	No
Small-flowered Androstephium <i>Androstephium breviflorum</i>	—	—	List 2.3	No
Booth's Evening-Primrose <i>Camissonia boothii ssp. boothii</i>	—	—	List 2.3	No
Pygmy Poppy <i>Cambya candida</i>	—	—	List 4.2	No
Desert Cymopterus <i>Cymopterus deserticola</i>	—	—	List 1B.2	Yes
Barstow Woolly Sunflower <i>Eriophyllum mojavense</i>	—	—	List 1B.3	Yes
Creamy Blazing Star <i>Mentzelia tridentata</i>	—	—	List 1B.3	No
Mojave Monkeyflower <i>Mimulus mohavensis</i>	—	—	List 1B.2	Yes
Short-joint Beavertail <i>Opuntia basilaris var. brachyclada</i>	—	—	List 1B.2	Yes
San Bernardino Aster <i>Symphotrichum defoliatum</i>	—	—	List 1B.2	No
Gastropods				
Victorville Shoulderband <i>Helminthoglypta mohaveana</i>	—	—	—	No

SPECIES	STATUS			TO BE COVERED IN WEST MOJAVE PLAN HCP
	USFWS	CDFG	CNPS	
Reptiles				
Western Pond Turtle <i>Actinemys marmorata pallida</i>	—	CSC	—	No
Coast Horned Lizard <i>Phrynosoma coronatum</i>	—	CSC	—	Yes
Birds				
Northern Harrier <i>Circus cyaneus</i>	—	CSC	—	No
Cooper's Hawk <i>Accipiter cooperii</i>	—	CSA	—	No
Ferruginous Hawk <i>Buteo regalis</i>	—	CSA	—	No
Golden Eagle <i>Aquila chrysaetos</i>	—	CSA	—	No
Prairie Falcon <i>Falco mexicanus</i>		CSA	—	No
Burrowing Owl <i>Athene cunicularia</i>	—	CSC	—	Yes
Long-eared Owl <i>Asio otus</i>	—	CSC	—	No
Brown-crested Flycatcher <i>Myiarchus tyrannulus</i>	—	CSA	—	No
Loggerhead Shrike <i>Lanius ludovicianus</i>	—	CSC	—	No
Bendire's Thrasher <i>Toxostoma bendirei</i>	—	CSC	—	No
Le Conte's Thrasher <i>Toxostoma lecontei</i>	—	CSA	—	No
Yellow Warbler <i>Dendroica petechia</i>	—	CSC	—	No
Yellow-breasted Chat <i>Icteria virens</i>	—	CSC	—	No
Summer Tanager <i>Piranga rubra</i>	—	CSC	—	No
Tricolored Blackbird <i>Agelaius tricolor</i>	—	CSC	—	No
Mammals				
Pallid San Diego Pocket Mouse <i>Chaetodipus fallax pallidus</i>	—	CSC	—	No
Mojave River Vole <i>Microtus californicus mohavensis</i>	—	CSC	—	No
Pallid Bat <i>Antrozous pallidus</i>	—	CSC	—	No

SPECIES	STATUS			TO BE COVERED IN WEST MOJAVE PLAN HCP
	USFWS	CDFG	CNPS	
Townsend's Big-eared Bat <i>Corynorhinus townsendii</i>	—	CSC	—	No
Spotted Bat <i>Euderma maculatum</i>	—	CSC	—	No
California Mastiff Bat <i>Eumops perotis californicus</i>	—	CSC	—	No
American Badger <i>Taxidea taxus</i>	—	CSC	—	No

LEGEND – TABLE A

USFWS (Federal) Classifications

- E Taxa listed as Endangered.
- T Taxa listed as Threatened.
- PE Taxa proposed to be listed as Endangered.
- PT Taxa proposed to be listed as Threatened.

CDFG (State) Classifications

- E Taxa State listed as Endangered.
- T Taxa State listed as Threatened.
- CSC California Species of Special Concern. An administrative designation given to vertebrate species that appear to be vulnerable to extinction because of declining populations, limited ranges, and/or continuing threats. Some species may be just starting to decline, while others may have already reached the point where they meet the criteria for listing as a threatened or endangered species.
- CSA California Special Animal. A general term that refers to all of the taxa the CNDDDB is interested in tracking, regardless of their legal or protection status. This list is also referred to as the list of "species at risk" or "special status species." The CDFG considers the taxa on this list to be those of greatest conservation need.

CNPS Lists

- List 1B Plants considered by CNPS to be rare or endangered in California and elsewhere.
- List 2 Plants considered by CNPS to be rare, threatened, or endangered in California, but which are more common elsewhere.
- List 4 Plants of limited distribution or infrequent occurrence throughout a broader area in California that CNPS does not regard as "rare" from a statewide perspective, but their populations warrant monitoring.

CNPS Threat Ranks

The CNPS Threat Rank is an extension added onto the CNPS List and designates the level of endangerment by a 1 to 3 ranking, with 1 being the most endangered and 3 being the least endangered:

- 0.1 Seriously threatened in California (high degree/immediacy of threat)
- 0.2 Fairly threatened in California (moderate degree/immediacy of threat)
- 0.3 Not very threatened in California (low degree/immediacy of threats or no current threats known)

A Threat Rank is assigned to all taxa on CNPS List 1B, List 2, and the majority of those on Lists 3 and List 4. Taxa on List 4 may be assigned a Threat Rank of 0.2 or 0.3; however an instance in which a Threat Rank of 0.1 is assigned to a List 4 plant has not yet been encountered. List 4 plants generally have large enough populations to not have significant threats to their continued existence in California; however, certain conditions still exist to make the plant a species of concern and hence be placed on a CNPS List. In addition, all List 1A (presumed extinct in California) and some List 3 (need more information) and List 4 (limited distribution) plants, which lack threat information, do not have a Threat Rank extension.

SENSITIVE SPECIES ACCOUNTS

Most of the following species accounts are derived from the accounts presented in the West Mojave Plan, which describes its species accounts as follows:

For each plant or animal addressed by the Plan, a *Species Account* was prepared. The Supergroup approved the list of 98 plant and animal species to be addressed by the Plan in 1996. The USGS [U.S. Geological Survey] then contracted with experts on each species, who prepared the species accounts for use in development of the Plan. A wildlife biologist or botanist possessing recognized expertise concerning the species in question authored each of these documents. These accounts describe the general status, habitat, life history, distribution, biological goals, and threats faced by each species, as well as a detailed bibliography. All species accounts were peer reviewed.

Biologists preparing biological reports for proposed projects in the Study Area should refer to the West Mojave Plan itself, which in most cases provides far more detailed information about habitat requirements, distribution, recommended conservation measures, and other potentially relevant topics. The following authors prepared West Mojave Plan species accounts that were used in the preparation of this biological technical report:

- ▶ André, James M., and Pitzer, Barbara – Barstow Woolly Sunflower (*Eriophyllum mohavense*)
- ▶ Bagley, Mark – Desert Cymopterus (*Cymopterus deserticola*)
- ▶ Boarman, William I. – Desert Tortoise (*Gopherus agassizii*)
- ▶ Brown-Berry, Patricia – Pallid Bat (*Antrozous pallidus*)

- ▶ Campbell, Kurt F. – Burrowing Owl (*Athene cunicularia*), Long-eared Owl (*Asio otus*), Loggerhead Shrike (*Lanius ludovicianus*), and Tricolored Blackbird (*Agelaius tricolor*)
- ▶ England, A. Sydney – Bendire’s Thrasher (*Toxostoma bendirei*)
- ▶ Garrett, Kimball A., and Kathy C. Molina – Northern Harrier (*Circus cyaneus*)
- ▶ Grindrod, Paul, and Brian James Walton – Cooper’s Hawk (*A. cooperii*) and Ferruginous Hawk (*Buteo regalis*)
- ▶ Hollingsworth, Bradford D., and Kent R. Beaman – San Diego Horned Lizard (*Phrynosoma coronatum blainvillei*)
- ▶ Laabs, David – Mojave River Vole (*Microtus californicus mohavensis*) and Mohave Ground Squirrel (*Spermophilus mohavensis*)
- ▶ LaPré, Lawrence F. – Bald Eagle (*Haliaeetus leucocephalus*)
- ▶ Laymon, Stephen A. – Yellow-billed Cuckoo (*Coccyzus americanus*)
- ▶ Lovich, Jeff – Western Pond Turtle (*Emys marmorata*)
- ▶ MacKay, Pamela J. – Mojave Monkeyflower (*Mimulus mojavensis*) and Short-joint Beaver-tail (*Opuntia basilaris* var. *brachyclada*)
- ▶ Myers, Steven J. – Brown-crested Flycatcher (*Myiarchus tyrannulus*), Yellow Warbler (*Dendroica petechia*), Yellow-breasted Chat (*Icteria virens*), and Summer Tanager (*Piranga rubra*)
- ▶ Patten, Michael A. – Least Bell's Vireo (*Vireo bellii pusillus*)
- ▶ Prescott, Brian G. – Le Conte’s Thrasher (*Toxostoma lecontei*)
- ▶ Sanders, Andrew C. – Small-flowered Androstephium (*Androstephium breviflorum*)
- ▶ Unitt, Philip – Willow Flycatcher (*Empidonax traillii*)

The West Mojave Plan provides no species accounts for several taxa that are addressed in this biological resources report (because those species were not deemed to be “covered” in the West Mojave Plan). For some of these taxa, such as the Golden Eagle (*Aquila chrysaetos*), Prairie Falcon (*Falco mexicanus*), I referred to the “West Mojave Plan Draft Evaluation Report, Suggested Conservation Strategies” (BLM 1999).

Accounts of Listed/Proposed Species

The following species are listed as threatened or endangered by state and/or federal resource agencies.

Arroyo Toad (*Bufo microscaphus californicus*)

This toad is federally listed as endangered, and is a California Species of Special Concern (an administrative designation given to vertebrate species that appear to be vulnerable to

extinction because of declining populations, limited ranges, and/or continuing threats referring to taxa with populations declining seriously or that are otherwise highly vulnerable to human developments). The historic range extended along the coastal slope from San Luis Obispo County to northwestern Baja California, and six sites in on the state's southern desert slope. The species still occurs along the Mojave River above Mojave Forks Dam (Brown and Fisher 2002), but has disappeared from areas downstream of this dam. Arroyo Toads are largely nocturnal, and have highly specialized habitat requirements. They typically frequent sandy washes and arroyos with shallow pools that lack predatory fish or crayfish, and that have damp, sandy or gravelly banks. The adults dig deep burrows in sandy stream terraces and remain underground from late summer through the winter.

Since the Arroyo Toad appears to be extirpated from the Mojave River downstream of Mojave Forks Dam, the West Mojave Plan does not specifically address this species. Nonetheless, the river lies within this toad's historic range, and the toad could potentially be found there in the future, and so it is appropriate to briefly address this species in this report. The BLM's Larry LaPré—one of the West Mojave Plan's principal preparers—reported the following relevant information about the Arroyo Toad in a January 2004 presentation¹:

The [USFWS] designated critical habitat for the arroyo toad (*Bufo californicus*) at the upper reaches of the Mojave River near the Mojave Forks dam and in a stretch of the river in Victorville, including Mojave Narrows Regional Park. This designation has been withdrawn by court order, and a new critical habitat designation is pending. The Victorville reach has historical records of occurrence of the arroyo toad, but biological surveys within the past ten years have failed to detect this species. The upper reach on both sides of the Mojave Forks dam is known to currently support arroyo toads. The 1d Fire and subsequent debris flows in 2003 and 2004 damaged a great deal of occupied arroyo toad habitat in the upper tributaries.

The San Bernardino County Flood Control District conducts annual maintenance activities in four "critical reaches" of the Mojave River — Spring Valley Lakes, Victorville, Silver Lakes and Barstow. Vegetation clearing in these areas and occasional maintenance of other areas in the river is conducted in accordance with an existing Biological Opinion. This BO addressed the least Bell's vireo, southwestern willow flycatcher, and arroyo toad. Measures are incorporated into the Maintenance Plan to remove exotic vegetation, assist in preventing off-highway vehicles from entering Mojave Narrows Regional Park, operate cowbird traps, and fund restoration efforts by the BLM at Afton Canyon.

The City of Hesperia is directing the preparation of a separate Habitat Conservation Plan for lands including the Mojave River just below the Mojave Forks dam. This HCP will address the arroyo toad, least Bell's vireo, and southwestern willow flycatcher. Nearly all of the occupied arroyo toad habitat within the West Mojave Plan area is included in the Summit Valley HCP.

¹ Presentation outline published at <http://dmg.gov/documents/mojaveriver-overview.doc> downloaded on 28 January 2008.

Desert Tortoise (*Gopherus agassizii*)

The Desert Tortoise is widely distributed across the Mojave and Sonoran deserts of California, Nevada, Utah, Arizona, Sonora, and Sinaloa. Desert Tortoises found north and west of the Colorado River (i.e., those in the West Mojave Plan Area or WMPA) are listed as threatened by federal and state governments. The Mojave population exists at varying densities in six distinct population segments, or “evolutionarily significant units,” and the species’ 1994 Recovery Plan (USFWS 1994) lists each segment as a separate Recovery Unit. One major segment of the Mojave population of the Desert Tortoise occurs almost entirely within the WMPA and is called the West Mojave Recovery Unit.

Vegetation and topography in tortoise habitat within the WMPA are variable. The greatest population densities are found in Creosote Bush scrub with lower densities occurring in Joshua Tree woodland and Mojave-saltbush-allscale scrub. Major topographical features used by tortoises include flats, valleys, bajadas, and rolling hills generally from 600 to 1000 meters in elevation. Friable soil is important for digging burrows. Direct threats to Desert Tortoises include collisions with motorized vehicles, illegal collecting, and disease. Indirect threats likely affecting tortoise populations include: habitat loss from construction and agricultural development; habitat alterations from livestock grazing, recreational activities, atmospheric pollution, global warming, and invasions of exotic plants. In the WMPA, the greatest threats are probably (1) disease, (2) cumulative effects of habitat loss, degradation, and fragmentation from construction, (3) urbanization and development, and (4) a high level of human access to tortoise habitat. Increased predation by Common Ravens (*Corvus corax*) also appears to exert pressure on this population. Even if some individual threats appear to be minor, they may be cumulatively considerable.

Desert Tortoises have occurred in the Study Area, at least historically, but have not been found there in recent years. The species’ recovery plan recommends conservation and management of several tortoise-occupied areas covering approximately 1610 km² each, and none of the proposed areas extend into the Study Area.

Bald Eagle (*Haliaeetus leucocephalus*)

Listed as endangered by the federal government in 1978, the Bald Eagle was formally delisted by the U.S. Fish and Wildlife Service on 8 August 2007. across much of North America, although the breeding range is patchy in much of the contiguous United States and very localized in northern Mexico. In California, breeding areas are restricted to the northern, forested parts of the state with the exception of a reintroduced population on the Channel Islands and several recent unsuccessful nesting attempts in southern California, including at Lake Silverwood in San Bernardino County (1994–1996). Northern populations are partially migratory, and some of these birds winter at water bodies in southern California. At all times of year, Bald Eagles require access to water bodies that provide adequate supplies of fish.

The West Mojave Plan’s species account, by LaPré, characterizes the species’ status and distribution in the WMPA as follows:

Bald Eagles do not nest within the WMPA. The closest nesting location is Silverwood Lake, located at the border of the WMPA south of Hesperia. Wintering habitat in the WMPA consists primarily of lakes, ponds, and reservoirs where the eagles can forage for fish and waterfowl. Sightings have been reported from scattered locations throughout the planning area, including Piute ponds at Edwards AFB, Mojave Narrows Regional Park in Victorville, China Lake NAWS, Haiwee Reservoir, and others. Only one or two birds are usually reported. Most of these sites do not sustain Bald Eagles throughout the winter. Jess Ranch in Apple Valley attracts Bald Eagles for sustained periods, and the Bald Eagle has remained for several weeks at Horseshoe and Pelican Lakes in Mojave Narrows Regional Park. These sites are accessible to eagles from Big Bear Lake, where a regular wintering population is known. The WMPA contains essential night roost locations (e.g., Las Flores Ranch) for Bald Eagles that utilize Silverwood Lake, Lake Arrowhead, and Big Bear Lake in the San Bernardino Mountains. This wintering population of Bald Eagles also regularly forages near several stock ponds on private lands within the WMPA.

The Study Area does not include any water bodies known to support Bald Eagles, but the species could occasionally wander into this area from Mojave Narrows Regional Park, Apple Valley, or elsewhere.

Yellow-billed Cuckoo (*Coccyzus americanus*)

The Yellow-billed Cuckoo is widely distributed in North America, breeding primarily across the central and eastern United States and in northern Mexico. The California Yellow-billed Cuckoo (*C.a. occidentalis*) occupies a much more restricted range that is limited to scattered populations in California, Idaho, Utah, Arizona, New Mexico, extreme western Texas, and possibly Nevada and western Colorado. A statewide survey of Yellow-billed Cuckoos in California conducted during 1986 and 1987 found a maximum of 33 pairs and 31 unmated males at nine localities (Laymon and Halterman 1989). Most were found along the upper Sacramento River and along the South Fork of the Kern River, the only localities in California known to sustain breeding populations of Yellow-billed Cuckoos. The species has been observed during the breeding season at several locations along the Mojave River between Victorville and Barstow, but most of these sightings have involved unmated males (Gaines and Laymon 1984; Laymon and Halterman 1989). The species probably breeds at Mojave Narrows near Victorville, but nests or fledged young have not been located.

Yellow-billed Cuckoos have one of the most restrictive suite of macro-habitat requirements of any bird species. Not only are they restricted to a single habitat type, but the size and configuration of the habitat are also extremely important. During the breeding season in California, they are confined to cottonwood-willow riparian habitat. Gaines and Laymon (1984) concluded that willow-cottonwood habitat of any age with high humidity and a habitat breadth of 100 meters was necessary for Yellow-billed Cuckoo nesting. Laymon and Halterman (1989) concluded that habitat patches of at least 200 acres in extent and a width of at least 600 meters are optimal, and that habitat patches smaller than 38 acres or less than 100 meters wide are unsuitable.

This species has declined primarily due to habitat loss on the breeding grounds. It has been estimated that 95% or more of the original riparian habitat in the Central Valley of California has been lost over the past 150 years, and much of the remaining habitat is highly degraded and fragmented, and is not suitable because the patches are too small in

extent and too narrow in width. The extent of the historic breeding population of Yellow-billed Cuckoos in the WMPA is unknown. It is likely that habitat along the Mojave River and at Morongo Valley was more extensive in the distant past than it is today and that a breeding population occurred at least along the Mojave River. It is unlikely that other areas of habitat sizable enough to support a population of Yellow-billed Cuckoos existed, though a pair may have nested at larger oases from time to time.

Laymon's species account in the West Mojave Plan states the following with regard to potential conservation measures for the Yellow-billed Cuckoo in the WMPA:

Protection of existing riparian habitat at both Morongo Valley and along the Mojave River is important for the survival of the species in the WMPA. Protection could include: (1) developing a fire management plan with fire brakes [*sic*] around riparian sites, (2) removing exotic vegetation, (3) fencing to exclude livestock and feral domestic animal grazing, (4) excluding firewood cutting, (5) excluding off-road vehicle use, and (6) developing a recreation plan that examines the impacts of recreation on the riparian resource. These are the only sites with potential breeding habitat and the only high quality habitat for migrant cuckoos within the Planning Area.

Willow Flycatcher (*Empidonax traillii*)

Two subspecies of Willow Flycatcher regularly occur in California: the Southwestern Willow Flycatcher (*E. t. extimus*), which is federally listed as endangered, and the Little Willow Flycatcher (*E. t. brewsteri*), which has no federal status. The entire species (including both subspecies mentioned above) has been placed on California's endangered species list. Fragmentation, modification, and destruction of the dense, expansive riparian woodlands that Willow Flycatchers require for nesting, combined with brood parasitism by Brown-headed Cowbirds (*Molothrus ater*), have greatly reduced breeding numbers of Willow Flycatchers in California and the West. The drawing down of water tables that support expansive riparian habitat is also implicated in this species' widespread decline in the West. Willow Flycatchers are widespread during migration, and occur regularly throughout southern California, generally favoring riparian areas.

From 1990 to 1995, territorial Willow Flycatchers (presumably Southwestern Willow Flycatchers) were found sparingly along the Mojave River, at Mojave Narrows Regional Park and about one-quarter mile downstream of Interstate 15. Nesting has not been confirmed in this area, and the species' current status there is unknown. Unitt's species account in the West Mojave Plan concludes with the following observation and recommendation for the possible future restoration of the Mojave River as Willow Flycatcher habitat:

The Mojave Desert has never been reported as an important region for the Willow Flycatcher. Currently, the birds use the area only sporadically. Apparently, at present, the habitat is only marginally suitable. However, it is quite possible that the Mojave River once supported a significant population that was extirpated before it was reported by biologists. The Kern River offers an intriguing parallel. On both the Kern and Mojave rivers, *Empidonax traillii extimus* is known from a single historic specimen. The birds of neither area were thoroughly inventoried and reported on in the earlier literature. Yet now the Kern River is the site of one of the subspecies' key populations, presumably as a relict. The Mojave may once have had an equally important role, suggesting it as a site for an attempt at restoration.

Least Bell's Vireo (*Vireo bellii pusillus*)

This small, migratory songbird is listed as endangered by both federal and state resource agencies. This vireo once nested commonly throughout much of lowland California and northern Baja California, but its breeding range is now largely limited to a small number of major riparian systems in southern California and Baja California. This decline has been attributed to loss and degradation of riparian habitat, combined with brood parasitism by the Brown-Headed Cowbird, and is being reversed through preservation and restoration of habitat combined with aggressive cowbird control. Least Bell's Vireos typically breed along the margins of dense willow-riparian habitat that possesses high structural diversity.

Patten's species account in the West Mojave Plan indicates that only one or two pairs of Least Bell's Vireos are known to breed at Mojave Narrows Regional Park, and includes the following recommendations for possible conservation and management actions within the WMPA to benefit this species:

...conservation and sustainable management of the small breeding populations at Morongo Valley and along the Mojave River could be accomplished through (1) limiting the destruction of riparian habitat in these areas, including less invasive flood control management activities, (2) eradication of nonnative salt cedar, giant reed (*Arundo donax*), and Russian olive (*Elaeagnus angustifolius*) from sites occupied by the vireo, with willows and mulefat planted in their place, (3) extensive trapping and removal of Brown-headed Cowbirds from breeding areas, and (4) restoration of riparian habitats, because cowbird parasitism is reduced woodland habitats with lower edge to area ratios (Laymon 1987). An additional measure could be the limiting access of both cattle and humans (hikers and off-highway vehicle users) to prime nesting areas.

Mohave Ground Squirrel (*Spermophilus mohavensis*)

This ground squirrel is listed as threatened by the State of California, occupies portions of Inyo, Kern, Los Angeles, and San Bernardino counties in the western Mojave Desert. The species ranges from near Palmdale on the southwest to Lucerne Valley on the southeast, Olancho on the northwest, and the Avawatz Mountains on the northeast. Most of the Study Area lies within this species' range. The Mohave Ground Squirrel occupies all of the region's major desert scrub habitats, preferring flat to moderately hilly terrain; steep areas are generally avoided. This ground squirrel is most frequently in sandy, alluvial soils, but is also found in gravelly, and occasionally rocky soils.

Laab's species account in the West Mojave Plan describes the difficulty in accurately characterizing this species' known status in the WMPA:

Determining the status of the Mohave ground squirrel is difficult due to behavioral and demographic aspects of the species. The species is inactive throughout much of the year, and abundance as well as the period of surface activity varies from year to year. Live-trapping studies must be scheduled carefully and even then cannot necessarily establish the absence of the species from a site (Gustafson 1993). Further, Mohave ground squirrel populations are dependent on the amount of fall and winter precipitation (Leitner and Leitner 1998). If poor conditions persist for several seasons, local extirpation can occur. Re-colonization of these areas can take place after conditions favoring reproduction resume. Therefore, suitable

habitat can be unoccupied during some years but occupied during others (Gustafson 1993). The Mohave ground squirrel is not distributed continuously throughout its range (Gustafson 1993). This was true prior to widespread conversion of habitats within its range. The dynamic nature of its distribution, both spatially and year-to-year, makes accurate estimates of overall population size impractical.

The main threats to this species come from destruction, degradation, and fragmentation of habitat. In addition, agricultural development can bring the animals into contact with harmful toxins and may also increase populations of the California Ground Squirrel (*Spermophilus beecheyi*), a species that competes for resources with the Mohave Ground Squirrel.

Accounts of Species not Listed or Proposed for Listing

Chaparral Sand-Verbena (*Abronia villosa* var. *aurita*)

This annual herb is placed on CNPS 1B.1, referring to species that CNPS considers to be rare or endangered in California and elsewhere, as well as being seriously threatened in California (high degree/immediacy of threat). Chaparral Sand-Verbena flowers between January and September, and is found in desert dune, scrub, and chaparral communities at elevations ranging between 80 and 1600 meters. Most populations are in the western half of Riverside County, but the species is found at widely scattered locations elsewhere in southern California.

Chaparral Sand-Verbena has been recorded at two locations in the vicinity of Barstow, roughly 20 miles north of the Study Area. At one of those sites, associated plants included Fourwing Saltbush (*Atriplex canescens*), horsebrush (*Tetradymia* sp.), Russian-thistle (*Salsola tragus*), and Desert Marigold (*Baileya multiradiata*). This species has potential to occur in the Study Area.

Small-flowered Androstephium (*Androstephium breviflorum*)

This perennial herb is placed on CNPS List 2.3, referring to species that CNPS considers to be rare, threatened, or endangered in California, but that are more common elsewhere, and that are not very threatened in California (low degree/immediacy of threats or no current threats known). The California distribution is poorly known, consisting of scattered populations in San Bernardino, Riverside, and possibly Inyo counties. Small-flowered Androstephium flowers in March and April, and occurs in desert dune and Mojavean desert scrub communities at elevations ranging between 220 and 640 meters. Clark et al. (1984) reported a population of Small-flowered Androstephium along Highway 18, 0.75 miles west of its junction with Highway 395 (Doby Corners). The specimen is #652652 at Rancho Santa Ana Botanic Garden, is supported by a set of photographs as well as a small amount of preserved vegetative material. The validity of this record was questioned in the West Mojave Plan:

Small-flowered androstephium is reported to occur west of Victorville (Clark et al., 1984), but that location is far from other well documented sites and the documenting specimen

cannot now be found (Clark, pers. comm.). It is possible that this record actually applies to crowned muilla (*Muilla coronata*), a somewhat similar plant, which is known from almost exactly the site reported by Clark. The available published sources describing crowned muilla at the time that Clark et al. wrote . . . were inaccurate in a number of respects . . . and this could have caused a misidentification, though the major key characteristics were described accurately.

On 28 January 2008 Sula Vanderplank, collections manager at Rancho Santa Ana Botanic Gardens, confirmed that the photos and vegetative material supporting this record are regarded as inconclusive by Steve Boyd, the herbarium's curator. Thus, the status of this species in the Study Area is uncertain.

Booth's Evening-Primrose (*Camissonia boothii* ssp. *boothii*)

This annual herb is placed on CNPS List 2.3. In addition to populations in Arizona, Nevada, and Washington, in California it is known from scattered populations in western San Bernardino, southeastern Inyo, and Mono counties. Booth's Evening-Primrose flowers from April to September. It occurs between 800 and 2400 meters elevation in Joshua Tree woodland and pinyon and juniper woodland communities, on rocky or gravelly slopes and along sandy washes. The Consortium of California Herbaria lists an historic record from the Victorville area and three records from along the Mojave River in and near the Study Area dating back to 1981: 0.5 miles upriver from Oro Grande; Yucca Loma Road at the river in Apple Valley; and about a mile north of Mojave Forks Dam, near Hesperia. It is likely that this species still occurs the Study Area.

Pygmy Poppy (*Canbya candida*)

This tiny annual herb is a California endemic placed on CNPS 4.2., indicating that its populations warrant monitoring and appear to be fairly threatened in California. The range of the Pygmy Poppy includes Inyo, Kern, Ventura, San Bernardino, and Imperial counties. The species flowers from March to June and occurs between 600 and 1460 meters in elevation in Joshua Tree woodland, Mojavean desert scrub, and pinyon-juniper woodland communities. Soils are sandy, gravelly, or granitic. The Data Base includes two records of the Pygmy Poppy from the Study Area and vicinity – one from Victorville in 1903 and the other from the Hesperia area in 1958. The Consortium of California Herbaria list several additional records from north of the Study Area, around Hinkley, Kramer Junction, and Barstow. Populations of this inconspicuous plant potentially persist in the Study Area.

Desert Cymopterus (*Cymopterus deserticola*)

This herbaceous perennial plant is placed on CNPS List 1B.2, referring to species that CNPS considers to be rare or endangered in California and elsewhere, and that CNPS regards as being fairly threatened in California (moderate degree/immediacy of threat). It is known from a limited number of populations in western San Bernardino, southeastern Kern, and northeastern Los Angeles counties. Desert Cymopterus flowers between March and early May, and occurs in deep, loose, well drained, fine to coarse sandy soils of alluvial fans and basins, often in swales or on stabilized low sand dunes, and occasionally on sandy slopes.

The known elevation range is 630 to 1500 meters. It occurs in Creosote Bush scrub, Desert Saltbush scrub, and Joshua Tree woodland with Creosote Bush scrub or Desert Saltbush scrub understory (Holland 1986). Common perennial associates growing with Desert Cymopterus include Creosote Bush, Joshua Tree, saltbush (*Atriplex polycarpa*, *A. canescens*, *A. spinifera*, *A. confertifolia*), Burrobush (*Ambrosia dumosa*), Goldenhead (*Acamptopappus sphaerocephalus*), Winter Fat (*Krascheninnikovia lanata*), Peachthorn (*Lycium cooperi*), Cheesebush (*Hymenoclea salsola*), Desert Croton (*Croton californicus* var. *mohavensis*), and Indian Rice-grass (*Oryzopsis hymenoides*). The latter four species, in particular, are indicators of sandy habitats. Desert Cymopterus plants typically are widely scattered, usually growing in openings between shrubs.

Although this plant's distribution remains poorly known, it appears that the species favors lands on the east side of desert playas where blow sand accumulates. These populations are distributed in the Rogers Lake, Harper Lake, and Cuddeback Lake basins, and 97% of the known plants occur on Edwards Air Force Base. Desert Cymopterus has never been found in Victorville, but populations were historically known from near Highway 18 in Apple Valley. It was last seen there in 1941, and appears to be extirpated due to human activities. It is suspected that Desert Cymopterus may be more widespread and abundant than is currently known. This is because (1) large areas of potentially suitable habitat have not been surveyed, (2) the species is detectable only during relatively short periods each year, and (3) population sizes fluctuate greatly between wet and dry years. Desert Cymopterus has some potential to occur in the Study Area, particularly in the Northern Sphere Expansion area.

Barstow Woolly Sunflower (*Eriophyllum mohavense*)

This small annual herb is placed on CNPS List 1B.3. It is found in a very limited range in northwestern San Bernardino County and adjacent counties; most of the known populations are in the Kramer Junction area northwest of Barstow. Due to increasing disturbance throughout its range, the species may meet criteria for federal listing as threatened or endangered. In 1914, W. L. Jepson collected the southernmost specimen in a sandy wash at Stoddard Well, approximately six miles east of the Northern Sphere Expansion area. That population is likely extirpated, as the Stoddard Well area is now highly disturbed. Flowering takes place between late March or April and May, and the plants rapidly dry out and decompose, becoming nearly impossible to detect by the end of May or beginning of June (Bagley 1987). This plant may be confused with a closely related species, Bud Woolly Sunflower (*Eriophyllum pringlei*). The West Mojave Plan's lengthy species account for the Barstow Woolly Sunflower includes details of an attempt to translocate this species that met with limited success.

The Barstow Woolly Sunflower is usually found in Creosote Bush scrub, sometimes adjacent to or with an overstory of Joshua Trees, and in arid-phase saltbush scrub, with an elevation range of about 600 to 1100 meters (Rutherford and Bransfield, 1991). It is most often associated with sparse occurrences of Mojave Spineflower (*Chorizanthe spinosa*) and Yellow Peppergrass (*Lepidium flavum*), but has also been recorded less frequently with Fremont's Phacelia (*Phacelia fremontii*), Leafy Tickseed (*Coreopsis calliopsida*), Snake's Head

(*Malacothrix coulteri*), Red-stemmed Filaree (*Erodium cicutarium*) and Desert Dandelion (*Malacothrix glabrata*) (Henry 1983; Rutherford and Bransfield 1991; Tetra Tech 1995; André 1998). In general, this species requires open, flat, barren sites, and is most commonly found on the sandy margins of alkali depressions distributed among the more common Creosote Bush scrub plant community. Hydrology in these areas is usually characterized by poor drainage, especially in shallow depressions showing evidence of ponding, but the species seems to be capable of tolerating variable substrate surfaces. Bagley (1987) found a growing in a disturbed area that had previously been bladed, providing at least one example that the species may persist in highly disturbed soils.

The Barstow Woolly Sunflower is unrecorded in the Study Area but has potential to occur there, particularly in the Northern Sphere Expansion area.

Creamy Blazing Star (*Mentzelia tridentata*)

This annual herb is placed on CNPS List 1B.3. It flowers between March and May and occurs in Mojavean desert scrub with rocky, gravelly, or sandy soils at elevations ranging from 700 to 1160 meters. Plants reportedly associated with this species in the West Mojave area include Creosote Bush (*Larrea tridentata*), Burrobush (*Ambrosia dumosa*), Spiny Hopsage (*Grayia spinosa*), Bladder Sage (*Salazaria mexicana*), Catclaw Acacia (*Acacia greggii*), Burrobush (*Hymenoclea salsola*), and Mojave Yucca (*Yucca schidigera*). This species is known from several locations in northwestern San Bernardino County, all of them north and east of the Study Area; it has potential to occur there, particularly in the Northern Sphere Expansion area.

Mojave Monkeyflower (*Mimulus mohavensis*)

This annual herb, known only from western San Bernardino County, is placed on CNPS List 1B.2. This inconspicuous species flowers April–June and occurs between 600 to 1200 meters in Joshua Tree woodland and Creosote Bush scrub communities. The Data Base lists several records from May 1992 of populations of Mojave Monkeyflower within the Northern Sphere Expansion area. This wildflower occurs mainly on granitic soils on gravelly banks of desert washes, in sandy openings between Creosote Bushes, and along rocky slopes above washes (areas that are not subject to regular water flows). The species has been recorded in association with Creosote Bush, Desert Senna (*Senna armata*), Cheesebush, Rattany (*Krameria* sp.), Cholla (*Opuntia* sp.), Burrobush, Indigo bush (*Dalea* sp.), Cat-claw Acacia (*Acacia greggii*), Bigelow's Monkeyflower (*Mimulus bigelovii*), Desert Bells (*Phacelia campanularia*), and Desert Trumpet (*Eriogonum inflatum*).

Short-joint Beavertail (*Opuntia basilaris* var. *brachyclada*)

This small cactus is placed on CNPS List 1B.2. It is a California endemic with a range centered in southwestern San Bernardino and northeastern Los Angeles counties, plus a few populations to the west and east. Short-joint Beavertail flowers in May and June, and occurs in chaparral, Joshua Tree woodland, Mojave Desert scrub, and pinyon-juniper woodland communities at elevations of 425 to 2000 meters. It often occurs as a single plant

and seldom occurs in large numbers. Associated plants in the western Mojave Desert include Joshua Tree, Mojave Yucca (*Yucca brevifolia*), California juniper (*Juniperus californica*), Tucker's Oak (*Quercus john-tuckeri*), Pinyon Pine (*Pinus monophylla*), Desert Ceanothus (*Ceanothus greggii*), California buckwheat (*Eriogonum fasciculatum* var. *polifolium*), Purple Sage (*Salvia dorrii*), Rubber Rabbitbrush (*Chrysothamnus nauseosus*), and Linear-leaved Goldenbush (*Ericameria linearifolia*).

The Data Base reports that in 1989 one plant was present near Oro Grande Wash, along Highway 395 at Joshua Street, which was apparently translocated by Caltrans in order to establish a rest stop there. In 1991 another single plant was observed approximately 0.3 miles southeast of the Hesperia Airport in Hesperia. Just west of the Study Area, P. J. MacKay has frequently observed Short-joint Beavertail at many scattered locations in the Pinon Hills and south Phelan. This species could occur in the Study Area.

San Bernardino Aster (*Symphyotrichum defoliatum*)

San Bernardino Aster is placed on CNPS List 1B.2. This species, formerly given the scientific name of *Aster bernardinus*, is a California endemic known from populations in Kern, Los Angeles, Orange, Riverside, San Bernardino, San Diego, and possibly San Luis Obispo counties. San Bernardino Aster is a rhizomatous herb that flowers from July to November. It occurs in a wide variety of habitats below 2040 meters, including disturbed areas, and Reed (1988) listed it as an "obligate" wetland plant, meaning that it "occurs almost always (estimated probability 99%) under natural conditions in wetlands." F. W. Peirson collected this plant near a pond south of Victorville on 31 August 1924, and the species appears on Dr. Pamela J. MacKay's *Mojave River Plant List*¹. The San Bernardino Aster may still occur in Victorville and surrounding areas.

Victorville Shoulderband (*Helminthoglypta mohaveana*)

This native snail, which has no federal or state protective status, occurs only along the Mojave River in the vicinity of Victorville, where it occupies rocky outcrops. Considering its extremely limited range, the species would seem to be a possible candidate for listing by the state and/or federal governments at some time, although probably not in the foreseeable future.

Western Pond Turtle (*Actinemys marmorata pallida*)

This turtle is a California Species of Special Concern. The species ranges from Washington to northern Baja California. Two subspecies are currently recognized, but more taxonomic divisions may be warranted and the southern populations (now treated as *E. m. pallida*) may represent a distinct species (Janzen et al. 1997). Holland (1991) suggested, based on preliminary analysis, that turtles in the Mojave River showed a high level of morphological differentiation from other populations in southern California.

¹ <http://hegel.lewiscenter.org/users/mhuffine/subprojects/Instructor/Mojave%20Desert%20Collection/plantMojaveDesert.html>. Accessed on 28 January 2008.

Western Pond Turtles occupy a wide range of permanent and intermittent aquatic habitats from near sea level to approximately 2050 meters, and require some slack- or slow-water aquatic habitat as well as sandy banks or open fields in which to estivate, hibernate, and lay eggs. Nesting sites are usually located along stream or pond margins, but may be more than 100 meters from the water on hillsides.

Lovich's species account in the West Mojave Plan states the following regarding the status and distribution of the Western Pond Turtle in Victorville and elsewhere along the Mojave River:

Records are scattered along much of the Mojave River including Yermo and Victorville (Seeliger 1945). Brattstrom and Messer (1988) speculated that some turtles remain in Deep Creek and reported previous records from the Mojave Narrows near Victorville, and Afton Canyon. The author observed a western pond turtle in a beaver (*Castor canadensis*) pond along the Mojave River below the Victorville sewage treatment plant in 1998.

Populations along the Mojave River were considered to be "small" by Brattstrom and Messer (1988). Holland (1991) estimated that no more than 100 western pond turtles are found in the Mojave River and noted that prospects for re-establishment in the event of extirpation are essentially zero. Ongoing research indicates that at least 34 western pond turtles survive at Camp Cady and Afton Canyon, combined (Lovich, unpublished).

The Data Base lists a record of the Western Pond Turtle at a waste water treatment plant located somewhere within the USGS Victorville quadrangle in the year 2004. The animals were in habitat vegetated by "cottonwood, narrow-leaf willows, black willows, and freshwater reeds. Dominant exotics include cattails and arundo." Western Pond Turtles are threatened in various ways, including loss and degradation of habitat, competition from exotic turtle species, and predation by exotic Bullfrogs (*Rana catesbeiana*).

San Diego Horned Lizard (*Phrynosoma coronatum blainvillei*)

This lizard is a California Species of Special Concern. It occurs in southern California and northwestern Baja California. In California, this species is distributed predominately throughout cismontane regions of the Transverse Ranges in Kern, Los Angeles, Santa Barbara, San Bernardino, and Ventura counties, southward to the Peninsular Ranges in Orange, Riverside, and San Diego counties. Within the WMPA, the San Diego Horned Lizard (SDHL) occurs from the Antelope Valley eastward along the base of the San Gabriel and San Bernardino Mountains to Joshua Tree National Park. The species historically occurred along the Mojave River north to near Oro Grande, but is reportedly extirpated from this part of the range (Jennings and Hayes 1994). Note, however, that the Data Base lists two records from within approximately 10 miles of Victorville, to the south and southwest, suggesting that the species could possibly still be found within the limits of the Study Area.

San Diego Horned Lizards are active between late March and early October. They are found at elevations up to 2600 meters in a wide variety of habitats, including coastal sage scrub, chaparral, grassland, coniferous forest, oak woodland, riparian, and the margins of the higher elevation desert, where they are restricted to the juniper-desert chaparral. Low

bushes are required for cover, as well as open spaces for sunning, and relatively flat patches of fine, loose soil for burrowing. The primary food is harvester ants.

Northern Harrier (*Circus cyaneus*)

This raptor, a California Species of Special Concern (breeding), breeds widely in marshlands and open upland habitats across North America and Europe. Northern populations are migratory, and in the New World the species winters as far south as Central and northern South America. In the WMPA, regular breeding is limited to Piute Ponds (at Edwards Air Force Base) and Harper Dry Lake, and Northern Harriers may occasionally nest in agricultural or grassland areas elsewhere in the WMPA. This species winters fairly commonly in the Victorville area but is unlikely to nest in the Study Area.

Cooper's Hawk (*Accipiter cooperii*)

This medium-sized hawk, a California Special Animal (breeding), is a generally uncommon breeding species and fairly common wintering species in southern California. This hawk typically nests in well-developed oak woodlands and riparian forests, and occurs in a wider variety of habitats, including residential areas, during the fall and winter months. Cooper's Hawks winter regularly in the WMPA and breed locally at a handful of sites. Mojave Narrows Regional Park is the only known breeding site near the Study Area.

Ferruginous Hawk (*Buteo regalis*)

The Ferruginous Hawk, a California Special Animal (wintering), breeds in the west-central United States and adjacent southern Canada; it winters in grasslands and deserts southward through most of the western and central United States and northern Mexico. In the WMPA, this large hawk is an uncommon migrant and winter visitor that occurs primarily in agricultural fields, as well as other open habitats that offer adequate supplies of jackrabbits, ground squirrels, gophers, and other suitable prey. Ferruginous Hawks probably occur as rare migrants and winter visitors in undeveloped portions of the Study Area.

Golden Eagle (*Aquila chrysaetos*)

This large raptor is a California Special Animal (breeding and wintering). Golden Eagles are year-round residents across much of southern California, nesting in hilly and mountainous areas well removed from human presence and foraging over a open desert in a range of close to 100 square miles. Bureau of Land Management biologists described this eagle's status and distribution in the WMPA as follows:

Golden eagle is widespread in mountainous areas of the planning area. The Argus Mountains are an important location for golden eagles. Within the China Lake NAWS [Naval Air Weapons Station] Mojave B Range, the Eagle Crags provide outstanding habitat for golden eagle. The southern Sierra Nevada Mountains contain several golden eagle nest sites. Where development has encroached on historical nesting sites, golden eagles sometimes make new nests on electrical transmission lines, as in Adelanto.

...

A nearly complete database of nest sites was established in 1978-1979 by the BLM. BLM has identified Key Raptor Areas at Red Mountain-El Paso Mountains and the Ord-Newberry Mountains for golden eagle.

The West Mojave Plan states that protection of known nest sites is the most effective method of preserving Golden Eagles in the WMPA. It is possible that the Northern Sphere Expansion area includes rocky cliffs suitable for use as nesting substrate for the Golden Eagle, but otherwise the species' occurrence in the Study Area would be limited to wandering and foraging birds.

Prairie Falcon (*Falco mexicanus*)

This large falcon is a California Special Animal (breeding) that occupies open country throughout southern California and the West. It is increasingly rare throughout the region, particularly as a breeder. The BLM (1999) described the Prairie Falcon's status and distribution in the WMPA as follows:

The prairie falcon is found throughout the West Mojave, although it generally avoids urbanized areas. Nests are located on cliffs in rugged mountain ranges, often within a half-mile of a water source. Mountain ranges near agricultural areas also are favored because of increased prey density near nest sites. In winter, birds disperse widely, and are joined by migratory birds from northern latitudes.

...

A nearly complete database of nest sites was established in 1978-1979 by the BLM. Key Raptor Areas have been identified by the BLM, in the Red Mountain-El Paso Mountains and the Ord-Newberry Mountains.

It is possible that the Northern Sphere Expansion area includes rocky cliffs suitable for use as nesting substrate for the Prairie Falcon, but otherwise the species' occurrence in the Study Area would be limited to wandering and foraging birds.

Burrowing Owl (*Athene cunicularia*)

This small, ground-dwelling raptor is a California Species of Special Concern (breeding). Burrowing Owls live in grasslands, rangelands, along the edges of agricultural fields, and in sparsely vegetated scrub lands. They usually occupy ground squirrel burrows but have been known to use drain pipes and other types of holes or other structures. Burrowing Owls were widespread and fairly common residents in southern California during most of this century, prior to widespread losses of habitat and destruction of ground squirrel colonies associated with human developments. In many areas, particularly on the coastal slope, the species now occurs only rarely in fall and winter.

Campbell's species account in the West Mojave Plan reported 53 records of the Burrowing Owl in the WMPA, 23 of them from Edwards Air Force Base. He further indicated that, in

the WMPA, the Burrowing Owl “is currently uncommon, local or patchy in occurrence, and currently in slow decline, but is not yet threatened with extirpation. The total breeding population within the WMPA is likely in the range of a few hundred pairs.” A 31 December 2007 Data Base search for the Victorville USGS topographic quadrangle and surrounding quadrangles yielded 33 records of the Burrowing Owl, some of them from within Victorville City limits in recent years. The species presumably still occurs in open lands in the Study Area, particularly in areas that have healthy ground squirrel populations. The West Mojave Plan cites the following potential threats to Burrowing Owls in the WMPA: (1) direct mortality from interactions with humans, including vehicle collisions, (2) pesticides, (3) habitat degradation and destruction, and (4) predators.

Long-eared Owl (*Asio otus*)

This owl is a California Species of Special Concern (breeding) found across large portions of North America, including most of the West. Populations have declined greatly throughout much of the species’ range due to habitat loss and degradation. The Long-eared Owl’s status is generally poorly known in California, but it appears to occur most regularly in desert areas. Although not truly migratory, pairs may move considerable distances outside of the breeding season, presumably in response to prey availability. Moderate winter influxes in California occur most strongly, or at least most conspicuously, in desert areas (Garrett and Dunn 1981, Barrows 1989). In the California deserts, Long-eared Owls nest and/or roost in a variety of plant communities, including riparian woodlands, junipers, and even stands of exotic tamarisk (*Tamarix* spp.) or other artificial plantings. In the Colorado Desert, Barrows (1989) noted the species in naturally occurring California Fan Palms (*Washingtonia filifera*). Long-eared Owls may occur in areas near low-density rural development, but seldom nest within approximately 1 km of typical residential neighborhoods (Bloom 1994).

Campbell’s species account in the West Mojave Plan characterizes the Long-eared Owl’s current status in the WMPA as “very poorly known,” and includes the following brief summary:

There is no clear geographic pattern to this species’ distribution within and near the WMPA. Most records are from southern portions of the WMPA, but this could easily be a function of the distribution of suitable habitat and of observers. While there is clearly some winter influx (Garrett and Dunn 1981), it is not clear whether the majority of birds are winter visitors. Most of the 20 records compiled for this report (at least 14 locales) appear to be breeding or possible breeding records. There is no direct information on whether breeding birds are resident, although at least most of the well-known breeding areas have winter records as well. Bent (1938) reports visiting a, “small nesting colony [in] . . . an extensive tract of cottonwoods and willows along the Mojave River” which was “around Victorville.” No date was given, but he was told that at least four nesting pairs were present the year before (not mapped for the current work).

The Data Base does not list any recent records of the Long-eared Owl from in or around the City of Victorville, but the species is known to nest along the Mojave River (BLM 1999) and possibly in undeveloped or lightly developed areas within the City of Victorville, where stands of suitable trees occur. The West Mojave Plan identifies habitat degradation

and habitat disturbance as the most likely potential threats to Long-eared Owls in the WMPA.

Loggerhead Shrike (*Lanius ludovicianus*)

This small predatory bird is a California Species of Special Concern (breeding). Shrikes inhabit open country, where they feed primarily on large insects and occasionally small vertebrate prey. Southern California's resident populations are increased somewhat by winter visitors that breed elsewhere. Campbell's species account in the West Mojave Plan characterizes this species' status and distribution as follows:

This shrike is one of the most widely distributed vertebrates in the WMPA, although it is not truly common anywhere in the deserts. As the records compiled for this report suggest, the species is to be expected virtually anywhere in the WMPA except the centers of the largest and most barren dry lake beds. Distribution in the WMPA may be limited primarily by the presence of adequate nesting sites and foraging posts, and the degree and nature of local habitat degradation or augmentation by man. In some areas, adequately dense nesting substrate may be a limiting factor, as the species is well-known to use artificial plantings at ranchyards and roadsides.

...

This species has declined precipitously in portions of eastern North America, and Breeding Bird Survey data indicate a significant negative trend in much of the west, including Mojave Desert areas (Peterjohn and Sauer 1995, Sauer et al. 1995), but there is no specific information on total population size or trends within the WMPA.

The Loggerhead Shrike is known to occur in the Study Area, with resident breeders presumably augmented by winter visitors from elsewhere. Potential threats to this species identified in the West Mojave Plan include the use of biocides (herbicides and insecticides), competition from human-tolerant species like the Common Raven, collisions with vehicles, and possibly invasion of desert scrub by non-native annual grasses, which may decrease shrike foraging efficiency.

Brown-crested Flycatcher (*Myiarchus tyrannulus*)

The Brown-crested Flycatcher is a California Special Animal (breeding) that breeds in the southwestern United States southward to Central America. It is a very localized breeder in southeastern California, where it requires riparian woodland or forest dominated by large cottonwoods and willows, and these birds migrate southward to winter in Mexico or Central America. As reported in Myers's species account in the West Mojave Plan, up to three pairs of Brown-crested Flycatchers nest each year at Mojave Narrows Regional Park, the only pocket of potentially suitable habitat for this species in or around Victorville. Loss of well-developed riparian woodlands along the river resulting from drawing down of groundwater probably represents the greatest threat to this small breeding population of Brown-crested Flycatchers.

Bendire's Thrasher (*Toxostoma bendirei*)

This California Species of Special Concern (breeding) is resident in the southwestern United States and northwestern mainland Mexico. The northernmost birds, including those in the Mojave Desert, withdraw southward in winter. The breeding distribution of Bendire's Thrasher in California is restricted almost exclusively to the Mojave Desert. In the northern and western Mojave, the species occurs at widely scattered locations that support either Joshua Trees other species of yuccas, or cholla cactus (*Opuntia* spp.). Large tracts of the desert, especially in the western Mojave, support one or more of these plant species but lack thrasher populations.

England and Laudenslayer (1989b) compared habitat parameters at points where Bendire's Thrashers were found with those where they were absent, and identified several habitat relationships in the Mojave Desert:

- ▶ Points where Bendire's Thrashers were found had significantly denser total succulent and arborescent species, denser columnar cholla cactus, and denser Mojave Yucca and Spanish Bayonet than points that lacked the thrasher. There was no difference in the densities of Joshua Trees between points with and without the bird. The height of succulent and arborescent species also did not differ between points with and without the thrasher.
- ▶ Bendire's Thrashers were found at sites lacking either Mojave Yucca and Spanish Bayonet, Joshua Trees, or columnar cholla cactus. Probable breeding birds were never found at sites lacking all three, and either Joshua Trees or Mojave Yucca and Spanish Bayonet were always present.
- ▶ Sites with Bendire's Thrasher had significantly denser populations of perennial shrubs and higher shrub cover than sites lacking the thrasher. Vegetation height did not differ significantly with presence or absence of the thrasher.
- ▶ Soil surface texture at sites with Bendire's Thrashers had significantly less sand, rock, and desert pavement, and more firmly packed dirt than sites without the thrasher. Bendire's Thrashers occurred less frequently on soft, sandy soils and on hard, rocky soils.

England's species account in the West Mojave Plan characterizes this species' status and distribution as follows:

The primary distribution of Bendire's Thrasher breeding habitat in the WMPA extends as a discontinuous band in suitable habitat from Joshua Tree National Park (JTNP) to near Victorville (England and Laudenslayer 1989a). The most extensive and best documented population is in JTNP. Outside JTNP to the west, breeding records and habitat become more sparse and disjunct with observations over the last 25 years: (1) near Landers, Yucca Valley, Pioneertown, and Pipes Canyon, (2) between Apple Valley and Lucerne Valley along Desert View Road; and (3) on the flats at Sidewinder Mountain northeast of Apple Valley (England and Laudenslayer 1989a). Pierce (1921) collected eggs from a Bendire's Thrasher nest and observed a female with juveniles near Victorville in 1920, but no recent records exist for this

area (England and Laudenslayer 1989a). A bird carrying food was observed near Victorville at Stoddard Mountain on May 22, 1969, but birds were not found at this location in either 1986 or 1987 during a desertwide survey for Bendire's Thrasher (England and Laudenslayer 1989a).

The Data Base does not list any recent records of Bendire's Thrasher from in or around the Study Area, and if the species does occur there it is probably rare.

Le Conte's Thrasher (*Toxostoma lecontei*)

This thrasher, a California Special Animal (year-round), is resident in the southwestern United States and northwestern Mexico. Many of California's Le Conte's Thrashers occur in the WMPA, generally in open desert with scattered shrubs and sandy and/or alkaline soil, rarely on rocky soil, hillsides, in riparian vegetation or on agricultural lands. This species is not found in urban or dense residential areas, but may be found in proximity to scattered rural residences. Loss of suitable habitat is identified as the main threat to Le Conte's Thrasher. The Data Base lists several records from the Victorville USGS quadrangle and surrounding quadrangles, but most are from outside of Victorville proper. The species may occur in undeveloped or lightly developed parts of the Study Area, where suitable habitat is present.

Yellow Warbler (*Dendroica petechia*)

This widespread wood-warbler, a California Species of Special Concern (breeding), occurs in 43 recognizable subspecies partitioned into three groups (Browning 1994). Yellow Warblers breed in a variety of woodland habitats in the state, and is widespread in migration. Southern California breeding populations declined markedly due to habitat loss, habitat degradation, and parasitism by Brown-headed Cowbirds, but have rebounded in recent years in response to habitat preservation, restoration, and cowbird control measures.

According to the West Mojave Plan, Mojave Narrows Regional Park is one of only four places in the WMPA that currently hosts breeding Yellow Warblers (8 to 12 pairs annually). Threats to this species in the WMPA include cowbird parasitism and loss of well-developed riparian woodlands along the river resulting from drawing down of groundwater. The extensive network of trails at Mojave Narrows Regional Park increases the amount of "edge" in the riparian forest there, a condition known to promote cowbird proliferation, and horse stables also serve to attract large numbers of cowbirds to areas near the Mojave River. The species occurs as a regular spring and fall migrant within the Study Area proper, but it is unlikely to breed there.

Yellow-breasted Chat (*Icteria virens*)

This large, flashy warbler nests primarily in well-developed woodlands across large parts of North America, and winters in Mexico and Central America. California's breeding population has declined significantly, especially in the southern portion, leading to its consideration as a California Species of Special Concern (breeding).

According to the West Mojave Plan, Mojave Narrows Regional Park is one of only five places in the WMPA that currently hosts breeding Yellow-breasted Chats (6 to 10 pairs annually). The West Mojave Plan identifies cowbird parasitism as the main threat to this species in the WMPA, and notes that the extensive network of trails at Mojave Narrows Regional Park increases the amount of “edge” in the riparian forest there, a condition known to promote cowbird proliferation. Horse stables also serve to attract large numbers of cowbirds to areas near the Mojave River. The Study Area proper lacks habitat that appears to be suitable for nesting by the Yellow-breasted Chat.

Summer Tanager (*Piranga rubra*)

The Summer Tanager is a California Species of Special Concern (breeding) that breeds across large parts of the United States and northern Mexico. Populations scattered through the southern California deserts breed almost exclusively in well-developed cottonwood-willow riparian forests.

According to the West Mojave Plan, Mojave Narrows Regional Park is one of only four places in the WMPA that currently hosts breeding Summer Tanagers (10-15 pairs annually). Threats to this species come from loss of well-developed riparian woodlands along the river resulting from drawing down of groundwater, from invasion of native riparian woodlands by non-native plant species, and from fire, and possibly from cowbird parasitism (e.g., Shuford and Gardali 2008). The Study Area proper lacks habitat that appears to be suitable for nesting by the Summer Tanager.

Tricolored Blackbird (*Agelaius tricolor*)

The Tricolored Blackbird, a California Species of Special Concern (breeding), is a highly colonial species found almost exclusively in California, particularly in the Central Valley, with small numbers in Oregon, western Nevada, Washington, and northern Baja California. The species breeds in freshwater marshes, and occasionally in other types of dense, often thorny, vegetation, and requires expansive nearby grasslands, rangelands, or other open habitats for foraging. Tricolored Blackbirds make regular seasonal movements, but the occupancy of individual colony sites is often unpredictable. In the WMPA, Tricolored Blackbirds are most frequent in the western parts, and the West Mojave Plan reports that they have bred along the Mojave River near Interstate 15.

According to the West Mojave Plan, suspected threats to Tricolored Blackbird in the WMPA include loss and destruction of suitable nesting and foraging habitat, contamination by biocides and other toxins, and human disturbance of colonies. Tricolored Blackbirds could potentially nest in small “pocket” wetlands in the Study Area and/or forage in open fields, golf courses, and other open situations.

Pallid San Diego Pocket Mouse (*Chaetodipus fallax pallidus*)

This small mouse, a California Species of Special Concern, occupies desert areas from eastern Los Angeles County south and east through San Bernardino and Riverside counties

to eastern San Diego County southwestern Imperial County. The species occurs in a variety of habitats, including desert wash, desert scrub, desert succulent scrub, and pinyon-juniper woodland. Sandy soils are selected, usually in association with rocks or coarse gravel and herbaceous vegetation. The Data Base lists records from Oro Grande and Victorville, and the species presumably still occurs in suitable habitat throughout the Study Area.

Mojave River Vole (*Microtus californicus mohavensis*)

The Mojave River Vole, one of numerous subspecies of the California vole, *Microtus californicus*, is limited to moist habitats (e.g., meadows, freshwater marshes, irrigated pastures, possibly alfalfa fields) in the vicinity of the Mojave River between Victorville and Helendale. Suitable habitat is associated with ponds and irrigation canals along with the Mojave River proper. Laab's species account in the West Mojave Plan characterizes the species' known status in the WMPA, and potential threats there, as follows:

The current population status of the Mojave River vole is unknown. The amount of freshwater marsh and meadow habitat along the Mojave River has decreased as the result of agricultural and urban development. The rapid development of the Victorville/Apple Valley/Hesperia area has taken place in the historic core area of the subspecies. The Mojave Narrows Regional Park is the only protected land in this core area. To make a better determination of its current population status, updated information regarding the amount of potential and occupied habitat is needed.

The primary threats to the Mojave River vole are the destruction and fragmentation of habitat resulting from agriculture and urbanization. Urbanization adjacent to the Mojave River restricts the availability of upland habitat that may be critical during flood events. Agricultural development affects this subspecies by removing and modifying native habitats. Channelization of surface water and pumping of ground-water may continue to be a significant threat along the Mojave River. Introduction and spread of salt cedar (*Tamarix* sp.) displaces native plants and alters the composition and structure of native plant communities. Competition from introduced house mice (*Mus musculus*) has been identified as a threat to the closely related Amargosa vole (CDFG 1992). Concentrated off-highway-vehicle use and other surface-disturbing activities also threaten *M. c. mohavensis* by removing vegetation required for foraging and cover. The restricted range of this subspecies makes it susceptible to natural stochastic events such as flooding and drought, and the genetic and demographic consequences of small populations. Virtually all of the potential habitat along the Mojave River, with the exception of the Mojave Narrows Regional Park, is in private ownership.

Pallid Bat (*Antrozous pallida*)

This bat is a California Species of Special Concern. Pallid Bats occupy a variety of habitats in western North America, from southern British Columbia to northwestern Mexico, but the species has declined greatly in many parts of its range, including southern California. The species occurs throughout California in habitats that include low desert, oak woodland, and coastal redwood forests, at elevations up to 3000 meters in the Sierra Nevada. Pallid bats roost in rock crevices, old buildings, bridges, caves, mines, and hollow trees. They are unique among North American bats in foraging on the ground, where scorpions, grasshoppers, beetles and other insects make up the main prey base, and they also glean insects from shrubs and trees.

Brown-Berry's species account in the West Mojave Plan characterizes the species' known status in the WMPA, and potential threats there, as follows:

Pallid bats are distributed throughout the WMPA in areas of mountains and rocky outcrops. Colonies in mines and historic buildings have been in the Coxcomb Mountains just east of Joshua Tree National Park. Individuals have been mist-netted or their vocalizations recorded in other scattered locations (Brown pers. obs).

...

The population status of desert pallid bats is not well documented since they do not congregate in accessible roosts to the extent of the coastal populations. Except for a few colonies in mines, most bats appear to roost in rock crevices, making population estimates and trends difficult to assess.

According to Brown-Berry's account, no known Pallid Bat roost is currently threatened in the WMPA, but potential threats include loss or disturbance to roosts and destruction of foraging habitat. In the desert, many rock crevice roosts may be difficult to identify, and impacts may be unintentional such as the blasting of rocks for renewed mining, highway construction, and other developments. When the bats occupy mines and buildings, human entry can cause the bats to abandon the roost, even if non-volant young are present. Roosts in abandoned mines are also at risk due to closure for hazard abatement or renewed mining in historic districts. Closure can directly entomb bats if conducted during the day, but renewed activity is always a potential issue to bats roosting in mines. In many parts of their range, Pallid Bats roosting in buildings are excluded by renovations or by the desire of property owners to be rid of them. Because their roosting sites are often highly visible (e.g., open rafters) and the animals display considerable roost loyalty, they are often targeted by pest control operators and vandals. In the name of human safety, public health personnel encourage the removal of bats in buildings.

Townsend's Big-eared Bat (*Corynorhinus townsendii*)

This sedentary bat is a California Species of Special Concern that is widespread in western North America. In California it is found primarily on the west side of the Sierra Nevada Range. This bat roosts in caves and other similar situations, including lava tubes and mine tunnels; buildings and other human-made structures are also utilized. The Data Base lists a specimen from near the Study Area at Apple Valley, collected at Dead Man's Point on Laguna Seca Drive 0.25 mile north of State Route 18. Potentially suitable roosting habitat for Townsend's Big-eared Bat occurs in the Study Area, particularly in the Northern Sphere Expansion area. Bats occupying mines and buildings are threatened by human entry, which can cause the bats to abandon the roost, even if non-volant young are present. Roosts in abandoned mines are also at risk due to closure for hazard abatement or renewed mining in historic districts.

Spotted Bat (*Euderma maculatum*)

This bat, a California Species of Special Concern, is considered one of the rarest mammals in North America. The Spotted Bat has been found in the West from southern British

Columbia to the Mexican border, at widely scattered localities. Little is known of its habitat requirements, but records come from such varied habitats as arid deserts, grasslands, and mixed coniferous forests as high as 3200 meters. This bat roosts primarily in crevices in cliffs. In the Study Area, potentially suitable roosting habitat for the Spotted Bat occurs in the Northern Sphere Expansion area.

California Mastiff Bat (*Eumops perotis californicus*)

This, the largest bat in North America, is a California Species of Special Concern. The California Mastiff Bat ranges from north-central California south to northern Baja California, eastward across the southwestern United States and northwestern Mexico to west Texas and Coahuila. In California, most records are from rocky areas at low elevations, where roosting occurs primarily in crevices in cliffs and trees. In the Study Area, potentially suitable roosting habitat for the California Mastiff Bat occurs in the Northern Sphere Expansion area.

American Badger (*Taxidea taxus*)

This mustelid, a California Species of Special Concern, ranges across most of western North America, including California outside of the humid coastal forests of northwestern California. The American Badger's principal habitat requirements seem to be sufficient food, friable soils, and relatively open, uncultivated ground. Grasslands, savannas, and mountain meadows near timberline are preferred. Badgers prey primarily on burrowing rodents, although they will eat a variety of other animals, including mice, Woodrats, reptiles, birds and their eggs, bees, and other insects. Badger populations across the state have declined drastically in California within the last century and the species has been extirpated from many areas in southern California. Loss of natural open spaces to agriculture and construction represents the primary cause of the species' decline and extirpation in California, and deliberate killing probably has played a role, as well. Badgers are also susceptible to direct and secondary poisoning. Shooting and trapping is another source of mortality. The Data Base lists no records of the American Badger from the Study Area, but the biological technical report for the City of Barstow's General Plan (Circle Mountain Biological Consultants 1996) reported sightings from the Kramer Hills and Iron Mountain areas. American Badgers have potential to occur in the Study Area.

SUMMARY OF RESOURCE PROTECTION REGULATIONS

The following federal, state, and local regulations pertain to resources present, or potentially present, in the Study Area. Some of the language in this section was adapted from a report by AMEC Earth & Environmental, Inc. (2007) and from the Wikipedia entry for CEQA.

FEDERAL REGULATIONS

Endangered Species Act (ESA): 16 USC Sections 1531-1544

Section 9 of the ESA prohibits the “take” of listed wildlife taxa. “Take” is defined as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct” relative to listed taxa. The ESA also makes it illegal for any person to collect (“remove and reduce to possession”) or “maliciously damage and destroy” any endangered plant species. Since “take” cannot always be avoided, Section 10 of the ESA includes provisions for “take” that are incidental to, but not the purpose of, otherwise lawful activities occurring on state or private lands. Section 7 of the Act provides a similar function for incidental take considerations associated with federal agencies that undertake, fund or authorize actions potentially affecting listed species.

Section 7 of the Act also directs the USFWS to issue “biological opinions” (BO’s) to requesting federal agencies in consideration of actions which may affect listed species. These binding regulatory documents identify probable impacts to listed species and/or designated critical habitat, and offer expert opinions as to whether a proposed action would constitute jeopardy to the continued existence of listed species or result in “adverse modification” of critical habitat. This process is initiated with the submission of a “biological assessment” (BA) by the requesting federal agency, which ascertains whether the considered action “may affect” a listed taxon. Terms and conditions designed to minimize anticipated impacts are generally specified in the resulting BO issued by the USFWS, as is a specific level of “incidental take.” Endangered Species Act consultations and permitting actions in the Study Area are handled by the USFWS Ventura Field Office.

The West Mojave Plan¹ presents a multi-species conservation strategy applicable to public and private lands throughout the region, including the City of Victorville (if the City becomes a signatory to the Plan). The Plan amends the Bureau of Land Management’s California Desert Conservation Area (CDCA) Plan for federal lands. Local jurisdictions and state agencies that become signatories to the West Mojave Plan would be issued “incidental take” permits for those listed, threatened, or otherwise sensitive plant and wildlife species that occur on federal lands and that are covered under the Plan. In exchange, such jurisdictions would require the payment of a development fee (currently being recalculated) to cover the West Mojave Plan’s costs for land acquisition, land management, and other operations. Appendix B to the West Mojave Plan identifies the following specific conservation responsibilities for the City of Victorville. These actions would be required if the City agrees to become a signatory to the Plan:

Burrowing Owl: (RAP-6) Abbreviated surveys at sites where Desert Tortoise clearance surveys are required.
 (RAP-10) Eviction or relocation if Burrowing Owls are found.
 (RAP-9) Provide educational brochures to landowners.

¹ Information on the West Mojave Plan, including links to the FEIR/FEIS, Record of Decision, and other documents, is published online by the BLM at <http://www.blm.gov/ca/st/en/fo/cdd/wemo.html>.

(M-15) Report incidental take and relocations annually.

Desert Tortoise: Follow tortoise conservation strategy as outlined in EIS Section 2.2.4.2

Ferruginous Hawk: (Rap-1,14) Require raptor-safe electrical distribution lines.
(M-23,AM-22,AM-105) Retrofit problem poles based on monitoring results.

Mohave Ground Squirrel: Follow conservation strategy as outlined in EIS Section 2.2.4.3

Mojave River Species¹: (AM-14, MR-1) Cooperate with water management agencies to maintain ground water levels in the Mojave River.

Prairie Falcon: (RAP-2) Require development projects to stay 1/4 mile away from occupied nests, unless the line-of-sight from the edge of development is obscured. Prohibit construction or disturbance near nest sites during the nesting season.
(RAP-3) Impose blasting restrictions on new mines.

In addition, the State of California and County of San Bernardino are preparing a separate Habitat Conservation Plan (HCP) to address future ESA Section 10 incidental take permitting issues on state and private lands. Table A in this report (see pages 10-13) indicates the species that potentially occur in the City of Victorville that are expected to be included in the HCP as of the 20 March 2008 meeting of the West Mojave HCP Working Group².

Becoming a signatory to the West Mojave Plan, once the accompanying HCP is completed and adopted, would streamline the process of complying with ESA within the City by providing a simplified means of mitigating incidental take of listed plant and wildlife species within City limits. If the City chooses not to sign on to the West Mojave Plan, projects within City limits would continue to address ESA issues on a case-by-case basis.

Clean Water Act (CWA): 33 USC Sections 1251-1376

The CWA, administered by the Environmental Protection Agency (EPA) and other federal agencies, authorizes water quality programs, requires federal effluent limitations/state water quality standards, and requires permits for pollutant discharge into "Waters of the United States."

¹ Southwestern Pond Turtle, Brown-crested Flycatcher, Least Bell's Vireo, Southwestern Willow Flycatcher, Summer Tanager, Yellow Warbler, Yellow-breasted Chat, Mojave River Vole.

² E-mail dated 11 April 2008 from Carrie Hyke, County of San Bernardino Land Use Services Dept., to Robert A. Hamilton.

Section 401 of the CWA is administered by the State Water Resources Control Board (SWRCB) through its Regional Water Quality Control Boards (RWQCB's), which review projects and issue permits for those actions which may result in wastewater discharge, or that may otherwise affect water quality in the State of California. The RWQCB certifies that established state water quality standards would not be violated by the discharge of pollutants into Waters of the U.S. Some regulated actions may qualify for a waiver of certification if certain precautions are taken during project implementation. The Study Area lies within the RWQCB's Lahontan Region and is served by its Victorville office.

Section 402 of the CWA establishes a permitting system for the discharge of any pollutant (except dredge or fill material) into Waters of the U.S. This regulatory program is administered by the SWRCB through its RWQCB's. A National Pollutant Discharge Elimination System (NPDES) permit is required for all point discharges of pollutants to surface waters. A point source is a discernible, confined, and discrete conveyance, such as by pipe, ditch, or channel. The regulatory process involves preparing a Notice of Intent and Stormwater Pollution Prevention Plan (SWPPP) and submitting them for agency approval.

Section 404 of the CWA establishes a permit program administered by the U.S. Army Corps of Engineers (Corps) that regulates the discharge of dredged or fill material into Waters of the U.S. Corps jurisdiction is founded upon a nexus between the water body in question and interstate commerce. This connection may be direct, through a tributary system linking a stream channel with traditional navigable waters used in interstate or foreign commerce, or may be indirect, through a nexus identified in Corps regulations. Corps jurisdictional areas include 1) navigable waters, 2) tributaries to navigable waters that possess an "ordinary high water mark," and 3) isolated waters that are important to interstate or foreign commerce. In order for non-tributary (i.e., isolated) waters to be considered jurisdictional, they must possess intrinsic attributes important to interstate or foreign commerce. Important attributes include habitat for endangered species or migratory birds, or other attributes identified in Corps regulations. The Corps may, at its discretion, assert jurisdiction over minor seasonal drainage, policy may undergo change in response to the Supreme Court's 19 June 2006 "Rapanos decision" in which some justices questioned the validity of the nexus between non-navigable waters and interstate commerce.

The Corps has created a series of nationwide permits (NWP's) that authorize certain activities within Waters of the U.S., provided that the proposed activity does not exceed certain impact thresholds. Per this nationwide program, steps must also be taken to avoid impacts to wetlands where practicable, minimize potential impacts to wetlands, and provide compensation for any remaining, unavoidable impacts. For projects that exceed identified thresholds for nationwide permits, individual permits are considered for issuance by the Corps. The Study Area is served by the Corps' Los Angeles District Office.

Migratory Bird Treaty Act (MBTA) 16 USC Sections 703-711; 50 CFR Subchapter B

The original 1918 statute implemented the 1916 Convention between the U.S. and Great Britain (for Canada) for the protection of migratory birds. Later amendments implemented

treaties between the U.S. and Mexico, the U.S. and Japan, and the U.S. and the Soviet Union (now Russia). Provisions in the statute and amendments relevant to the Victorville General Plan include:

- ▶ Establishment of a Federal prohibition, unless permitted by regulations, to “pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird, included in the terms of this Convention . . . for the protection of migratory birds . . . or any part, nest, or egg of any such bird.” (16 USC 703)
- ▶ The 1960 statute (Public Law 86-732) amended the MBTA by altering earlier penalty provisions. The new provisions stipulated that violations of this Act would constitute a misdemeanor and conviction would result in a fine of not more than \$500 or imprisonment of not more than six months. Activities aimed at selling migratory birds in violation of this law would be subject to fine of not more than \$2000 and imprisonment could not exceed two years. Guilty offenses would constitute a felony. Equipment used for sale purchases was authorized to be seized and held, by the Secretary of the Interior, pending prosecution, and, upon conviction, be treated as a penalty.
- ▶ Public Law 99-645, the 1986 Emergency Wetlands Resources Act, amended the Act to require that felony violations under the MBTA must be “knowingly” committed.
- ▶ Public Law 105-312 amended the law to allow the fine for misdemeanor convictions under the Migratory Bird Treaty Act to be up to \$15,000 rather than \$5000.

The practical effect of the MBTA is to make the disturbance of nearly all actively nesting native bird species a federal offense. Compliance with the MBTA is normally achieved either through (a) prohibiting actions during the nesting season (roughly 1 February to 31 August) that could disturb native birds attempting to nest, or (b) requiring preconstruction surveys by a qualified biological monitor to identify any nests that could be disturbed, followed by periodic (e.g., weekly) construction monitoring to check for such disturbance. If apparent disturbance is noted, the monitor typically has the authority to cease or modify the actions so as to permit successful nesting.

National Environmental Policy Act (NEPA): 42 USC Section 4321

Title I of NEPA requires that all federal agencies prepare detailed environmental impact statements for “every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment.” The statute stipulated the factors to be considered in environmental impact statements, and required that federal agencies employ an interdisciplinary approach in related decision-making and develop means to ensure that unquantified environmental values are given appropriate consideration, along with economic and technical considerations. NEPA review provides for interdisciplinary agency review of proposals, allows for public

involvement, and determines the need for preparation of an Environmental Impact Statement (EIS). The process also facilitates the identification of mitigation measures that can minimize impacts to the human environment. NEPA reviews are based upon the Council on Environmental Quality (CEQ) regulations set forth at 40 C.F.R. Sections 1500–1508.

STATE REGULATIONS

California Environmental Quality Act (CEQA): Title 14 California Code of Regulations

CEQA was established by the state legislature to inform both state and local governmental decision-makers and the public about significant environmental effects of proposed activities, to identify ways to avoid or reduce significant adverse effects on the environment, and to disclose the reasons why a project is approved if significant environmental impacts would result. For California's public agencies, CEQA enables the identification of significant environmental effects, the design of measures to avoid significant environmental effects, where feasible, or the design of measures that fully mitigate significant environmental effects.

CEQA generally applies to discretionary land use projects that require approval by a local government body. This includes building projects as well as planning documents such as general plans and zoning ordinances. CEQA typically does not apply when only ministerial approval is necessary, such as a building permit application, but there are exceptions to this rule. The CEQA lead agency begins the review process by preparing an initial study that discloses whether a project has the potential to cause significant environmental impacts in one or more land use categories (e.g., traffic, biological resources, cultural resources). If so, the agency must prepare an environmental impact report. If the lead agency determines that no significant impacts could result from project implementation, the agency prepares a Negative Declaration. If the project could entail significant environmental impacts, but the lead agency determines that all potentially significant impacts could be mitigated to below a level of significance, then the agency prepares a Mitigated Negative Declaration.

The environmental impact report (EIR) required under CEQA and the environmental impact statement (EIS) under NEPA are similar documents, yet have some crucial differences. For example, CEQA requires the best alternative to be followed unless the lead agency identifies specific policy reasons justifying a less environmentally protective alternative, whereas NEPA simply requires the impacts of each alternative be listed. Under CEQA the lead agency is required to analyze the environmental impact of the project, but also must look to the impacts of reasonable alternatives, including a "no project alternative." The lead agency must identify the environmentally superior alternative, and when this is the "no project alternative" the agency must also identify the environmentally superior alternative that would meet the main goals of the project. If the lead agency selects a project with greater environmental impact, it must adopt a Statement of Overriding Considerations that identify specific economic, legal, social, technological, or other considerations that outweigh the project's significant, unmitigated impacts.

California Fish and Game Code: Title 14 California Code of Regulations

Section 1602 of the California Fish and Game Code requires any person, state or local governmental agency, or public utility to notify CDFG before beginning any activity that will do one or more of the following: 1) substantially obstruct or divert the natural flow of a river, stream, or lake; 2) substantially change or use any material from the bed, channel, or bank of a river, stream, or lake; or 3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into a river, stream, or lake. Section 1602 applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes in the state. Section 13050 of California's Porter-Cologne Act defines "waters of the state" as "any surface water or groundwater, including saline waters, within the boundaries of the state."

Section 1603 of the Code states that, upon notification, if CDFG determines that the proposed activity may have an effect listed above, CDFG shall provide a draft **Streambed Alteration Agreement** to the entity within 60 days. The draft agreement shall describe the fish and wildlife resources to be affected and specify measures to protect those resources. Within 30 days of the date of receipt of the draft agreement, the applicant shall notify the department whether the measures in the draft agreement are acceptable. Upon written request, CDFG shall meet with the applicant within 14 days. If the applicant fails to respond, in writing, within 90 days of receiving the draft agreement, CDFG may withdraw that agreement and require the entity to resubmit a notification before commencing the activity.

Sections 1900–1913 of the Code constitute the **Native Plant Protection Act (NPPA)**. The NPPA directed CDFG to carry out the Legislature's intent to "preserve, protect and enhance rare and endangered plants in this State." The NPPA gave the California Fish and Game Commission the power to designate native plants as "endangered" or "rare" and protected endangered and rare plants from take. The NPPA provides limitations on take and transport of identified plants as follows: "no person will import into this state, or take, possess, or sell within this state" any rare or endangered native plants, except in accordance with the provisions outlined in the Act. Furthermore, if a landowner is notified by CDFG pursuant to Section 1903.5 that a rare or endangered plant is growing on their property, the landowner shall notify the CDFG at least 10 days prior to impacting land uses to allow CDFG to salvage the plants.

Sections 1925–1926 of the Code state that CDFG, in cooperation with the Department of Food and Agriculture, shall enforce the provisions of the **California Desert Native Plants Act** (Sections 80001–80006 of the California Food and Agricultural Code). Thus, for example, official tags and seals issued by the San Bernardino County Agricultural Commissioner are required to transport cacti and Joshua Trees (*Yucca breviflora*) on public roadways.

The **California Endangered Species Act (CESA)** (Fish and Game Code Sections 2050–2116) later expanded upon the original NPPA and enhanced legal protection for plants, but the NPPA remains part of the Fish and Game Code. To align with federal regulations, CESA

created the categories of “threatened” and “endangered” species. It converted all “rare” wildlife species into the Act as threatened species, but did not do so for rare plants. Thus, there are three listing categories for plants in California: rare, threatened, and endangered.

A CESA Section 2081 (a) permit is required for take of candidate or listed threatened and endangered plants for scientific, educational, or management purposes, and a CESA Section 2081 (b) permit is needed for incidental take of listed threatened and endangered plants from all activities, except those specifically authorized by the NPPA. Since rare plants are not included in CESA, mitigation measures for impacts to rare plants are specified in a formal agreement between the Department and the project proponent.

The Wildlife and Habitat Data Analysis Branch of CDFG maintains a “Special Plants” list consisting of approximately 2000 native plant taxa that are tracked by the Department's Natural Diversity Database (NDDDB). These plant taxa are either officially State or federally listed, proposed, or candidate species, or other species, subspecies, or varieties that are of concern due to reasons such as rarity, threats, or the species' close association with declining habitats, or for which more information is needed. Status and threat rankings are assigned to the plant taxa on the Special Plants list, which is available on the Department's web page (<http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/SPPlants.pdf>).

The California Native Plant Society (CNPS) publishes and maintains an Inventory of Rare and Endangered Vascular Plants of California in both hard copy and electronic versions (<http://cnps.web.aplus.net/cgi-bin/inv/inventory.cgi>). The Inventory assigns plants to one of several categories expressing the species' perceived rarity and threat levels. A plant need not be in the Inventory to be considered a rare, threatened, or endangered species under CEQA. In addition, CDFG recommends, and local governments may require, protection of plants that are regionally significant, such as locally rare species, disjunct populations of more common plants, or plants on the less sensitive CNPS Lists.

LOCAL REGULATIONS

City of Victorville Joshua Tree Ordinance

Title 13, Chapter 13.33, of the City's Municipal Code reads:

13.33.010 Purpose and intent.

It is determined by the city council that proper and necessary steps be taken in order to protect and preserve, to the greatest extent possible, Joshua trees in all areas of the city so as to preserve the unique natural desert environment throughout the city and for the health, safety and welfare of the community. (Ord. 1224 § 1 (part), 1988)

13.33.020 Scope and applicability.

(a) The provisions of this chapter shall apply to all property within the corporate limits of the city.

(b) The provisions of this chapter shall not apply to:

(1) Any existing lot in a subdivision already cleared and graded with improvements installed as required by the conditions of the original subdivision;

(2) Any occupied residential properties. (Ord. 1224 § 1 (part), 1988)

13.33.030 Definitions.

The term "Joshua tree" means a living tree of the botanical name of *Yucca Brevifolias* [stet; the correct scientific name is *Yucca brevifolia*]. (Ord. 1224 § 1 (part), 1988)

13.33.040 Prohibition of removal and enforcement.

It is unlawful for any person to cut, damage, destroy, dig up, or harvest any Joshua tree without the prior written consent of the director of parks and recreation or his designee. A violation of this section is a misdemeanor punishable by up to six months in jail and/or a five-hundred-dollar fine. (Ord. 1224 § 1 (part), 1988)

Title 15, Chapter 15.06.080, Section 2, Subsection A, Number IV reads:

All Joshua Trees, as per Chapter 13.33 of the Victorville Municipal Code, shall be indicated by showing the exact center of its trunk as established by a licensed surveyor. Its tag number, trunk diameter and height must be indicated. The health and proposed disposition of the tree must be indicated. The application shall include a detailed plan for protecting, preserving, relocating the tree, which may be affected by the proposed grading. The details of which shall conform to Chapter 13.33 of the Victorville Municipal Code as amended.

RECOMMENDATIONS FOR BIOLOGICAL RESOURCE PROTECTION

The conservation strategies for the City of Victorville contained in the West Mojave Plan (see pages 37–38 of this report) were developed through a lengthy and comprehensive review of biological issues of concern across the wider region. The resource protection recommendations described below are designed to be compatible with the West Mojave Plan's conservation strategies.

RECOMMENDATION 1 : REQUIREMENTS FOR CEQA DOCUMENTS

Documents for which the City serves as CEQA lead agency should address the full range of sensitive plant and wildlife species that have potential for occurrence on a given site, using this biological technical report as a guide. The biological surveys conducted in support of such CEQA documents should be conducted at the times of year necessary to detect all sensitive species for which potentially suitable habitat exists on a given site.

RECOMMENDATION 2 : PROTECTION/ENHANCEMENT OF MOJAVE RIVER RESOURCES

A large number of threatened, endangered, and otherwise biologically sensitive species occur in and around the Mojave River, making the river the City's most biologically important asset. The City should cooperate with water management agencies to maintain ground water levels in the Mojave River. In pursuing actions that may affect the river, such as the City's conceptual "Riverwalk" project, the City should work closely with the U.S. Fish and Wildlife Service and the California Department of Fish and Game to ensure that potential adverse effects on sensitive biological resources are avoided and minimized to the extent feasible, and mitigated appropriately in cases where significant impacts cannot be avoided.

In addition, land use decisions along the river should recognize that various large and medium-sized mammals are expected use the river and associated flood plain as a travel route. In order to maintain this presumed function, the City should have as a resource protection goal the preservation, restoration, and possible expansion of the river's undeveloped flood plain. Any proposed actions that would impact riparian vegetation or reduce the width of the undeveloped floodplain should carefully evaluate the potential effects of such actions on the movement of wildlife through the Study Area.

RECOMMENDATION 3: MOHAVE GROUND SQUIRREL CONSERVATION

The Mohave Ground Squirrel is a state-listed species known to occur in natural open spaces within the City of Victorville. The City should continue working with CDFG to ensure that individual projects comply with state laws protecting this species.

RECOMMENDATION 4: DESERT TORTOISE CONSERVATION

The Desert Tortoise is a federally and state-listed species with potential to occur in natural open spaces within the City of Victorville. The City should continue working with the USFWS and CDFG to ensure that individual projects comply with federal and state laws protecting this species.

RECOMMENDATION 5: BURROWING OWL CONSERVATION

The Burrowing Owl is a California Species of Special Concern that is known to occur in agricultural fields and natural open spaces within the City of Victorville. This species has declined markedly, and continues to decline, across large parts of its range. Focused surveys for the Burrowing Owl should be required for all projects that propose the development of agricultural fields or natural open spaces that are contiguous with larger open space areas capable of supporting Burrowing Owls. Burrowing Owl surveys, and any mitigation measures to be undertaken in the case of positive survey results, should comply with current CDFG recommendations.

PERSONS CONTACTED

Larry LaPré, biologist, BLM Desert District Office. Telephone conversation on 17 May 2005.

Sula Vanderplank, collections manager, Rancho Santa Ana Botanic Gardens. Telephone conversations on 28 January 2008.

Carrie Hyke, County of San Bernardino Land Use Services Department. Telephone conversation and e-mail exchange in April 2008.

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CULTURAL RESOURCES TECHNICAL REPORT

CITY OF VICTORVILLE GENERAL PLAN

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August 5, 2005

CRM TECH Contract #1550
Approximately 75 Square Miles
T4N R5W, T5N R4-6W, T6N R4-5W, San Bernardino Base Meridian
USGS Adelanto, Baldy Mesa, Helendale, Hesperia, Victorville, and Victorville NW, Calif., 7.5' quadrangles

EXECUTIVE SUMMARY

Between March and August, 2005, CRM TECH performed a cultural resources overview study on an approximately 75-square-mile area in and around the City of Victorville, San Bernardino County, California. The subject of the study is the planning area for the City's general plan, including the City proper as well as its sphere of influence. It measures approximately 14.5 miles along the north-south axis and 12.5 miles along the east-west axis, extending across the Victor Valley area on both sides of the Mojave River and between the City of Adelanto on the west, the town of Apple Valley on the east, and the City of Hesperia on the south. It consists of various sections in T4N R5W, T5N R4-6W, and T6N R4-5W, San Bernardino Base Meridian, as depicted in the USGS Adelanto, Baldy Mesa, Helendale, Hesperia, Victorville, and Victorville NW, Calif., 7.5' quadrangles.

As part of the environmental overview for the general plan, the purpose of this study is to provide the City of Victorville with the necessary information and analysis to facilitate cultural resources considerations in the planning process and in formulating City policies. In order to inventory previously identified cultural resources and prepare a sensitivity assessment of the planning area, CRM TECH implemented a historical/archaeological resources records search, pursued historical and ethnohistorical background research, carried out a reconnaissance-level field survey, consulted with City staff and the Mohahve Historical Society, and contacted Native American representatives from four different tribes in the vicinity.

The results of the records search indicate that approximately one-third of the total acreage within the planning area has been surveyed for cultural resources, leaving the bulk of the planning area yet to be surveyed systematically and intensively. To date, a total of 178 historical/archaeological sites have been formally recorded within the planning area, three of which are listed as California Historical Landmarks. Ten sites in the planning area have been previously evaluated and determined eligible for listing in the National Register of Historic Places. Seventeen sites are recognized by the Victorville Chamber of Commerce as historic sites of local interest, all of which are located in the downtown area. A total of 50 sites are prehistoric—i.e., Native American—in nature, which occur predominantly near the banks of the Mojave River and near other natural water sources. The majority of the known sites are from the historic period, reflective of the efforts of early settlers to establish roads and homesteads in the valley and along the Mojave River. The historic-period buildings recorded in the planning area were notably concentrated in and near the city's historic downtown core, as would be expected.

The results of historical research and field reconnaissance provided further support for the distribution pattern of the various types of cultural resources observed above

as well as insight into the likelihood of yet-to-be-identified cultural resources to be encountered in each particular geographic setting. Based on the combined findings from all research procedures undertaken, the present study concludes that areas along the Mohave River and its tributaries, namely the Oro Grande Wash and the Bell Mountain Wash, and around the drainages and springs near Turner Springs appear to be highly sensitive for prehistoric and historic-period archaeological resources. Areas approximately 1-2 miles from these natural water sources are moderately sensitive for such resources. The valley floor, making up the balance of the planning area, while low in sensitivity for prehistoric archaeological remains, exhibits a moderate sensitivity for historic-period sites. The downtown area also demonstrates a moderate sensitivity for archaeological resources from the historic period, mostly due to the possibility of unknown subsurface artifact deposits that may be present.

For historic-period buildings and other features of built environment, the downtown area bounded by A, E, 1st, and 11th Streets and the corridors extending southwest along 6th Street, 7th Street, Yucca Avenue, and Forrest Avenue showcase the densest concentration of early 20th century residences and historic-period commercial buildings. National Trails Highway between Air Expressway and the Interstate 15 freeway hosts a number of historic-period commercial and industrial buildings. The neighborhoods to the southwest of the downtown area feature a relatively high percentage of mixed-vintage residences from the early and mid-20th century, including some buildings that are now approaching the age threshold to be considered potentially historic. In addition, many of the buildings on the former George Air Force Base appear to be over, or approaching the age threshold, and the base as a whole should be considered historically sensitive. Sporadic historic-period buildings can be found throughout much of the planning area, with the exception of where recent subdivisions have been developed.

To help ensure the proper management of Victorville's historic heritage, CRM TECH presents the following recommendations to the City:

- Establish a transmittal system with the Archaeological Information Center at the San Bernardino County Museum, Redlands, as a routine procedure in its planning process;
- Adopt a City policy to make or require every reasonable effort to identify and document historical/archaeological resources that may be affected by proposed development projects and other landscape-altering activities;
- Pursue further, government-to-government consultation with Native American tribes in the region to comply with State Bill 18 mandate.

In addition to these cultural resource management procedures, the City may find it beneficial to take other steps towards formulating a comprehensive historic

preservation program, such as initiating a citywide historical resources survey, establishing an official register of local historical landmarks, enacting a historic preservation ordinance, and participating in the State of California's Certified Local Government program.

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INTRODUCTION

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As part of the environmental overview for the general plan, the purpose of this study is to provide the City of Victorville with the necessary information and analysis to facilitate cultural resources considerations in the planning process and in formulating City policies. In order to inventory previously identified cultural resources and prepare a sensitivity assessment of the planning area, CRM TECH implemented a historical/archaeological resources records search, pursued historical and ethnohistorical background research, carried out a reconnaissance-level field survey, consulted with City staff and the Mohave Historical Society, and contacted Native American representatives from four different tribes in the vicinity. The following report is a complete account of the methods and results of the research, and the final conclusion of this study.

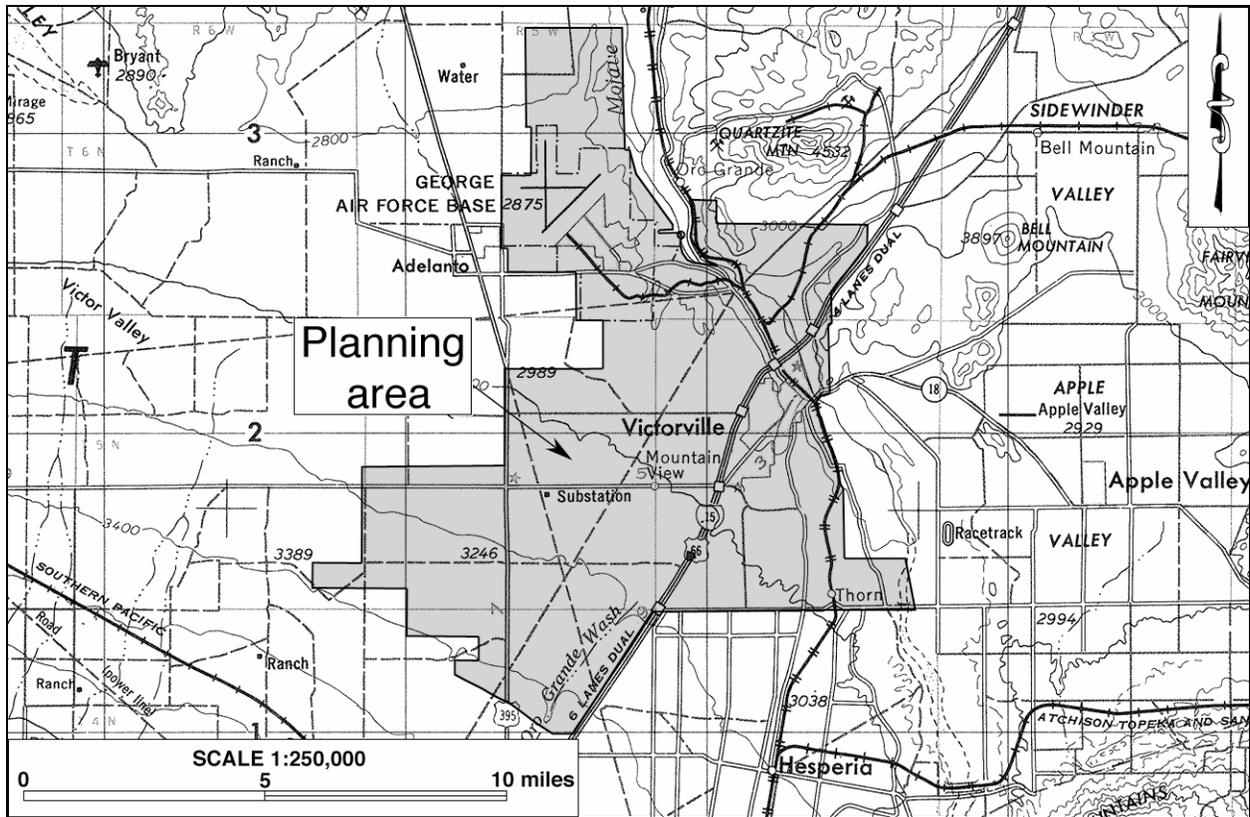


Figure 1. Project vicinity. (Based on USGS San Bernardino, Calif., 1:250,000 quadrangle [USGS 1969])

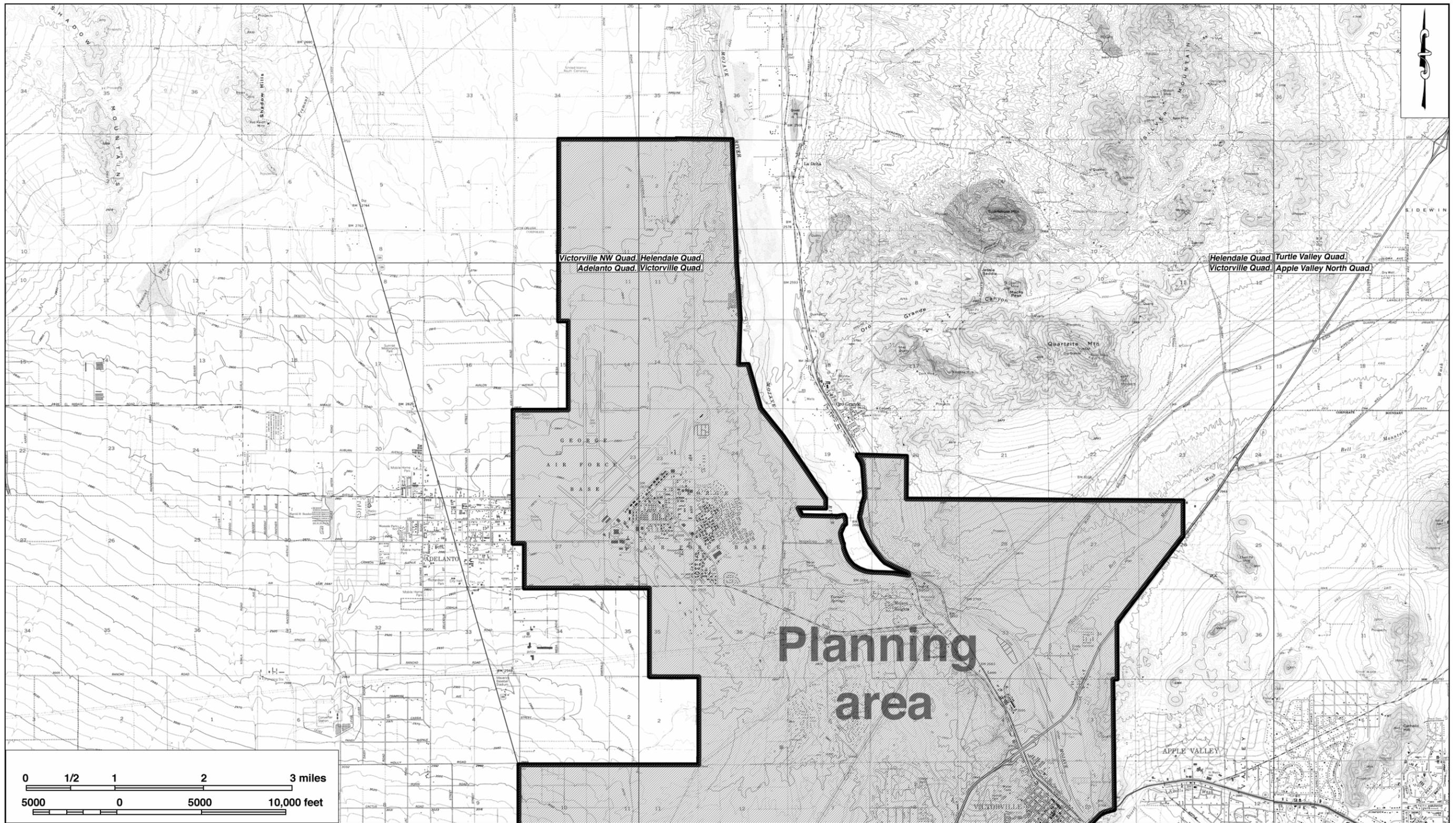


Figure 2a. Northern portion of planning area. (Based on USGS Adelanto, Apple Valley North, Helendale, Victorville, Victorville NW, and Turtle Valley, Calif., 1:24,000 quadrangles [USGS 193a-f])

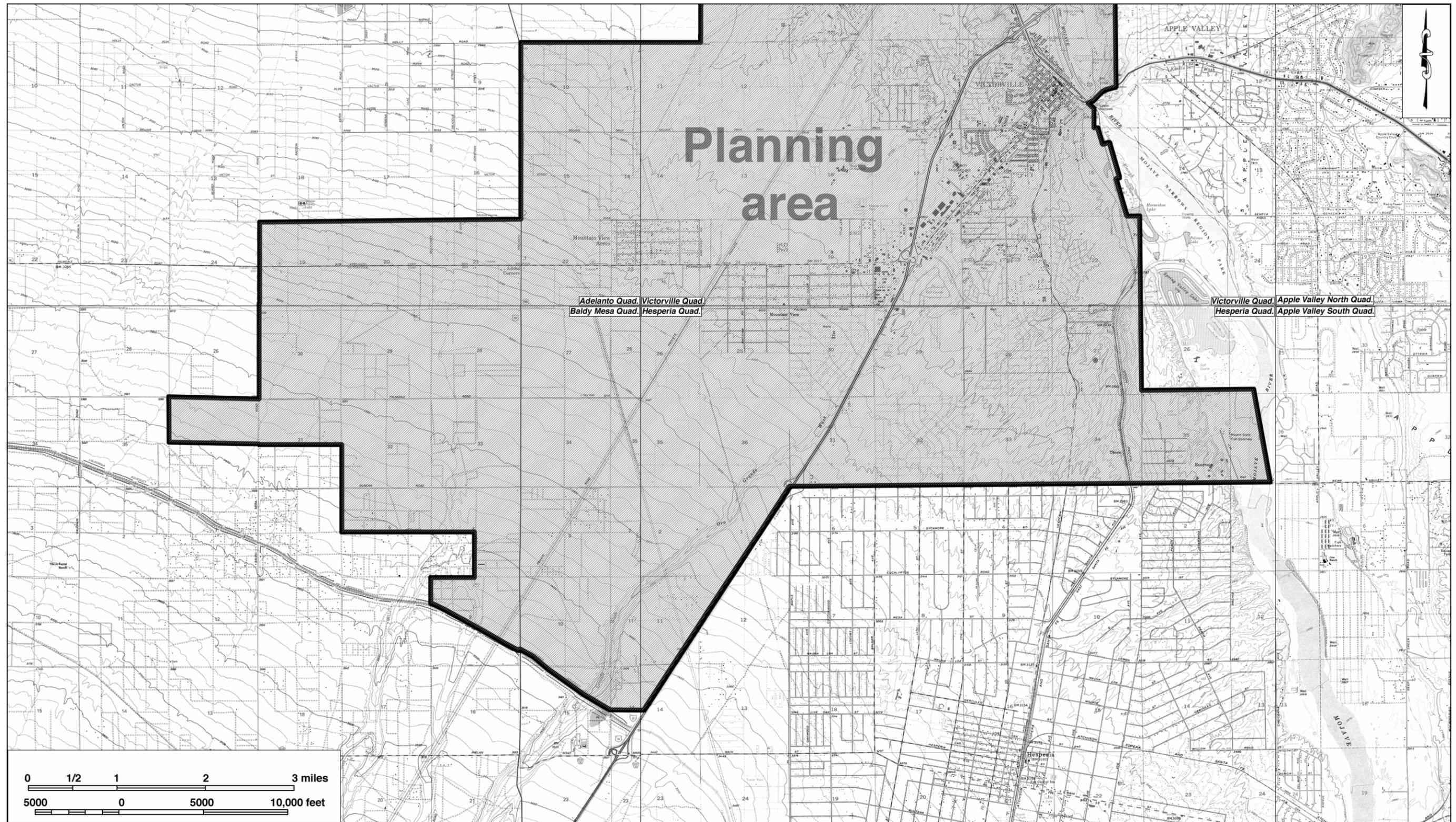


Figure 2b. Southern portion of planning area. (Based on USGS Adelanto, Apple Valley North, Apple Valley South, Baldy Mesa, Hesperia, and Victorville, Calif., 1:24,000 quadrangles [USGS 1980a; 1980b; 1993a-d; 1996])

CULTURAL SETTING

PREHISTORIC CONTEXT

Archaeological Chronology

In order to understand Native American cultures prior to European contact, archaeologists have devised chronological frameworks on the basis of artifacts and site types that go back some 12,000 years. Currently, the chronology most frequently applied in the Mojave Desert divides the region's prehistory into five periods marked by changes in archaeological remains, reflecting different ways in which Native peoples adapted to their surroundings. According to Warren (1984) and Warren and Crabtree (1986), the five periods are as follows: the Lake Mohave Period, 12,000 years to 7,000 years ago; the Pinto Period, 7,000 years to 4,000 years ago; the Gypsum Period, 4,000 years to 1,500 years ago; the Saratoga Springs Period, 1,500 years to 800 years ago; and the Protohistoric Period, 800 years ago to European contact.

This time frame is based on general changes in artifactual remains from large stone projectile points with few stone tools for grinding food products, to smaller projectile points with an increase in the number of milling stones. The scheme also notes increases in population, changes in food procurement and resource exploitation, and more cultural complexity over time. During the Protohistoric Period, there is evidence of contact with the Colorado River tribes and the introduction of pottery across the Mojave Desert.

The more recent Native American history in California, beginning with the first European contact, is chronologized by anthropologists and historians as follows:

1500-1770s	Long-distance contact with Europeans
1770s-1830s	Mission Period
1830s-1850s	Rancho Period
1850s-1880s	American migration to California
1880s-present	Reservation Period

Ethnohistory

The project area is located in the homeland of the Serrano Indians, whose traditional territory is centered at the San Bernardino Mountains, but also includes the southern rim of the Mojave Desert, extending from Victorville eastward to Twentynine Palms. The name "Serrano" was derived from a Spanish term meaning "mountaineer" or "highlander." The basic written sources on Serrano culture are Kroeber (1925), Strong (1929), and Bean and Smith (1978). The following ethnographic discussion of the Serrano people is based on these sources.

Prior to European contact, the Serranos were primarily gatherers and hunters, and occasional fishers. Their settlements were situated near available water sources, especially in the desert region, where the availability of a permanent water source was a determining factor in the nature, duration, and distribution of Serrano settlements. Dwellings on the valley floor were dome-shaped and constructed of willows and tules gathered from the nearby rivers and creeks. The houses were large enough to contain the immediate members of the family, namely the parents and children, but the household sometimes also included grandparents and widowed aunts and uncles. The family house had a central fire hearth, a sleeping area, and room for storage, though most of the daily activities took place outside under the shade of open-air ramadas. Materials for the construction of ramadas, usually willow sticks, tule reeds, and palm fronds, were also gathered from the riverbed. Most Serrano villages contained a large ceremonial house, which also served as the home of the religious leader. Other structures in the village included granaries constructed of coiled willow branches and semi-subterranean earthen sweathouses. The sweathouses were often located next to water, as the common practice was to bathe immediately after sweating. Serrano men, women, and children all practiced sweating in the lodge.

The primary plant foods gathered by the Serrano of the high desert were scrub oak acorns, mesquite beans, yucca roots, barrel cacti, Joshua trees, seeds, roots, bulbs, and shoots. Deer, mountain sheep, antelope, rabbits, small rodents, and birds were hunted and trapped using a variety of methods. Some plant and animal foods were processed using mortars and metates, either portable or located on boulder outcrops. Yucca roots and meats were often baked in stone-lined earthen ovens or hearths. Tools and implements were fashioned from stone, bone, and wood for use as knives, scrapers, projectile points, drills, awls, hammers, grinding stones, spoons, bows, arrows, throwing sticks, musical instruments, and the like. Pottery vessels took the form of jars, bowls, and seed-parching trays. The Serrano also made elaborate ceremonial regalia, baskets, bags, and nets.

The Serrano were loosely organized into exogamous clans, led by hereditary heads, and the clans, in turn, were affiliated with one of two exogamous moieties. The exact nature of the clans, their structure, function, and number are not known, except that each clan was the largest autonomous political and landholding unit, the core of which was the patrilineage. There was no pan-tribal political union among the clans. A village consisted of two or more lineage sets. These lineages were joined to one another through ties of marriage, economic reciprocity, and joint participation in rituals, especially those of birth, puberty, and death.

Following the birth of a child, both the mother and newborn were nestled in a heated pit, where they were attended and remained for several days, adhering to strict food taboos. Later, the child's grandparents would hold a feast and distribute gifts to other members of their clan. Boys and girls participated in special ceremonies upon reaching adolescence. As part of the boys' ceremony, datura was prepared by the clans' shaman who pounded the plant in a special mortar, making it into a decoction. It was then drunk by the young males

at a secret place away from the village. The initiates were then brought into the ceremonial house where they danced around the fire until they fell into a trance. While they slept off the effects of the hallucinogen, visions would appear to the boys that would later be interpreted by the shaman and used to guide aspects of the boys' future.

As part of their puberty ceremony, young girls were placed in a heated pit. There they ingested special herbs and restrained from certain foods while receiving instruction on how to be a good wife. The ceremony was held at the same time as the boys' puberty rites. It is suspected that, like most southern California tribes, the creation of rock-art panels, in the form of both petroglyphs and pictographs, may have played a role during the boys' and girls' adolescence ceremonies.

After the death of a clan member, the body of the deceased was cremated along with most of their possessions. Soon after the family sponsored a night of singing and dancing, on which occasion certain items from the deceased's belongings were burned. Then, during the annual mourning ceremony, images of the deceased, constructed of tules and dressed in the deceased's clothes, were burned. As with most other ceremonies, the participants exchanged food and gifts, sang songs, and danced.

Although contact with Europeans may have occurred as early as 1771 or 1772, Spanish influence on Serrano lifeways was negligible until 1819, when a mission *assistencia* was established on the southern edge of Serrano territory. Between then and the end of the mission era in 1834, most of the Serranos in the San Bernardino Mountains and the high desert were removed to the nearby missions. At present, most Serrano descendants are found on the San Manuel and the Morongo Indian Reservations, where they participate in ceremonial and political affairs with other Native American groups on an inter-reservation basis.

HISTORIC CONTEXT

The present-day Victor Valley area received its first European visitor, the famed Spanish explorer Francisco Garcés, in 1776, and the first Euroamerican settlements appeared in the valley as early as 1860. Despite these "early starts," due to its harsh environment, development in the arid high desert country of southern California was slow and limited for much of the historic period, and the Victor Valley remained only sparsely populated until the second half of the 20th century.

Garcés traveled through the Victor Valley along an ancient Indian trading route, known today as the Mojave Trail. In the early 1830s, part of this trail was incorporated into an important pack-train road known today as the Old Spanish Trail, which extended between southern California and Santa Fe, New Mexico. Some 20 years later, when the historic wagon road known as the Mormon Trail or Salt Lake Trail was established between Utah and southern California, it followed essentially the same route across the Victor Valley

area. Since then, the Victor Valley has always served as a crucial link for a succession of major transportation arteries, where the heritage of the ancient Mojave Trail was carried on by the Santa Fe Railroad since the 1880s, by the National Old Trails Highway and U.S. Route 66 during the early and mid-20th century, and finally by today's I-15.

The City of Victorville traces its roots to a station on the Santa Fe Railroad, which was completed by the California Southern Railway Company, a Santa Fe subsidiary, in 1885. The station was initially named Victor, after Jacob Nash Victor, general manager of the California Southern Railway Company. With the coming of the railroad, settlement activities began in earnest in the Victor Valley in the 1880s, and reached a peak in the 1910s. The Victor townsite, with a grid pattern of streets bounded by today's A, G, 1st, and 11th Streets, was laid out in 1886, and included approximately 200 acres. By 1890, Victor had become a settlement of approximately 100 residents. In 1901, the name of the town was changed to Victorville to avoid confusion with Victor, Colorado.

Thanks to the availability of fertile lands and the abundance of ground water, agriculture played a dominant role in the early development of the Victor Valley area. During the late

19th and early 20th centuries, settlers in the valley attempted a number of money-making endeavors, such as growing alfalfa and deciduous fruits and raising poultry, with only limited success. Around the turn of the century, large deposits of limestone and granite were discovered, prompting cement manufacturing to become the leading industry in the valley. In 1916, the Southwestern Portland Cement Company (SPCC) began operation in Victorville.

Located approximately one mile north of downtown Victorville on the northwest side of today's state Route 18, the SPCC plant was founded by Los Angeles-based concrete contractor Carl Leonard. Leonard had been active in mining in the Victorville area since 1897, and founded the SPCC plant in El Paso, Texas, in the early 1900s (Schroth et al. 1991:3-2). The Victorville plant is one of three Portland cement plants in the high desert area of San Bernardino County. The Golden State Portland Cement Company, built in 1910 in nearby Oro Grande, was the first large-scale industrial production plant in the area (*ibid.*:3-4). The Kaiser Cement and Gypsum Corporation in Lucerne Valley dates to 1956.

The Victorville SPCC plant became a major employer in the area and has been credited as an impetus for the growth and success of the town (*ibid.*:3-2). It is one of only five SPCC plants in the nation and, of the three cement plants in the high desert area, it is the oldest continually operating plant (*ibid.*:3-4).

By the early 1920s, automobiles were gaining popularity, and more and better roads were being demanded throughout the country. In 1926, as a result of the 1916 Federal-Aid Highway Act as amended in 1925, U.S. Route 66 was established as one of the main arteries of the National Highway System. A segment of this route, which linked Chicago with Los

Angeles, ran through Victorville along what are now 7th and D Streets. The highway was intended to link hundreds of predominantly rural communities with larger urban centers, providing easier transport and distribution of grain and produce (National Historic Route 66 Federation 1995). The diagonal configuration of Route 66 through the essentially flat prairie lands was particularly significant to the trucking industry, which by 1930 had come to rival the railroad for preeminence in freight shipping (*ibid.*).

During the Depression of the 1930s, Route 66 symbolized the "road to opportunity" as masses of people followed its course out of the Dust Bowl and into California. During the 1930s, thousands of unemployed male youths from virtually every state were put to work as laborers on road gangs to pave the final stretches of the highway (*ibid.*). As a result, Route 66 was completely paved by the mid- to late 1930s. The following year, the road was immortalized as the "Mother Road" in John Steinbeck's classic novel (and 1940 movie), *The Grapes of Wrath*.

In the 1940s, Route 66 facilitated military mobilization across the country, and provided access to the Victorville Army Air Field (later George Air Force Base), which was established in 1941. Although it was primarily used as a flight training school, after the Japanese attack on Pearl Harbor in December 1941, hundreds of planes were flown to the field to guard against attacks on the mainland (Anonymous 1994). In 1947, when the United States Air Force became a separate and co-equal branch of the armed forces, the base was redesignated as Victorville Air Force Base and in 1950 it was renamed again in

honor of the late Brigadier General Harold H. George (Weber and Campbell 1998). During and after WWII, George Air Force Base added a new driving force in the local economy with its 6,000 civilian and military employees. After being deactivated in 1992, the former base was converted for civilian use as the Southern California Logistics Airport.

During the post-World War II period, Americans became more mobile than ever before, resulting in a variety of new businesses geared toward the car culture. Along Route 66, roped-off areas known as auto camps sprang up, eventually evolving into motels and motor courts with adjoining restaurants, tourist shops, and swimming pools. Through Victorville, the highway was lined with a variety of retail and tourist-related businesses with a distinctive western flavor. The "out in the country" feel of the town was further enhanced by dude ranches and apple orchards, making the community a popular spot for visitors and a favorite locale for filming Hollywood B westerns (Anonymous n.d.).

In 1962, the City of Victorville was incorporated with a population of approximately 8,110 and an area of 9.7 square miles. Ten years later, Route 66 was replaced by Interstate 15, which cuts through the city in a generally southwest-northeast direction a little less than a mile north of the original downtown area. In more recent years, Victorville has become one of the fastest growing cities in California, largely as a "bedroom community" in support of

the industrial and commercial centers in the Greater Los Angeles area. At the present, the city has expanded to more than 74 square miles, with an estimated population of 77,881.

RESEARCH METHODS

RECORDS SEARCH

The Archaeological Information Center (AIC) at the San Bernardino County Museum, Redlands, provided the records search service for this study. The AIC is the official cultural resource records repository for San Bernardino County, and a part of the California Historical Resources Information System, established and maintained under the auspices of the Office of Historic Preservation.

During the records search, Robin Laska, AIC Assistant Coordinator, checked the Center's electronic database for previously identified historical/archaeological resources in or near the project area, and existing cultural resources reports pertaining to the vicinity. Previously identified historical/archaeological resources include properties designated as California Historical Landmarks, Points of Historical Interest, or San Bernardino County Historical Landmarks, as well as those listed in the National Register of Historic Places, the California Register of Historical Resources, or the California Historical Resources Information System.

HISTORICAL RESEARCH

Historical background research for this study was conducted by CRM TECH historians Bai "Tom" Tang and Casey Tibbet (see App. 1 for qualifications) on the basis of published literature in local and regional history and historic maps of the Victorville area. Four sets of historical maps provided detailed illustration of the growth of the Victorville area between the 1850s and the 1950s: the township plat maps produced by the United States General Land Office (GLO) based on surveys completed in 1855-1856, and topographic maps produced by the United States Geological Survey (USGS) based on surveys completed in 1898-1932 and aerial photographs taken in 1940-1941 and 1952-1956. These maps are collected at the Science Library of the University of California, Riverside, and the California Desert District of the U.S. Bureau of Land Management, located in Moreno Valley.

ETHNOHISTORICAL RESEARCH

For information on possible sites of Native American traditional cultural value, CRM TECH archaeologist Josh Smallwood (see App. 1 for qualifications) pursued additional research in the literature on Serrano culture and history. In particular, the location of a Serrano village site in the Victorville area that has been reported to be of Native American

cultural significance, as discussed by Strong (1929:7-11), was identified and taken into consideration in the cultural resources sensitivity analysis.

CONTACT WITH NATIVE AMERICAN REPRESENTATIVES

As part of the research procedures, CRM TECH Native American liaisons Laura Hensley Shaker and John J. Eddy (see App. 1 for qualifications) contacted the State of California's Native American Heritage Commission in Sacramento to request a records search in the commission's sacred lands file. Following the commission's recommendations, CRM TECH further contacted six Native American representatives by standard mail, email, facsimile, and telephone to solicit local Native American input regarding areas of possible cultural resource concern within the planning area. The correspondence between CRM TECH and the Native American representatives is attached to this report in Appendix 2.

CONSULTATION WITH LOCAL COMMUNITY

John J. Eddy and CRM TECH archaeologist Josh Smallwood (see App. 1 for qualifications) also sought consultation with staff members of the City of Victorville, the Victorville Chamber of Commerce, and the Mohahve Historical Society for information pertaining to properties of local historical interest. The correspondence between CRM TECH and the local community representatives is attached to this report in Appendix 3.

FIELD RECONNAISSANCE

After completion of the records search and other preliminary research work, Casey Tibbet and Josh Smallwood carried out the field reconnaissance by conducting a "windshield survey" of the planning area and spot-checking previously identified cultural resources or anticipated locations of prehistoric or historic features. Aside from inspecting the current conditions of the previously recorded properties, the main purpose of the field reconnaissance was to examine and evaluate the sensitivity of the planning area for cultural resources that are yet to be identified, from both the prehistoric and the historic periods. The results of the field reconnaissance are discussed in the sections below.

RESULTS AND FINDINGS

RECORDS SEARCH

Known Historical/Archaeological Sites

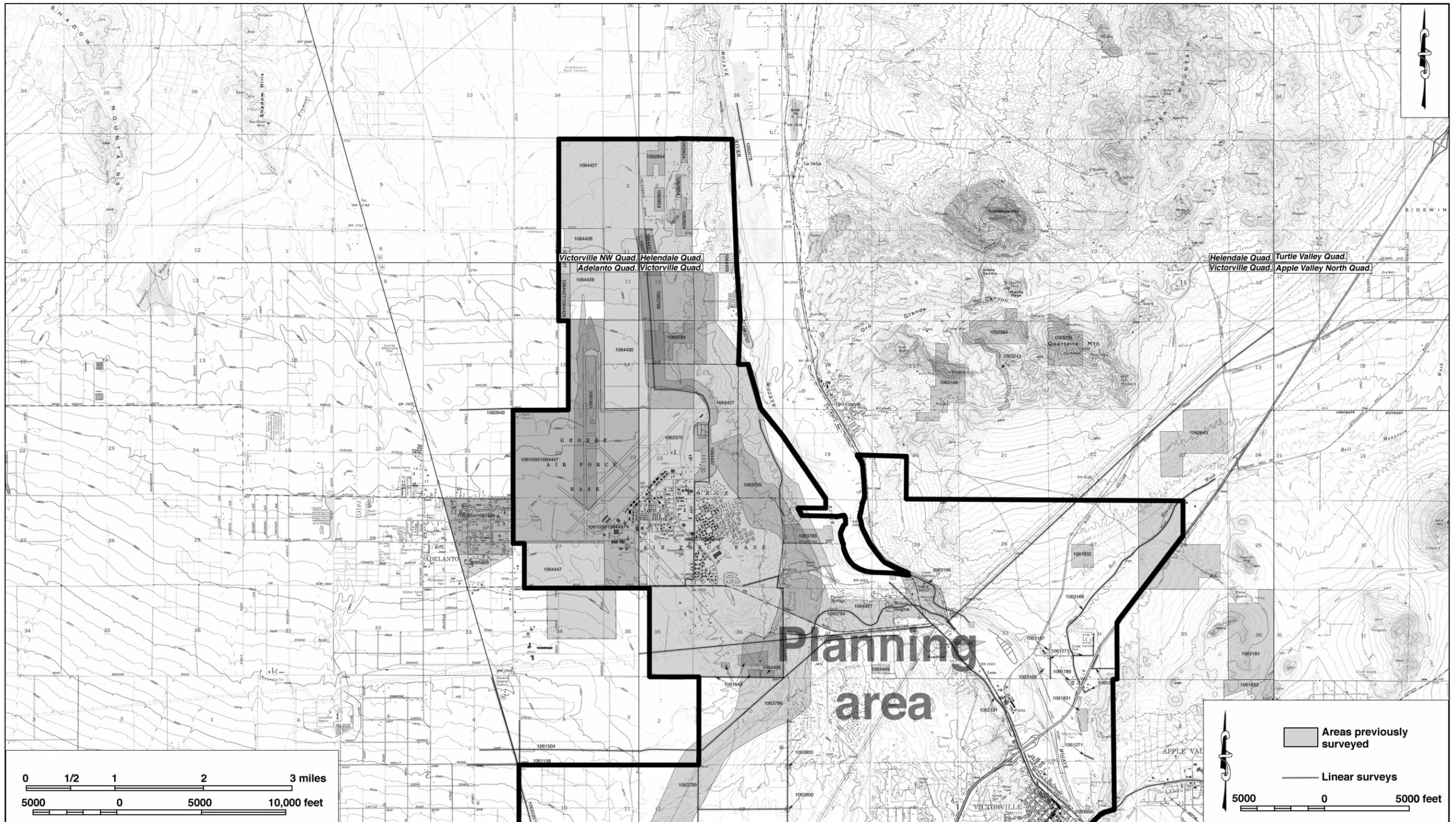
According to records on file at the AIC (see App. 4), the northern and southern portions of the planning area have been the location of much recent growth, necessitating several cultural resource surveys for development projects (Figs. 3a, 3b). The northwestern portion

of the planning area, around the Southern California Logistics Airport, has been surveyed extensively. Those studies encountered numerous archaeological sites and a number of historic-period buildings or other built environment features. Meanwhile, much of the central portion of the planning area remains unsurveyed for cultural resources. The western and northeastern portions, too, have not been extensively surveyed for cultural resources, reflecting the fact that development projects, usually the trigger for such surveys, have not been as widespread in those areas. In all, approximately one-third of the total acreage within the planning area has been covered by project-related surveys, leaving most of the planning area yet to be surveyed systematically and intensively (Figs. 3a, 3b).

Due in part to some of these previously completed surveys, at least 178 historical/ archaeological sites have been discovered within and adjacent to the planning area and recorded into the California Historical Resource Information System, including 50 prehistoric*—i.e., Native American— sites and 128 historic-period sites. These 178 sites are listed in Table 1 below. A total of 16 additional pending sites have been reported within the boundaries of the planning area, including 3 prehistoric resources and 13 historic-period sites.

As Table 1 shows, at least 14 prehistoric Native American campsites and two habitation sites have been identified within or immediately adjacent to the boundaries of the planning area. Many of the prehistoric habitation and use areas are situated along or near the banks of the Mojave River, near the confluence of seasonal drainages such as the Oro Grande Wash and the Bell Mountain Wash, or near springs in the Turner Springs area. One such site, CA-SBR-60, is a habitation site at the mouth of the Mojave River narrows, immediately adjacent to the planning area. At least 18 of the recorded prehistoric sites in the planning area were identified as food processing sites and hearths where Native Americans ground, prepared, and cooked plant and animal resources for food. Several stone quarries and reduction sites where prehistoric Native Americans manufactured stone tools have also been found, as have four rock art sites and one major Indian trail. These prehistoric resources represent some of the relics from thousands of years of Native American habitation in the planning area before Europeans arrived. Very few prehistoric-use sites or isolates have been found on the valley floor in the western portion of the planning area, indicative of a reliance on the Mojave River and its tributaries by prehistoric Native Americans.

* Nine of the 50 prehistoric sites have historic-period components.



Victorville NW Quad, Helendale Quad,
Adelanto Quad, Victorville Quad

Helendale Quad, Turtle Valley Quad,
Victorville Quad, Apple Valley North Quad

Planning
area

Areas previously surveyed

Linear surveys

0 1/2 1 2 3 miles
5000 0 5000 10,000 feet

5000 0 5000 feet

Figure 3a. Previous cultural resources studies within and adjacent to the planning area (northern portion).

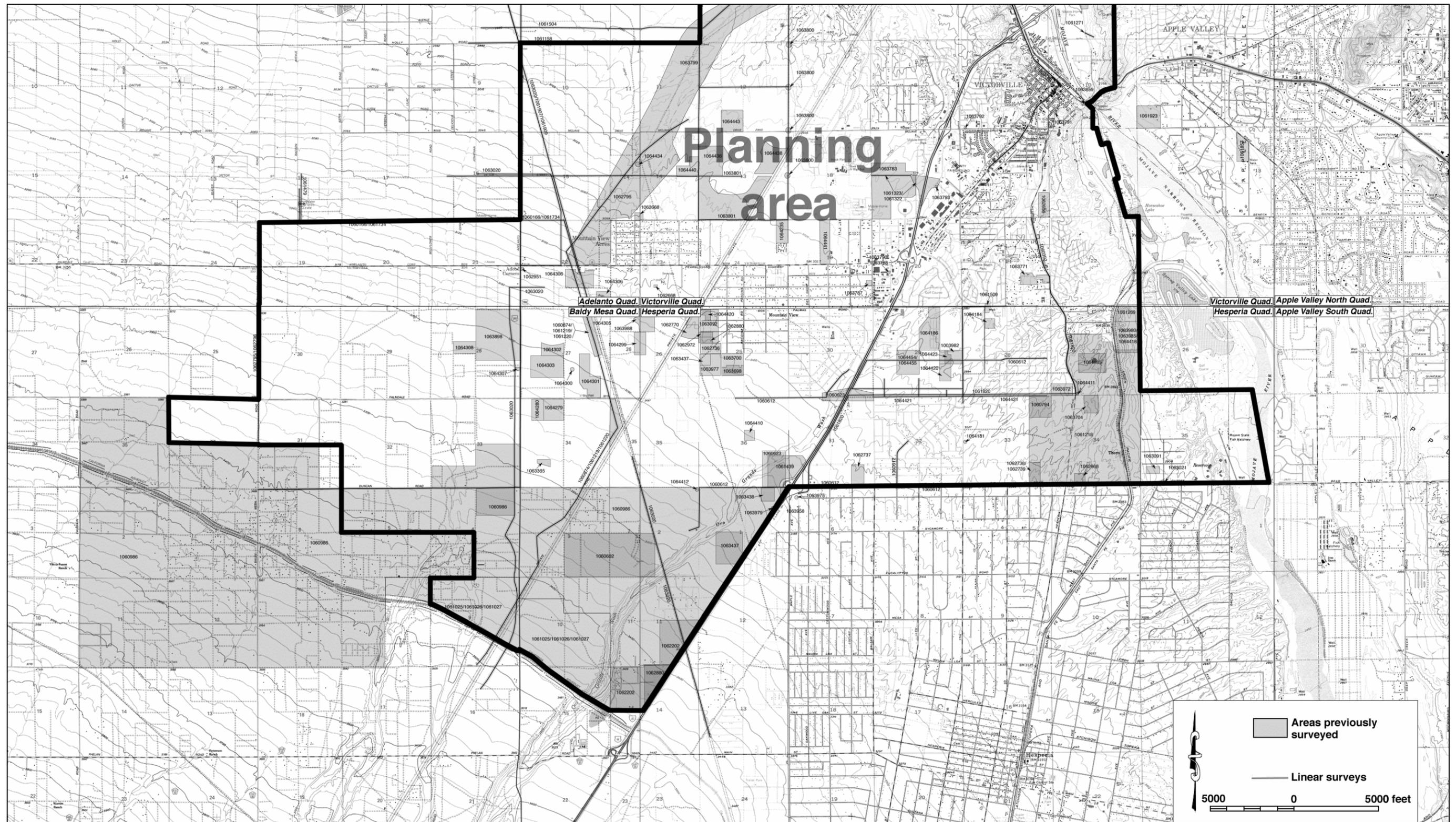


Figure 3b. Previous cultural resources studies within and adjacent to the planning area (southern portion).

Table 1. Recorded Historical/Archaeological Sites in the Planning Area*

Site Number	Description
CA-SBR-60	Prehistoric habitation site
CA-SBR-63	Native American rock art
CA-SBR-64	Native American rock art
CA-SBR-65	Lithic reduction site
CA-SBR-66/H	Prehistoric camp site/historic-period ranch
CA-SBR-67	Prehistoric food processing site
CA-SBR-68	Prehistoric food processing site
CA-SBR-69	Prehistoric food processing site
CA-SBR-70	Prehistoric food processing site
CA-SBR-71	Lithic reduction site
CA-SBR-72	Prehistoric camp site
CA-SBR-158	Native American rock art
CA-SBR-180	Prehistoric food processing site
CA-SBR-182	Prehistoric habitation site; Burial
CA-SBR-966	Native American rock art
CA-SBR-968	Burial/historic-period town site
CA-SBR-2627	Prehistoric camp site
CA-SBR-2734	Prehistoric camp site
CA-SBR-2910H	Road
CA-SBR-3005	Lithic scatter
CA-SBR-3006	Prehistoric camp site
CA-SBR-3007/H	Prehistoric camp site/structural site
CA-SBR-3008	Lithic scatter
CA-SBR-3033/H	Native American trail/historic-period road
CA-SBR-3159H	Railroad
CA-SBR-3618/H	Prehistoric food processing site/residence
CA-SBR-4018	Historic-period refuse disposal site
CA-SBR-4019	Historic-period refuse disposal site
CA-SBR-4179H	Road
CA-SBR-4180H	Residence
CA-SBR-4181H	Water storage site-reservoir, well
CA-SBR-4252H	Road
CA-SBR-4269H	Road
CA-SBR-4272H	Road
CA-SBR-4282	Prehistoric food processing site
CA-SBR-4313/H	Prehistoric camp site/historic-period refuse disposal site
CA-SBR-4411H	Mormon road
CA-SBR-4418H	Road
CA-SBR-5227	Prehistoric food processing site
CA-SBR-5431	Lithic quarry
CA-SBR-5432H	Mining
CA-SBR-5433	Lithic quarry
CA-SBR-6153	Prehistoric camp site
CA-SBR-6303H	Historic-period refuse disposal site
CA-SBR-6304	Hearth
CA-SBR-6312	Prehistoric food processing site

CA-SBR-6313	Prehistoric camp site
CA-SBR-6314	Hearth
CA-SBR-6315	Prehistoric food processing site
CA-SBR-6316H	Historic-period refuse disposal site

* Information on the exact locations of these sites is kept confidential as a protective measure.

Table 1. Recorded Historical/Archaeological Sites in the Planning Area (Cont.)	
Site Number	Description
CA-SBR-6317H	Mining
CA-SBR-6318H	Industrial
CA-SBR-6319H	Historic-period ranch
CA-SBR-6320H	Industrial
CA-SBR-6321H	Historic-period refuse disposal site
CA-SBR-6322H	Historic-period refuse disposal site
CA-SBR-6323H	Historic-period refuse disposal site
CA-SBR-6324H	Historic-period structural site
CA-SBR-6325H	Historic-period refuse disposal site
CA-SBR-6326H	Historic-period refuse disposal site
CA-SBR-6327	Prehistoric food processing site
CA-SBR-6328H	Historic-period track
CA-SBR-6353H	Historic-period refuse disposal site
CA-SBR-6533H	Historic-period refuse disposal site
CA-SBR-6784H	Historic-period refuse disposal site
CA-SBR-6793H	Railroad
CA-SBR-6889	Prehistoric food processing site
CA-SBR-7036	Hearth
CA-SBR-7037	Hearth
CA-SBR-7044/H	Prehistoric lithic scatter/historic-period refuse disposal site
CA-SBR-7061H	Road
CA-SBR-7154H	Historic-period refuse disposal site
CA-SBR-7155	Prehistoric food processing site
CA-SBR-7545H	Highway 395
CA-SBR-7694H	Power transmission line
CA-SBR-7742H	Historic-period refuse disposal site
CA-SBR-7746H	Historic-period refuse disposal site/water storage site-reservoir, well
CA-SBR-7747H	Historic-period homestead
CA-SBR-7750H	Historic-period refuse disposal site
CA-SBR-7751H	Historic-period refuse disposal site
CA-SBR-7752H	Historic-period refuse disposal site
CA-SBR-7753H	Historic-period refuse disposal site
CA-SBR-7754H	Historic-period refuse disposal site
CA-SBR-7848H	Historic-period refuse disposal site
CA-SBR-7994H	Commercial
CA-SBR-8194H	Historic-period refuse disposal site
CA-SBR-8250	Hearth
CA-SBR-8251	Prehistoric food processing site
CA-SBR-8265H	Residence

CA-SBR-8266H	Residence
CA-SBR-8388H	Historic-period refuse disposal site
CA-SBR-8389H	Dog burial/campfire ring
CA-SBR-8390H	Historic-period refuse disposal site
CA-SBR-8391	Prehistoric camp site
CA-SBR-8392H	Railroad
CA-SBR-8393	Prehistoric camp site
CA-SBR-8829H	Agricultural site
CA-SBR-8830H	Historic-period refuse disposal site
CA-SBR-8831H	Fence
CA-SBR-8832H	Historic-period refuse disposal site

Table 1. Recorded Historical/Archaeological Sites in the Planning Area (Cont.)	
Site Number	Description
CA-SBR-8833H	Historic-period refuse disposal site
CA-SBR-8834H	Historic-period refuse disposal site
CA-SBR-8835H	Historic-period refuse disposal site
CA-SBR-8836H	Fence
CA-SBR-8837H	Structural site
CA-SBR-8838H	Historic-period refuse disposal site
CA-SBR-8839H	Historic-period refuse disposal site
CA-SBR-8840H	Historic-period refuse disposal site
CA-SBR-8841H	Historic-period refuse disposal site
CA-SBR-8842H	Historic-period refuse disposal site
CA-SBR-8843H	Historic-period refuse disposal site
CA-SBR-8859H	Historic-period refuse disposal site
CA-SBR-8860H	Historic-period refuse disposal site
CA-SBR-8861H	Structural site
CA-SBR-8862H	Historic-period refuse disposal site
CA-SBR-8863	Lithic scatter
CA-SBR-10154H	Structural site
CA-SBR-10156H	Structural site
CA-SBR-10306H	Historic-period refuse disposal site/water storage site-reservoir, well
CA-SBR-10307H	Historic-period refuse disposal site
CA-SBR-10315H	Power transmission line
CA-SBR-10316H	Power transmission line
CA-SBR-10317H	Power transmission line
CA-SBR-10318H	Telephone line
CA-SBR-10504H	Fence
CA-SBR-10614	Prehistoric camp site
CA-SBR-10870H	Residence
CA-SBR-10871H	Structural site
CA-SBR-10882H	Historic-period refuse disposal site
CA-SBR-10883H	Historic-period refuse disposal site
CA-SBR-10884/H	Historic-period refuse disposal site/groundstone
CA-SBR-10885H	Well
CA-SBR-10886H	Historic-period refuse disposal site

CA-SBR-10887H	Historic-period refuse disposal site
CA-SBR-10888H	Historic-period refuse disposal site
CA-SBR-10889H	Well
CA-SBR-10915H	Historic-period refuse disposal site
CA-SBR-10946H	Historic-period refuse disposal site
CA-SBR-10947H	Historic-period refuse disposal site
CA-SBR-10948H	Residence
CA-SBR-10949H	Historic-period refuse disposal site
CA-SBR-10950H	Historic-period refuse disposal site
CA-SBR-10952	Lithic scatter
CA-SBR-10957	Prehistoric camp site
CA-SBR-10958	Prehistoric camp site
CA-SBR-10959/H	Burial/historic-period refuse disposal site
CA-SBR-10960H	Structural site
CA-SBR-11290H	Historic-period refuse disposal site
CA-SBR-11291H	Historic-period refuse disposal site
CA-SBR-11292H	Historic-period refuse disposal site
CA-SBR-11424H	Structural site

Table 1. Recorded Historical/Archaeological Sites in the Planning Area (Cont.)

Site Number	Description
CA-SBR-11425H	Structural site
CA-SBR-11426H	Historic-period refuse disposal site
CA-SBR-11427H	Historic-period refuse disposal site
CA-SBR-11600H	Historic-period refuse disposal site
CA-SBR-11999H	Historic-period refuse disposal site
CA-SBR-12007	Lithic scatter
CA-SBR-18731H	Structures
CA-SBR-18732H	Structures
CA-SBR-18733H	Structures
CA-SBR-18734H	Structures
CA-SBR-18735H	Structures
CA-SBR-18738H	Bridge
CA-SBR-20151H	Irrigation
36-018724	Southwestern Portland Cement Company
36-018725	Building at 15554 2nd Street
36-018726	Building at 15574 2nd Street
36-018727	Building at 15563 5th Street
36-018728	Building at 15547 8th Street
36-018729	Building at 16927 B Street
36-018730	Victor Valley Memorial Park
36-018731	Building at 16669 D Street
36-018732	Building at 16745 D Street
36-018733	Building at 16771 D Street
36-018734	Building at 16805 D Street
36-018735	Building at 16845 D Street
36-018736	Building at 16946 Monte Vista Street

36-018738	National Trails Highway
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Among the historic-period sites recorded in the planning area are several prominent early roads, including the Old Spanish Trail, the Mormon Trail, the Mojave Road, the National Trails Highway, and U.S. Routes 66 and 395; power and telephone transmission lines from the early 20th century; the remains of past mining activities; late-19th century homesteads, ranches, and townsites; commercial, industrial, and residential buildings and foundations; irrigation features, wells, and reservoirs; military structures from World War II; and numerous refuse scatters, all indicative of early settlement and land development activities. Many of these sites are situated in Victorville's downtown area, along National Trails Highway, within and near the Southern California Logistics Airport, and in the Mojave Heights/Turner Springs areas. However, historic-period sites are scattered virtually throughout the planning area, reflective of the efforts of early settlers to establish roads and homesteads in the valley and along the Mojave River.

As can be expected, a number of the recorded buildings in the planning area are concentrated in the downtown area, especially along D Street, formerly a part of Route 66 that ran through the heart of downtown Victorville. The construction dates of these properties range from the early 1900s to the mid-1940s.

Designated or Eligible Heritage Properties

Of the previously recorded historical/archaeological sites in the planning area, 10 have been previously evaluated and determined eligible for listing on the National Register of Historic Places, while three others have been proclaimed as California Historic Landmarks. In addition, the Victorville Chamber of Commerce has listed 17 historic sites as designated points of interest in the downtown area. All 30 of these properties are listed in Table 2.

Name	Location	Status*
CA-SBR-72	Along west side of Mojave River	NRHP-E
CA-SBR-2910H	Across the planning area	NRHP-E
CA-SBR-6304	Along west side of Mojave River	NRHP-E
CA-SBR-6313	Along west side of Mojave River	NRHP-E
CA-SBR-6533H	Near intersection of Seneca Road and Adelanto Road	NRHP-E
CA-SBR-6793H	Across the planning area	NRHP-E
CA-SBR-7694H	Across the planning area	NRHP-E
CA-SBR-10315H	Across the planning area	NRHP-E
CA-SBR-10316H	Across the planning area	NRHP-E
P1584-1	Crossing over Mojave Narrows	NRHP-E
Mormon Road	Across the planning area	CHL
Old Spanish Trail	Across the planning area	CHL
Mojave Road	Across the planning area	CHL

Indian Marie's Grave Site	17150 C Street	VCC
The Barrel House	16805 D Street	VCC
First National Bank	16849 D Street	VCC
Green Tree Inn Sign	14173 Green Tree Boulevard	VCC
McDougal Cottage	16805 Yucca Avenue	VCC
Methodist Church	15557 5th Street	VCC
Old Sheriff's Office	14343 Civic Drive	VCC
Old Victor School	15476 6th Street	VCC
Victor Valley Memorial Park	17150 C Street	VCC
Victorville "V"	As seen from the corner of Forrest Avenue and Hesperia Road	VCC
The Chantry House	15604 6th Street	VCC
Victor Valley Junior High School Gymnasium	Corner of Forrest Avenue and 7th Street	VCC
8th Street Community Center	15615 8th Street	VCC
U. S. Highway 66	National Trails Highway and 7th Street, Victorville	VCC
The Jail	16830 E Street	VCC
Victorville Hardware	15582 7th Street	VCC
San Bernardino County Fairground Sign	14800 7th Street	VCC

* Abbreviations: NRHP-E—eligible for listing in the National Register of Historic Places; CHL—California Historic Landmarks; VCC—Victorville Chamber of Commerce Designated Historic Sites

HISTORICAL RESEARCH

Historic maps consulted for this study show that in the mid-1850s the only evidence of human activities in the planning area was the historic wagon road known today as the Mormon Trail. The trail entered the planning area from the southwest, crossing the desert floor diagonally and exiting the northeastern boundary of the planning area near the Mojave River (Fig. 4). No other man-made features were observed in the planning area at that time.

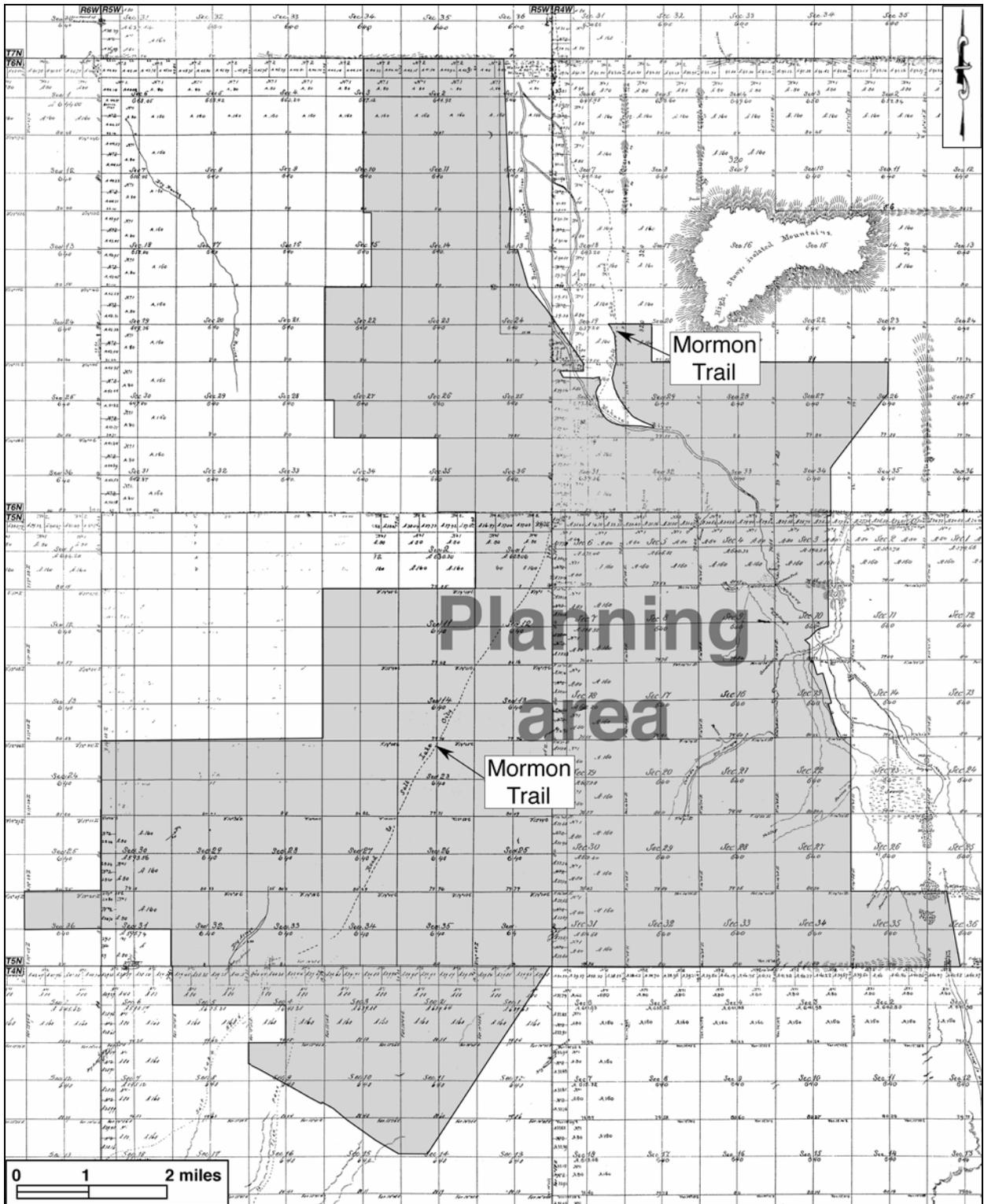


Figure 4. The planning area in 1853-1856. (Source: GLO 1855a-b; 1856a-g)

Later maps demonstrate that early settlement and land development activities occurred in the planning area during the late 19th and early 20th centuries, predominantly in today's downtown area (Fig. 5, 6). It was there, at a point along the Santa Fe Railroad near the upper Mojave Narrows that the town of Victorville began. A number of roads were noted in the planning area crisscrossing the desert floor on their way to homesteads in the valley and mines and quarries in the surrounding hills (Figs. 5, 6). During the first quarter of the 20th century, several automobile thoroughfares, such as the National Old Trails Highway and, later, U.S. Routes 66 and 395, gradually superceded the old wagon trails in the role of linking Victorville to the outside world.

By the early 1940s, the town of Victorville had expanded further to the southwest along Route 66 and Hesperia Road, the two main thoroughfares through town (Figs. 7, 8). In 1941, on a plateau nearly five miles to the northwest of downtown, George Air Force Base, then known as the Victorville Army Air Field, was established. Military housing was available on the base, but its arrival brought a new development boom that spread to nearby Victorville and Adelanto, providing for the numerous military and civilian employees that worked on the base. The post-WWII era brought about additional development to the Victorville area. Several small satellite communities arose in the planning area by the 1950s, including Adobe Corners and Mountain View along State Highway 18 to the west of downtown, and Mojave Heights near the intersection of National Trails Highway and Adelanto Road (present-day Air Expressway), half way between George Air Force Base and downtown Victorville (Fig. 8). Smaller clusters of buildings also appeared elsewhere in the planning area, such as along Stoddard Wells Road to the north of downtown (Fig. 8). These areas marked the beginnings of development on the outskirts of downtown.

During the most recent decades, residential developments and the accompanying commercial districts have turned vacant land in the southern portion of the planning area into a new population center, engulfing the small neighborhoods of Adobe Corners and Mountain View. Meanwhile, the northwestern portion of the planning area witnessed the decommissioning of George Air Force Base in December 1992, and the establishment and expansion of the Southern California Logistics Airport since. In contrast, the area to the northeast of downtown Victorville and on the western skirt of the city have remained largely rural in character throughout the historic period and into modern times.

ETHNOHISTORICAL RESEARCH

According to Strong (1929:7), one location near Victorville has been identified by ethnographers and Serrano cultural authorities to be of potential Native American cultural significance. The location is identified by Strong (1929:7-11) as the territory of the *Maviatem* clan, where a village group belonging to the Coyote moiety resided. While Strong states that the village was situated to the southeast of Victorville, its precise location is unclear.

In fact, no evidence of an active Indian village was noted during 19th-century U.S. land surveys of the Victorville area, as illustrated in Figure 4, and it is possible that the Indian village noted by Strong was located farther to the southeast along the Mojave River, outside the boundaries of the planning area.

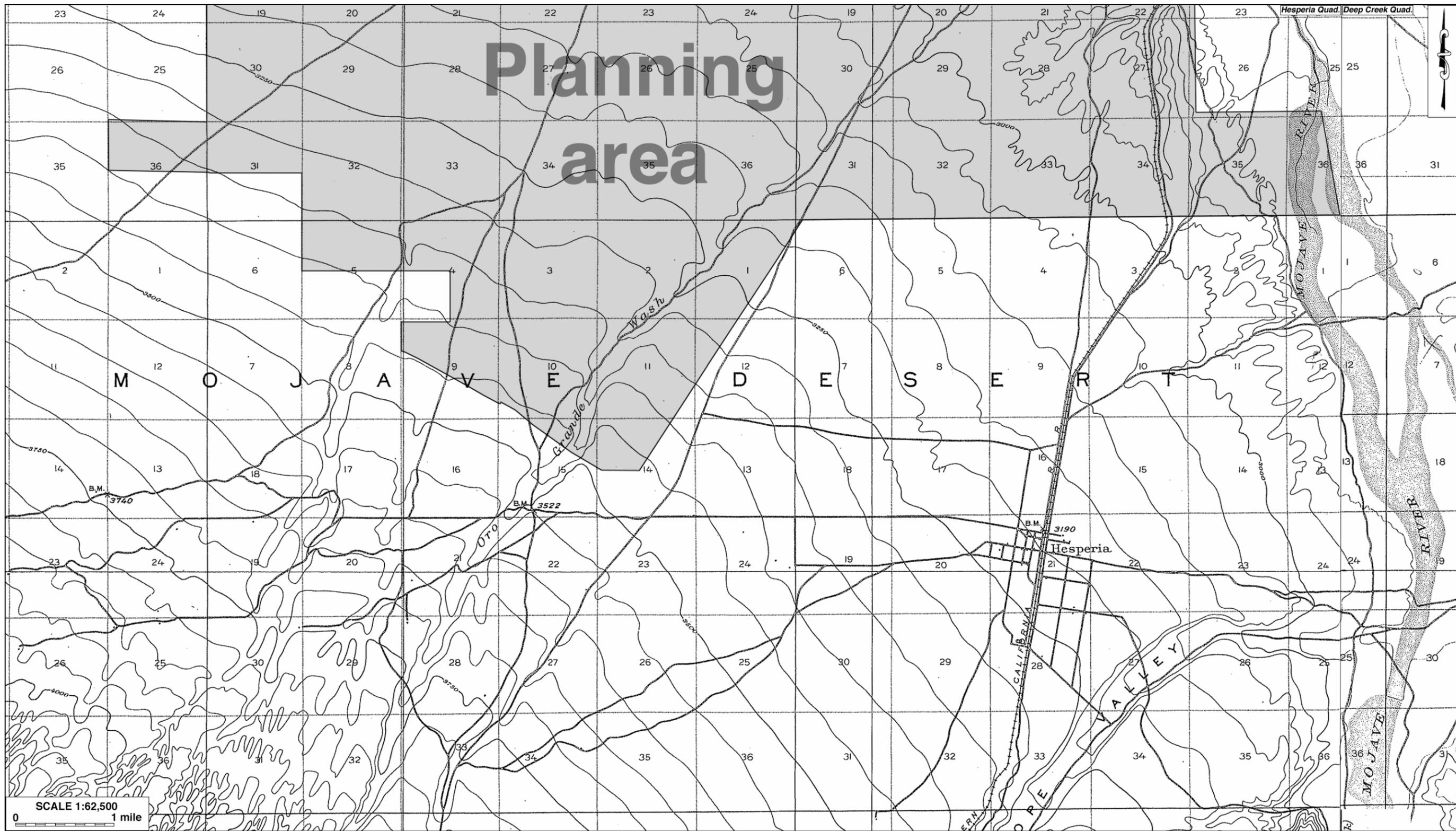


Figure 5. Southern portion of the planning area in 1898-1899. (Source: USGS 1902a, 1902b)



Figure 6. Northern portion of the planning area in 1920-1932. (Source: USGS 1934)



Figure 7. Northern portion of the planning area in 1952-1957. (Source: USGS 1956a; 1957)



Figure 8. Southern portion of the planning area in 1940-1952. (Source: USGS 1942, 1956b)

CONTACT WITH NATIVE AMERICAN REPRESENTATIVES

In response to CRM TECH's inquiry, the Native American Heritage Commission (NAHC) reported that the sacred lands record search identified no Native American cultural resources in the planning area (App. 2). However, noting that "the absence of specific site information in the sacred lands file does not indicate the absence of cultural resources in any project area," the commission suggested that local Native American representatives be contacted, and provided a list of potential contacts in the region (App. 2). Upon receiving the NAHC's response, CRM TECH contacted all six individuals on the list and the four tribal organizations they represent on April 7, 2005. As of the completion of this report, responses have been received from all four organizations.

Britt Wilson, Cultural Resources Coordinator for the Morongo Band of Mission Indians, replied in writing on behalf of the tribe on April 12, 2005 (see App. 2). Recognizing the traditional cultural affiliation between the tribe and the Victorville area, the letter states the tribe's intent to participate in a formal government-to-government consultation process with the City of Victorville, as provided by Senate Bill (SB) 18. The tribe has requested copies of all pertinent materials, including the record search results, the cultural resources survey report, and policy statements of the general plan that relate specifically to Native American cultural resources. Based on review of these documents and input gathered from tribal elder(s), the tribe may request in-person meetings between tribal and city officials and visitation rights to key Native American sites. Furthermore, the tribe has recommended that specific policies be included in the general plan that reference SB 18 and clearly state the requirements for conducting Phase I cultural resource surveys and archaeological monitoring, with particular attention to the treatment of artifacts and the curation and/or repatriation of those artifacts to local tribes.

John Valenzuela, Chairperson of the San Fernando Band of Mission Indians, and Goldie Walker, representative of the Serrano Band of Indians, both replied by telephone on May 9, 2005. Mr. Valenzuela and Ms. Walker accept the city's invitation to participate in government-to-government consultation. Mr. Valenzuela expressed serious concern regarding future development in this area, especially in areas surrounding the Mojave River and Mojave Narrows, which includes the site of a Native American village, *Topi Povie*. Ms. Walker requests that she be contacted regarding any archaeological discoveries encountered during future development within the planning area.

Bernadette Ann Brierty, Cultural Resource Coordinator for the San Manuel Band of Mission Indians, replied in writing on July 18, 2005 (see App. 2). The letter states the tribe's intent to participate in a formal government-to-government consultation process with the City of Victorville, as provided by SB 18. The tribe requests copies of all pertinent materials, including the record search results, the cultural resources survey report, the Victorville general plan, sections of a draft EIR report that relate specifically to Native American cultural resources and proposed mitigation measures, and a schedule of public

hearings or scoping meetings. The San Manuel Band lists six tribal concerns regarding the general plan that include the fulfillment of the SB 18 consultation process by the City of Victorville with the tribe and the treatment, confidentiality, and permanent inventory of archaeological sites, Native American human remains, and ceremonial/spiritual artifacts.

After the completion of this report, CRM TECH will continue to maintain contact with the Native American representatives and their respective tribal organizations regarding cultural resources issues. If any further Native American concerns arise in the future, they will be reported immediately to the City. However, as some of the Native American representatives pointed out, the information-gathering correspondences initiated by CRM TECH during this study do not fulfill the Native American consultation requirement set forth in SB 18. In order to satisfy and comply with SB 18 provisions, a formal, government-to-government dialogue will need to be carried out between the City of Victorville and the tribes that wish to participate (see further discussion in "Recommendations," below).

CONSULTATION WITH LOCAL COMMUNITY

Based on information provided by City staff and other community members, neither the City of Victorville nor any other civic organization currently maintains a list of officially designated or recognized local historical landmarks within the city. However, the Victorville Chamber of Commerce does have a list of historic sites as points of interest for visitors to the downtown area (see Table 2, above). The results of the consultation further indicates that at the present time the City has not enacted a local historic preservation ordinance, conducted a citywide historical resources survey, or implemented any other systematic historic preservation program.

Chris Borchert of the City of Victorville Planning Department stated that the City does not maintain an official register of local historic properties (see App. 3). He recommended that CRM TECH reference previous studies, including the Victorville General Plan, the Old Town Specific Plan, and the cultural resources survey report for the Southern California Logistics Airport Specific Plan Amendment and Rail Service project (Tang et al. 2003), which addressed properties of local historical significance, their preservation, and management.

Jim Mustra, President of the Mohahve Historical Society, replied by telephone on June 30, 2005, and stated that he would share the letter with members of the historical society. Fran Elgin, member of the Mohahve Historical Society, replied by email on July 14, 15, and 18, 2005. Ms. Elgin stated that the historical society had never formally named historic properties in the City of Victorville, but did recommend an unofficial guide of Victor Valley compiled by another member, Ellsworth Sylvester. Ms. Elgin sent a copy of the guide and corresponding maps by mail on July 20, 2005. Unfortunately, the maps that were available are either incomplete or illegible, and the plotted locations do not match with the numbered references in the guide. Consequently, the materials provided by Ms.

Elgin, while offering insightful historical information about known sites in the Victorville area, yielded little or no locational data that would be helpful for the purpose of identifying existing properties of local historical significance.

FIELD RECONNAISSANCE

The purposes of the field reconnaissance, as stated above, were to examine the current conditions of selected cultural resources that had been previously identified and to acquire a first-hand impression of the sensitivity of various portions of the planning area for cultural resources that are yet to be identified. The observations during the reconnaissance, by and large, confirmed the preliminary sensitivity assessment extrapolated from the other avenues of research discussed above.

During the field reconnaissance, it was noted that the areas along the Mojave River, the Oro Grande Wash, and the Bell Mountain Wash, including the drainages and springs near Turner Springs, with available water sources in the various canyons and a relative abundance of plant and presumably animal resources to be exploited, would have provided a more favorable environment for habitation to prehistoric Native peoples as well as early settlers. It can be expected that archaeological remains from both prehistoric and historic-period activities will be discovered along the benches and terraces overlooking these drainages rather than on the eroded, constantly changing stream beds. In addition, the downtown Victorville area is highly sensitive for the presence of unknown subsurface historic-period archaeological deposits dating to the city's early history. The relatively level valley floor in the planning area, a drier, harsher environment, is less likely to contain intact archaeological deposits from the prehistoric period. Archaeological remains from the historic period, however, have been found scattered over the surface of the valley floor as a result of previous studies, and may occur virtually anywhere in the planning area.

For built-environment features, it was observed that historic-period buildings, especially residences, can be found in essentially all urbanized neighborhoods in the planning area, either in relatively concentrated clusters or in isolated occurrences, except in the most recent developments in the southern portion of the planning area. The most notable concentration of early 20th century buildings, both residential and commercial, is found in the downtown area around Victorville's traditional town center, including A through E Streets, 1st through 11th Streets, and southwest from A Street along 6th Street, 7th Street, Yucca Avenue, and Forrest Avenue. A number of local historical sites designated by the Victorville Chamber of Commerce, including the first school and the first church in Victorville, were observed in the downtown area during the field reconnaissance.

A number of early- and mid-20th century buildings were found to the southwest of the town center, between Interstate 15 and Hesperia Road. Some of these neighborhoods appear to be early tract developments and reflect the growth of the city between the 1920s and the mid-1950s. The former George Air Force Base hosts a relatively high concentration

of slightly later buildings dating to the 1941-1960 period, as well as buildings of a more recent vintage. In the more rural sections of the planning area, historic-period buildings were found scattered amongst modern buildings. These buildings tend to be relatively plain and utilitarian, lacking any particular architectural style or integrity.

An overall assessment of the planning area's sensitivity for cultural resources from both the prehistoric and the historic periods is presented in the section below.

SENSITIVITY ASSESSMENT

In light of the findings from the various avenues of research, this study concludes that areas within one mile of the Mojave River and its tributaries, namely the Oro Grande Wash and the Bell Mountain Wash, and around the drainages and springs near Turner Springs appear to be highly sensitive for both prehistoric and historic-period resources (Fig. 9). The actual drainage beds, highly eroded and always changing, have a low sensitivity, but the

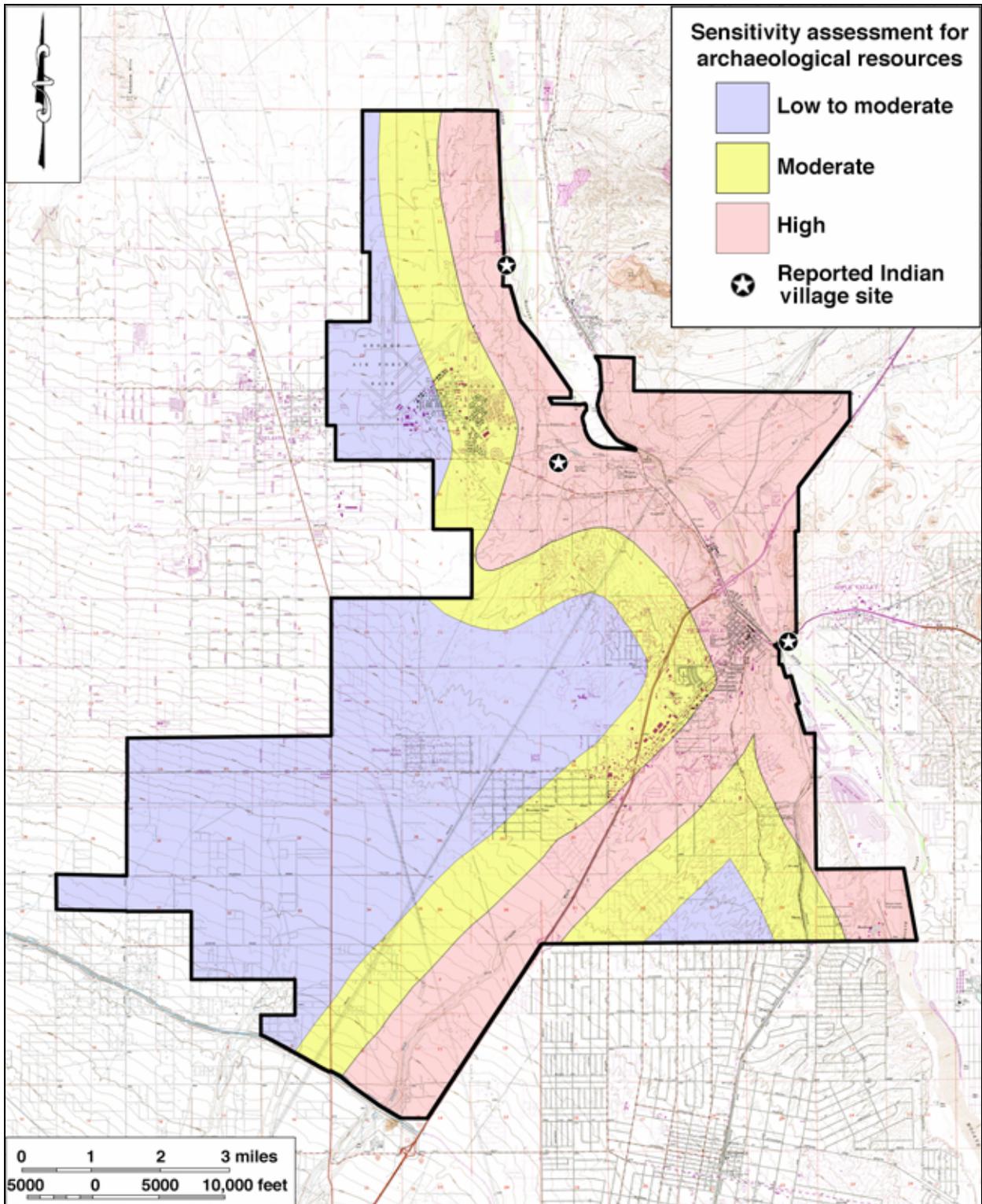


Figure 9. Sensitivity assessment for archaeological resources.

shorelines and terraces near these water sources provided resources for prehistoric Native American inhabitants. These areas were also visited by early pioneers and settlers, as evidenced by the location of a segment of the Mormon Trail near Turner Springs and the location of downtown Victorville along the Mojave narrows. Areas approximately 1-2 miles from these natural water sources are moderately sensitive for both prehistoric and historic-period resources (Fig. 9). The valley floor, making up the balance of the planning area, while low in sensitivity for prehistoric archaeological resources, exhibits a moderate sensitivity for historic-period sites. The downtown area demonstrates a moderate sensitivity for archaeological resources from the historic period, mostly due to the possibility of unknown subsurface artifact deposits that may be present (Fig. 9).

For historic-period buildings and other features of built environment, the downtown area bounded by A, E, 1st, and 11th Streets and the corridors extending southwest along 6th Street, 7th Street, Yucca Avenue, and Forrest Avenue showcase the densest concentration of early 20th century residences (Fig. 10). The strip of historic Route 66 between 1st Street and Stoddard Wells Road forms a business district of a distinctively historical character and should be considered highly sensitive for historic-period commercial buildings. The segment of National Trails Highway between Air Expressway and the Interstate 15 freeway also hosts a number of historic-period commercial and industrial buildings. The neighborhoods to the southwest of the downtown area between the Interstate 15 freeway and Hesperia Road feature a relatively high percentage of mixed-vintage residences from the early and mid-20th century, including some buildings that are now approaching the age threshold to be considered potentially historic (Fig. 10). In addition, many of the buildings on the former George Air Force Base appear to be over, or approaching the age threshold, and the base as a whole should be considered historically sensitive (Fig. 10). Sporadic historic-period buildings can be found throughout much of the planning area, with the exception of where recent large subdivisions have been developed.

MANAGEMENT CONSIDERATIONS

EXISTING HISTORIC PRESERVATION PROGRAMS

Federal Programs Available to the City

The National Historic Preservation Act (NHPA) of 1966, as amended, mandates that all federal agencies assume responsibility for the preservation of historic properties owned or controlled by the U.S. government. Section 106 of NHPA requires federal agencies to take into account the effect of an undertaking on any historic properties prior to approval of the undertaking. When delegated the responsibility for Section 106 compliance, such as in some programs funded by the U.S. Department of Housing and Urban Development (HUD), a local government agency may also take the lead in the enforcement of NHPA.

In the Section 106 process, many federal agencies recognize an enhanced role for Certified Local Governments (CLG). The CLG program, a joint federal-state initiative administered by the National Park Service and the State Historic Preservation Officers (SHPO) of each state, provides technical assistance and small grants for historic preservation purposes to

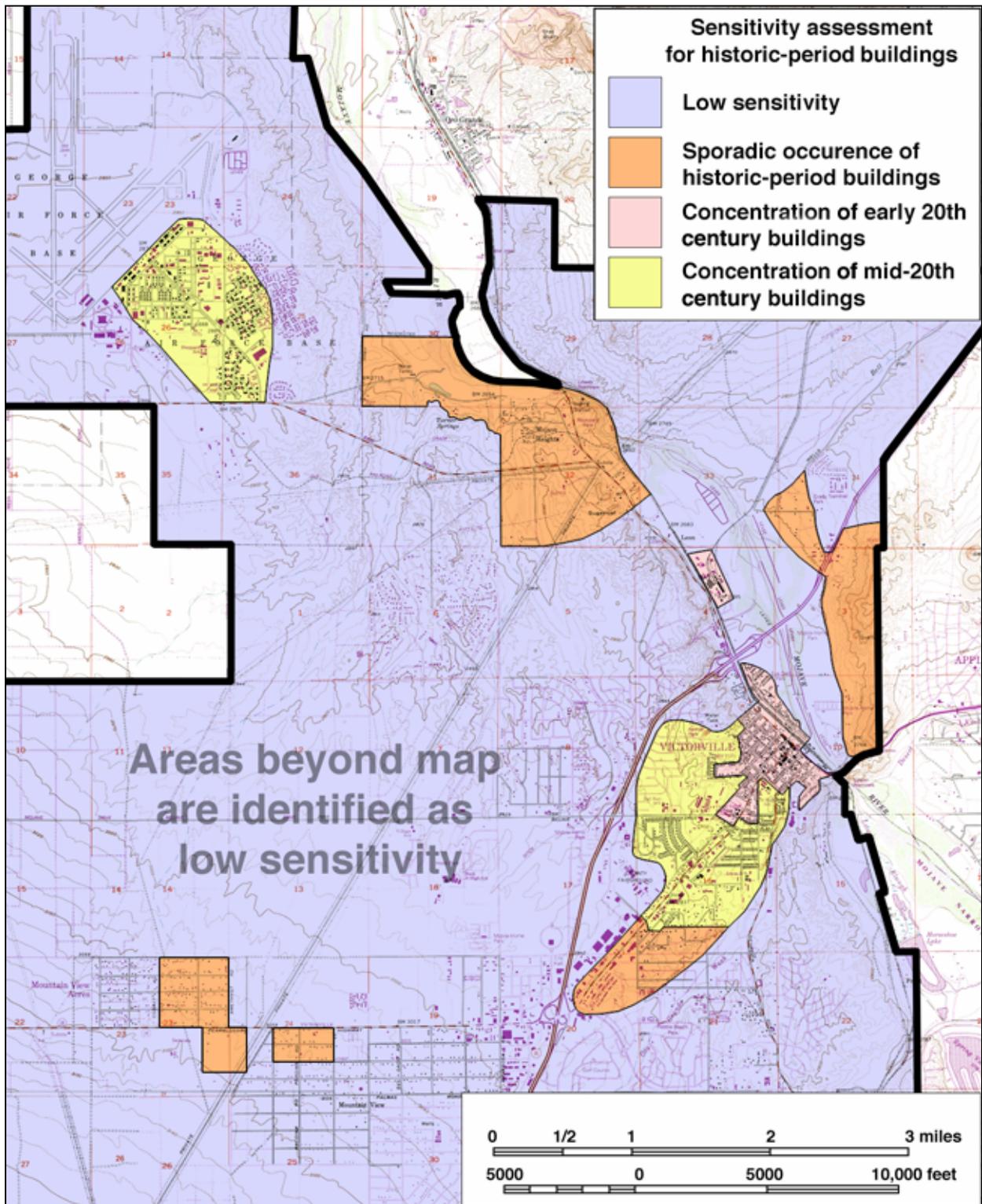


Figure 10. Sensitivity assessment for historic-period buildings.

Fig

local governments that meet certain requirements. In California, CLGs are encouraged by the State Office of Historic Preservation (OHP) to play an active role in the Section 106 process within its jurisdiction. In practice, a CLG can benefit from historic preservation expertise, professional and technical assistance, information exchange, and statewide preservation programs coordinated by the OHP and, last but not least, special grants from the SHPO.

In conjunction with NHPA, the Secretary of the Interior maintains the National Register of Historic Places, a nation-wide inventory of districts, sites, buildings, structures, objects, or other features of national, state, or local historical significance. According to statutory definition, any property listed in or determined to be eligible for listing in the National Register constitutes a "historic property." Currently, there are no National Register-listed resources located within the City of Victorville's planning area, but 10 sites have been determined to be eligible for listing (see Table 2).

In addition to NHPA, a number of other federal statutes also provide for programs aimed at the preservation of important cultural resources, including investment tax credits on certified rehabilitation of historic buildings, the Community Development Block Grant Program, and the historic building preservation program created by the Transportation Equity Act of 1998.

State Programs Available to the City

The California Register of Historical Resources, established in 1992, is the State of California's counterpart to the National Register of Historic Places. Its listings include all properties listed in or officially determined eligible for listing in the National Register. Together with the California Register, the Office of Historic Preservation (OHP) maintains two other registers to promote historic preservation in the state: California Historical Landmarks, a designation for properties of statewide historic importance, and Points of Historical Interest, for properties of countywide or regional importance. At present, there are three sites located within the planning area that are listed as California Historical Landmarks (see Table 2).

Properties included in any of these registers are eligible for a number of state historic preservation incentives, such as property tax reduction, benefits provided by the California Heritage Fund, alternative building regulations under the State Historic Building Code, special historic preservation bond measures, and seismic retrofit tax credits.

REGULATORY GUIDELINES ON CULTURAL RESOURCES MANAGEMENT

As mentioned above, Section 106 of the National Historic Preservation Act mandates that federal agencies or HUD-designated local agencies with jurisdiction over federal or

federally assisted undertakings take into account the effect of the undertakings on any "historic properties" during the planning process (16 USC 470f). For projects with no federal involvement, the California Environmental Quality Act (CEQA) similarly requires lead agencies to take the necessary action to prevent substantial adverse changes to "historical resources" (PRC §21084.1). Although termed differently in NHPA and CEQA, "historic properties" and "historical resources" both refer to a special class of cultural resources that meet the definitions set forth in the statutes and their implementation regulations.

The term "cultural resource" refers to any physical evidence of human activities that possesses potential historical, archaeological, or traditional cultural value. Among the examples that are most frequently noted as cultural resources are buildings, structures, historic districts, archaeological sites, and such objects as statues and street fixtures. In recent years, cultural resources also began to include non-traditional property types, including historical landscapes and natural features that have acquired cultural significance in history. In order to be considered potentially significant, cultural resources usually need to meet a certain age criterion. In the State of California, the age threshold is generally set at 50 years from the present time.

"Historic properties," as defined by the Advisory Council on Historic Preservation, include "prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior" (36 CFR 800.16(l)). The eligibility for inclusion in the National Register is determined by applying the following criteria:

- The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and
- (a) that are associated with events that have made a significant contribution to the broad patterns of our history; or
 - (b) that are associated with the lives of persons significant in our past; or
 - (c) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
 - (d) that have yielded, or may be likely to yield, information important in prehistory or history. (36 CFR 63)

"Historical resources," according to PRC §5020.1(j), "includes, but is not limited to, any object, building, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of

California." More specifically, CEQA guidelines state that the term "historical resources" applies to any such resources listed in or determined to be eligible for listing in the California Register of Historical Resources, included in a local register of historical resources, or determined to be historically significant by the Lead Agency (Title 14 CCR §15064.5(a)(1)-(3)).

Regarding the proper criteria of historical significance, CEQA guidelines mandate that "a resource shall be considered by the lead agency to be 'historically significant' if the resource meets the criteria for listing on the California Register of Historical Resources" (Title 14 CCR §15064.5(a)(3)). A resource may be listed in the California Register if it meets any of the following criteria:

- (1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
- (2) Is associated with the lives of persons important in our past.
- (3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
- (4) Has yielded, or may be likely to yield, information important in prehistory or history. (PRC §5024.1(c))

A local register of historical resources, as defined by PRC §5020.1(k), "means a list of properties officially designated or recognized as historically significant by a local government pursuant to a local ordinance or resolution." As mentioned above, the City of Victorville does not maintain a list of designated historic sites at the present time, but the Victorville Chamber of Commerce has designated 17 sites in the downtown area as points of local historical interest. If that list is or becomes officially endorsed by the City of Victorville, as a matter of City policy, the 17 sites on the list would be "presumed to be historically or culturally significant . . . unless the preponderance of the evidence demonstrates [otherwise]" (PRC §21084.1).

In summary, any property that meets one or more of the criteria for listing in the National Register or the California Register, or that is officially designated a historical resource by a local government agency, falls under the protection of NHPA and/or CEQA. Depending on the nature, significance, integrity, and current condition of the property, the proper form of protection may range from on-site preservation to project effect mitigation, such as in-depth documentation for historic buildings and data recovery excavation for archaeological sites.

RECOMMENDATIONS

The key to successful cultural resource management is the identification and evaluation of resources early in the planning process for any project or program. A number of archaeological sites and historic-period buildings have been previously recorded in the planning area. As development increases, and as more of the planning area is surveyed systematically for cultural resources, it is expected that additional resources will be identified.

Victorville's lack of 19th or early 20th century palatial mansions and spectacular showcases of historic architecture does not mean that there is a lack of historical resources to be preserved. Contrary to popular views that dominated the study of community history in bygone years, the understanding and preservation of "total history," including representations of the lifeways of the less influential and less affluent, are at least as important as saving a great architectural landmark or the home of a great man.

The presence of a historic building/structure or an archaeological site on a piece of property, contrary to widespread misunderstanding, does not necessarily mean that the property has become "untouchable." When cultural resources are properly identified, accurately plotted, and carefully evaluated against established significance criteria, that information can be incorporated into development plans in a way that benefits both the developer and the preservationist. Even in cases where the preservation of the property proves infeasible, significant qualities about the property can and often are salvaged through mitigation measures despite the physical loss of the property.

In order to bring about early detection and evaluation of cultural resources, CRM TECH recommends that the City of Victorville incorporate the following procedures into the planning process:

- Establish a transmittal system with the Archaeological Information Center at the San Bernardino County Museum, Redlands. When a project is in its initial phase, the City may send a location map to the AIC for a transmittal-level records search. The transmittal identifies the presence or absence of known cultural resources and/or previously performed studies in and near the project area. The AIC also offers recommendations regarding the need for additional studies, if warranted.
- Adopt a City policy to make or require every reasonable effort to identify and document cultural resources that may be affected by proposed development projects and other landscape-altering activities. In most cases, such effort entails intensive-level cultural resources surveys, commonly known as "Phase I studies," by qualified archaeologists, historians, and/or architectural historians, especially in areas of high sensitivity for cultural resources, as outlined in Figures 9 and 10. The scope of such a survey should include, as appropriate, in-depth records search at the AIC, historic background research, intensive-level field survey, consultation with the Mohahve

Historical Society, and consultation with the appropriate Native American representatives and tribal organizations.

- Pursue further, government-to-government consultation with the Native American representatives and tribal organizations listed in Appendix 2 in order to comply with SB 18 mandate. The specific steps necessary to complete the consultation process, as outlined in SB 18 guidelines (OPR 2005:10-11), are summarized below:
 1. Begin formal consultation with the tribes by providing documents and other forms of information requested by the tribes and hold in-person meetings with each individual tribe, if requested by the tribe, throughout the duration of the general plan process, including deliberation of the plan proposal through the planning commission and/or the city council.
 2. At least 45 days prior to adopting or substantially amending the general plan, refer the proposed actions to the tribes and open a 45-day comment period before approval by the city council. Provide notice of hearing to the tribes and any other persons who have requested such notice 10 days prior to public hearings. Hold public hearings of board of supervisors/city council to take final action on general plan.
 3. The consultation process will be considered concluded at the point when:
 - a. the parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
 - b. either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning appropriate measures of preservation or mitigation (OPR 2005:18).

In addition to the recommendations above, the City may also find it beneficial to take the following steps towards formulating a comprehensive historic preservation program:

- Conduct a citywide cultural resources survey to inventory all cultural resources within the planning area.
- On the basis of the citywide survey, maintain and expand as necessary a historical resources inventory to provide an up-to-date register of known cultural resources.
- Enact a historic preservation ordinance and/or prepare a historic preservation plan to outline the goals and objectives of the City's historic preservation programs and present an official historic context statement for the evaluation of cultural resources within the City's jurisdiction.
- Participate in the Certified Local Government program administered by the National Park Service and the State Historic Preservation Officer.
- Encourage property owners and other citizens to nominate qualified properties to the city's inventory system and/or any federal or state registers.

- Provide citizens with all incentives, assistance, and opportunities for historic preservation that are available through various federal, state, or city programs.
- Implement a systematic program to advance public awareness of the city's heritage, generate broad support for its preservation, and enhance community pride in the city.

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- 1856b Plat Map: Township No. IV North Range No. V West, San Bernardino Meridian; surveyed in 1855-1856.
- 1856c Plat Map: Township No. IV North Range No. VI West, San Bernardino Meridian; surveyed in 1855-1856.
- 1856d Plat Map: Township No. 5 North Range No. 4 West, San Bernardino Meridian; surveyed in 1853-1855.
- 1856e Plat Map: Township No. V North Range No. V West, San Bernardino Meridian; surveyed in 1853-1855.
- 1856f Plat Map: Township No. V North Range No. VI West, San Bernardino Meridian; surveyed in 1853-1855.
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APPENDIX 1:
PERSONNEL QUALIFICATIONS

PRINCIPAL INVESTIGATOR/HISTORIAN
Bai "Tom" Tang, M.A.

Education

- 1988-1993 Graduate Program in Public History/Historic Preservation, UC Riverside.
1987 M.A., American History, Yale University, New Haven, Connecticut.
1982 B.A., History, Northwestern University, Xi'an, China.
- 2000 "Introduction to Section 106 Review," presented by the Advisory Council on Historic Preservation and the University of Nevada, Reno.
1994 "Assessing the Significance of Historic Archaeological Sites," presented by the Historic Preservation Program, University of Nevada, Reno.

Professional Experience

- 2002- Principal Investigator, CRM TECH, Riverside, California.
1993-2002 Project Historian/Architectural Historian, CRM TECH, Riverside, California.
1993-1997 Project Historian, Greenwood and Associates, Pacific Palisades, California.
1991-1993 Project Historian, Archaeological Research Unit, UC Riverside.
1990 Intern Researcher, California State Office of Historic Preservation, Sacramento.
1990-1992 Teaching Assistant, History of Modern World, UC Riverside.
1988-1993 Research Assistant, American Social History, UC Riverside.
1985-1988 Research Assistant, Modern Chinese History, Yale University.
1985-1986 Teaching Assistant, Modern Chinese History, Yale University.
1982-1985 Lecturer, History, Xi'an Foreign Languages Institute, Xi'an, China.

Honors and Awards

- 1988-1990 University of California Graduate Fellowship, UC Riverside.
1985-1987 Yale University Fellowship, Yale University Graduate School.
1980, 1981 President's Honor List, Northwestern University, Xi'an, China.

Cultural Resources Management Reports

Preliminary Analyses and Recommendations Regarding California's Cultural Resources Inventory System (With Special Reference to Condition 14 of NPS 1990 Program Review Report). California State Office of Historic Preservation working paper, Sacramento, September 1990.

Numerous cultural resources management reports with the Archaeological Research Unit, Greenwood and Associates, and CRM TECH, since October 1991.

Membership

California Preservation Foundation.

PRINCIPAL INVESTIGATOR/ARCHAEOLOGIST Michael Hogan, Ph.D., RPA*

Education

- 1991 Ph.D., Anthropology, University of California, Riverside.
1981 B.S., Anthropology, University of California, Riverside; with honors.
1980-1981 Education Abroad Program, Lima, Peru.
- 2002 Section 106—National Historic Preservation Act: Federal Law at the Local Level. UCLA Extension Course #888.
2002 "Recognizing Historic Artifacts," workshop presented by Richard Norwood, Historical Archaeologist.
2002 "Wending Your Way through the Regulatory Maze," symposium presented by the Association of Environmental Professionals.
1992 "Southern California Ceramics Workshop," presented by Jerry Schaefer.
1992 "Historic Artifact Workshop," presented by Anne Duffield-Stoll.

Professional Experience

- 2002- Principal Investigator, CRM TECH, Riverside, California.
1999-2002 Project Archaeologist/Field Director, CRM TECH, Riverside.
1996-1998 Project Director and Ethnographer, Statistical Research, Inc., Redlands.
1992-1998 Assistant Research Anthropologist, University of California, Riverside
1992-1995 Project Director, Archaeological Research Unit, U. C. Riverside.
1993-1994 Adjunct Professor, Riverside Community College, Mt. San Jacinto College, UC Riverside, Chapman University, and San Bernardino Valley College.
1991-1992 Crew Chief, Archaeological Research Unit, U. C. Riverside.
1984-1998 Archaeological Technician, Field Director, and Project Director for various southern California cultural resources management firms.

Research Interests

Cultural Resource Management, Southern Californian Archaeology, Settlement and Exchange Patterns, Specialization and Stratification, Culture Change, Native American Culture, Cultural Diversity.

Cultural Resources Management Reports

Author and co-author of, contributor to, and principal investigator for numerous cultural resources management study reports since 1986.

Memberships

* Register of Professional Archaeologists.
Society for American Archaeology.
Society for California Archaeology.
Pacific Coast Archaeological Society.
Coachella Valley Archaeological Society.

PROJECT ARCHAEOLOGIST/REPORT WRITER Josh Smallwood, B.A.

Education

1998 B.A., Anthropology, Humboldt State University, Arcata, California.
1997 Archaeological Field School, Fort Ross Historic District, Fort Ross, California.
Archaeological Field School, Coastal Test and Mitigation Projects, Eureka, California.
1996 Archaeological Field School, Mad River Watershed Surveys, Blue Lake, California.
1994 A.A., Anthropology, Palomar College, San Marcos, California.
1993 Archaeological Field School, San Pasqual Battlefield, San Pasqual, California.
Archaeological Field School, Las Flores Asistencia, Camp Pendleton, CA.
1992 Archaeological Field School, Palomar College Campus Late Prehistoric Sites, San Marcos, California.
1994- Extensive study of lithic resource procurement strategies, reduction technology, tool manufacture, and reproduction.
2002 "Historical Archaeology Workshop," presented by Richard Norwood, Base Archaeologist, Edwards Air Force Base.
2001 "CEQA and Section 106 Basics," presented by Richard Carrico, Principal Investigator, Mooney & Associates, San Diego.
"OSHA Safety Training for Construction Monitors," presented by OSHA and City of San Diego.
2000 "HABS/HAER Recording Methods for Historic Structures," presented by Robert Case, Historic Archaeologist, Mooney & Associates, San Diego.
1998 "Unexploded Ordinance Training," presented by EOD officers, Fort Irwin Army Training Facility, Barstow.
1997 "Obsidian Sourcing through Characterization," presented by Thomas Origer, Sonoma State University.

Professional Experience

- 2002- Project Archaeologist/Report Writer, CRM TECH, Riverside, California.
- Archaeological field work, historic-period building surveys, historic archaeologist, marine shell and lithic analysis.
 - Historical background research based on published literature, historical maps, oral interviews, and county archival records.
- 1997-2002 Archaeologist for several environmental consultants, Department of Defense subcontractors, and Humboldt State University/Bureau of Land Management cooperative projects. Report writer, field crew, and crew chief in charge of survey, testing, data recovery, and monitoring projects for large public utility and military projects, marine shell, lithic, and historic-period artifact analysis.

Cultural Resources Management Reports

Co-author of and contributor to numerous CEQA and Section 106 compliance studies since 1997.

PROJECT HISTORIAN/ARCHITECTURAL HISTORIAN Casey Tibbet, M.A.

Education

- 2005 M.A., History (Historic Preservation), University of California, Riverside.
- 2002 Museum Research and Interpretation, Program in Historic Resources Management, University of California, Riverside.
- 1987 B.A., Political Science, University of California, Riverside.

Professional Experience

- 2003- Project Historian/Architectural Historian, CRM TECH, Riverside.
- 1990-2003 Associate Planner, Planning Department, City of Riverside.
- 2002 Organization and review of five historic surveys for various neighborhoods in the City of Riverside.
- 2002 Update and re-organization of the Wood Streets Neighborhood Conservation Area survey.
- 1999-2003 Section 106 and environmental reviews per NEPA for the City of Riverside Community Development Block Grant (CDBG) Program and other federally funded projects.
- 1990-2003 Application of CEQA to public and private development projects in the City of Riverside and surrounding areas, and review of related archaeological, biological, and historic surveys.

Membership

NATIVE AMERICAN LIAISON
Laura Hensley Shaker, B.S.

Education

- 1998 B.S., Anthropology (with emphasis in Archaeology), University of California, Riverside.
- 1997 Archaeological Field School, University of California, Riverside.
- 2002 "Historic Archaeology Workshop," presented by Richard Norwood, Base Archaeologist, Edwards Air Force Base; presented at CRM TECH, Riverside.
- 1999 "Unexploded Ordinance Training," presented by EOD officers; Fort Irwin Army Training Facility, Barstow.

Professional Experience

- 1999-1999 Project Archaeologist, CRM TECH, Riverside.
- 1999 Archaeological survey and excavation at Vandenburg Airforce Base; Applied Earthworks, Lompoc.
- 1999 Archaeological survey at Fort Irwin Army Training Facility, Barstow; A.S.M. Affiliates, Encinitas.
- 1998-1999 Paleontological field work and laboratory procedures, Eastside Reservoir Project; San Bernardino County Museum, Redlands.
- 1998 Archaeological survey at the Anza-Borrego State Park; Archaeological Research Unit, U.C. Riverside.
- 1997-1998 Archaeological survey and excavation at the Twentynine Palms Marine Corps Air and Ground Combat Center; Archaeological Research Unit, U.C. Riverside.

NATIVE AMERICAN LIAISON

John J. Eddy, B.A.

Education

- 2002 B.A., Anthropology/History, California State University, San Bernardino.
- 2000 Archaeological Field School, Willow II survey and data recovery of prehistoric and historic sites, Big Bear, California.
- Trained in both prehistoric and historic-era artifact analysis.

Professional Experience

- 2004- Field Crew Chief/Native American Liaison/Report Writer, CRM TECH, Riverside.
- Lead field crew on surveys and test/mitigation excavations; consult with Native American representatives per Section 106 regulations; coordinate telecommunication among Native American representatives, project proponents, lead/responsible agencies, and CRM TECH management; prepare site records and sections of cultural resource reports.
- 2003- Project Archaeologist/Paleontological Monitor, CRM TECH, Riverside.
- Surveys; test excavations; data recoveries; monitoring of earth-moving operations; computer-assisted cartography; site record preparation.
- 2001 Cultural Anthropology internship, California State University, San Bernardino; Genealogy of Gabrielino Band of Mission Indians; Dr. Alan Turner, Director.
- Oral interviews; record searches; special collections research; participation in/observation of traditional cultural and religious ceremonies.

Memberships

Society for American Archaeology
Society for California Archaeology
Archaeological Conservancy
National Parks Conservation Foundation
National Trust for Historic Preservation

Coachella Valley Archaeological Society

APPENDIX 2:

**CORRESPONDENCES WITH
NATIVE AMERICAN REPRESENTATIVES***

* A sample letter is presented. For a complete list of persons contacted, see telephone log.



CRM TECH

FAX COVER SHEET

4472 Orange Street
Riverside, CA 92501
951-784-3051 • Tel
951-784-2987 • Fax

To:

Native American
Heritage Commission

Fax:

(916) 657-5390

From:

Laura Hensley Shaker

Date:

March 22, 2005

Number of pages (including this
cover sheet):

2

HARDCOPY:

 will follow by mail

 √ will not follow unless
requested

RE: Sacred Land records search

This is to request a Sacred Lands records search. The project is a large pipeline that spans over several different quad sheets. So I am sending over the index map of the project area rather than all of the full size quad sheets.

- **Name of project:** 1550: Victorville General Plan
- **Project size:** More than 75 square miles
- **Location:** City of Victorville, San Bernardino Co.
- **USGS 7.5' quad sheet data:**

Adelanto, Baldy Mesa, Hesperia, Helendale,
Victorville, and Victorville NW

Please call if you need more information or have any questions.

Results may be faxed to the number above.

I appreciate your assistance in this matter.

Thank you,

Laura Hensley Shaker
CRM TECH

General index map included

April 7, 2005

Bernadette Brierty, Cultural Resource Coordinator
San Manuel Band of Mission Indians
P. O. Box 266
Patton, CA 92369

RE: Victorville General Plan Update
City of Victorville, San Bernardino County
CRM TECH Contract No. 1550

Dear Ms. Brierty:

Under the provisions of recent legislation (SB 18-Traditional Tribal Places), any local public agencies compiling a general plan or a specific plan is required to carry out Native American consultation with the local tribes.

CRM TECH has been retained by the City of Victorville to conduct the Native American consultation on behalf of the City for the latest update of the Victorville General Plan. Therefore, I am writing to inquire if you or other members of your tribe have any knowledge of sacred/religious sites or other sites of Native American traditional cultural concern within or near the planning area, which is depicted on the accompanying map.

Due to the large size of the planning area, the archaeological records search remains ongoing at the Archaeological Information Center, located on the at the San Bernardino County Museum, Redlands. A field reconnaissance of the planning area is currently pending.

Any information you can provide about Native American concerns regarding the location of this undertaking would be greatly appreciated. Thank you very much for your consideration of this matter.

Sincerely,

Laura Hensley Shaker
CRM TECH

Telephone Log, Consultation with Native American Representatives

Name	Affiliation	Time & Date	Responses
Britt Wilson	Morongo Band of Mission Indians	None.	Mr. Wilson responded in a letter dated April 12, 2005.
Maurice Lyons	Morongo Band of Mission Indians	None.	Britt Wilson responded on behalf of the Morongo Band.
John Valenzuela	San Fernando Band of Mission Indians	9:00 am; May 6, 2005 10:57 am; May 9, 2005	Mr. Valenzuela has serious concerns regarding future development in this area, especially in areas surrounding the Mojave River and Mojave Narrows. Furthermore, Mr. Valenzuela states that the Village of <i>Topi Povie</i> lies within the boundaries of the general plan.
Deron Marquez	San Manuel Band of Mission Indians	9:15 am; May 6, 2005 12:50 pm; May 9, 2005	Mr. Marquez referred to Bernadette Brierty as the contact for the San Manuel Band.
Error! Contact not defined.	San Manuel Band of Mission Indians	9:04 am; May 6, 2005 12:53 pm; May 9, 2005 3:53 pm; May 9, 2005	Ms. Brierty will send us a formal letter regarding the General Plan. Furthermore, SB18 states that consultation must be government-to-government.
Goldie Walker	Serrano Band of Indians	9:10 am; May 6, 2005 1:17 pm; May 9, 2005	Ms. Walker wishes to be informed of any archaeological finding encountered during future development in the planning area.

APPENDIX 3:
CORRESPONDENCES WITH LOCAL COMMUNITY*

* Sample letters are presented. For a complete list of persons contacted, see telephone log.

June 8, 2005

Mr. Bill Webb
City of Victorville Planning Department
14343 Civic Drive
Victorville, CA 92392

Re: Cultural Resources Overview Study
City of Victorville General Plan

Dear Mr. Webb:

CRM TECH is currently performing a cultural resources overview study in conjunction with the pending update of the City of Victorville General Plan. The scope of the study, as you may be aware, covers an approximately 75-square-mile area in and around the City of Victorville, including the City proper as well as its sphere of influence (see attached map).

As part of the environmental overview for the general plan, the purpose of this study is to provide the City of Victorville with the necessary information and analysis to facilitate cultural resources considerations in the planning process and in formulating City policies. In order to inventory all previously identified cultural resources in the planning area and prepare an overall sensitivity assessment, I am writing to request a copy of the City's local register of historical resources or list of locally designated historical resources, if the City currently maintains such a register/list. In addition, any other information you can provide on cultural resources issues and concerns from the City's perspective will also be greatly appreciated!

Please do not hesitate to contact me at (951) 369-3520 or the number listed below if you have any questions or comments. I look forward to hearing from you soon.

Sincerely,

Josh Smallwood
Project Archaeologist

June 30, 2005

Fran Elgin
Mohahve Historical Society
10334 6th Street
Hesperia, CA 92345

Re: Cultural Resources Overview Study
City of Victorville General Plan

Dear Ms. Elgin:

CRM TECH is currently performing a cultural resources overview study in conjunction with the pending update of the City of Victorville General Plan. The scope of the study, as you may be aware, covers an approximately 75-square-mile area in and around the City of Victorville, including the City proper as well as its sphere of influence (see attached map).

As part of the environmental overview for the general plan, the purpose of this study is to provide the City of Victorville with the necessary information and analysis to facilitate cultural resources considerations in the planning process and in formulating City policies. In order to inventory all previously identified cultural resources in the planning area and prepare an overall sensitivity assessment, I am writing to request a copy of the Mohahve Historical Society's register of historical resources or list of locally designated historical resources, if the society currently maintains such a register/list. In addition, any other information you can provide on cultural resources issues and concerns from the society's perspective will also be greatly appreciated!

Please do not hesitate to contact John Eddy at (951) 784-3051 if you have any questions or comments. I look forward to hearing from you soon.

Sincerely,

Josh Smallwood
Project Archaeologist

Telephone Log, Consultation with the City and the Mohahve Historical Society

Name	Phone	Comments
Fran Elgin, Member Mohahve Historical Society	None.	Ms. Elgin responded by email on July 14, 15, and 18 (copy attached).
Jim Mustra, President Mohahve Historical Society	June 30, 2005; 9:00 am	Mr. Mustra stated that the society would review the information in CRM TECH's letter and share it with the membership.
Chris Borchert, City of Victorville Planning Department	July 8, 2005; 9:50 am	Mr. Borchert stated that the Victorville General Plan, the Old Town Specific Plan and the SCLA Specific Plan Amendment were the only documents that the City was aware of that contained information regarding historic properties.

Email response from Fran Elgin

Subject: Re: Mojave Historical Society Info
Date: Thursday, July 14, 2005 10:36 AM
From: FRANCES ELGIN <franelgin@verizon.net>
To: "John J. Eddy" <reports@crmtech.us>

Dear Mr. Eddy:

As far as I know, the historical society has never formally named historic properties. They have taken numerous field trips over the years to historic spots, and about 15 years ago, one of the members, Ellsworth Sylvester, wrote up sort of a guide to places, but it was not official. I could try to locate that if you are interested. Fran Elgin

Date: Friday, July 15, 2005 10:42 AM

Mr. Eddy, I'll get to it early next week when I can get back to the college library. Fran

Date: Monday, July 18, 2005 3:52 PM

Mr. Eddy,
I'm going to mail what I could find. I hope you can make some sense of it. The maps were in a separate place, but they had numbers on them. I didn't have time to try to match them.

Also, you might want to contact the person at the Santa Fe Trading Co., 15464 Seventh St., Victorville, at 760-962-1290 who leads 3-hour walking tours of Victorville once a month. I think he could help, if you haven't already talked to him.

Fran Elgin

APPENDIX 4:
RECORDS SEARCH RESULTS

PALEONTOLOGICAL RESOURCES TECHNICAL REPORT
CITY OF VICTORVILLE GENERAL PLAN UPDATE

City of Victorville
San Bernardino County, California

For Submittal to:

Planning Department
City of Victorville
14343 Civic Drive
P.O. Box 5001
Victorville, CA. 92393-5001

Prepared for:

Joann Lombardo
Comprehensive Planning Services
P.O. Box 15592
Newport Beach, CA 92659

Prepared by:

Harry M. Quinn, Geologist/Paleontologist
Clarence Bodmer, Report Writer
CRM TECH
1016 East Cooley Drive, Suite A/B
Colton, CA 92324

Michael Hogan, Principal Investigator
Bai "Tom" Tang, Principal Investigator

February 6, 2008

CRM TECH Contract #2152P
Approximately 150 Square Miles
Various Sections or Portions of Sections in T4-7N R3-6W, San Bernardino Base Meridian
USGS Adelanto, Apple Valley North, Baldy Mesa, Helendale, Hesperia, Turtle Valley, Victorville,
and Victorville NW, Calif., 7.5' quadrangles

EXECUTIVE SUMMARY

Between October 2007 and February, 2008, CRM TECH performed a paleontological resources overview study on an approximately 150-square-mile area in and near the City of Victorville, San Bernardino County, California. The subject of the study is the planning area for the City's general plan update, measuring approximately 22 miles along the north-south axis and 17.5 miles along the east-west axis. It includes the current city limits of Victorville as well as the City's sphere of influence, encompassing various sections or portions of sections in T4-7N R3-6W, San Bernardino Base Meridian, as depicted in the USGS Adelanto, Apple Valley North, Baldy Mesa, Helendale, Hesperia, Turtle Valley, Victorville, and Victorville NW, Calif., 7.5' quadrangles.

As part of the environmental review process for the general plan update, the purpose of this study is to provide the City of Victorville with the necessary information and analysis to facilitate paleontological resources considerations in the planning process and in formulating municipal policies. In order to inventory previously identified paleontological resources and prepare a sensitivity assessment of the planning area, CRM TECH initiated records searches at the San Bernardino County Museum and the Natural History Museum of Los Angeles County, conducted a literature search, and carried out a reconnaissance-level field survey.

The geomorphology within the planning area is characterized by mountains, terraces, and basins. It features elevated and mountainous terrain of igneous and metamorphic bedrock in the northeast; relatively level areas of coalescing alluvial fans in the north-central portion and on the eastern and western edges of the midsection; ancestral and current Mojave River sediments in the stream channel; Recent alluvium at lower elevations in the northwest and southwest corners; and surficial deposits of Holocene alluvium, which likely cover subsurface deposits of the Victorville Fan in the vicinity of the Oro Grande Wash in the south-central portion of the planning area.

In general, the planning area contains five geologic formations of differing ages: Recent alluvium (**Qf**), Pleistocene alluvial fan deposits (**Qof**), Pleistocene Victorville Fan sediments (**Qvf**), Plio-Pleistocene to Recent Mojave River sediments (**MR**), and igneous and metamorphic bedrock (**BR**). These five geologic formations have been determined to have different paleontological sensitivity ratings, ranging from low to high. Based on this information, projects in the planning area would have different potentials to impact paleontological resources, depending on the location of the project area, the depth of impacts, and the sediment lithologies encountered. Thus, an appropriate paleontological monitoring program would differ for different projects according to these variables.

No monitoring is needed in any area where the geologic matrix consists primarily of igneous and metamorphic bedrock (**BR**). Periodic monitoring is recommended within the Holocene-and/or Pleistocene-age alluvial fan sediments and presently active areas of the Mojave River (**Qf**, **Qof**, and **Qvf**), and continuous monitoring will be needed in these areas when potentially fossiliferous sediments are encountered. Continuous monitoring is recommended from the beginning of all earth-moving operations where Plio-Pleistocene-age Mojave River sediments (**MR**) are exposed at or near the surface. For projects located within these relatively sensitive areas, focused paleontological studies may be necessary in order to determine the precise sensitivity of each project area, the appropriate level of monitoring needed, and the depth at which monitoring should start. When continuous monitoring becomes necessary, a program to mitigate impacts to the paleontological resources that may be unearthed is also recommended.

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INTRODUCTION

Between October 2007 and February, 2008, CRM TECH performed a paleontological resources overview study on an approximately 150-square-mile area in and near the City of Victorville, San Bernardino County, California (Fig. 1). The subject of the study is the planning area for the City's general plan update, measuring approximately 22 miles along the north-south axis and 17.5 miles along the east-west axis. It includes the current city limits of Victorville as well as the City's sphere of influence, encompassing various sections or portions of sections in T4-7N R3-6W, San Bernardino Base Meridian, as depicted in the USGS Adelanto, Apple Valley North, Baldy Mesa, Helendale, Hesperia, Turtle Valley, Victorville, and Victorville NW, Calif., 7.5' quadrangles (Figs. 2, 3a, 3b).

As part of the environmental review for the general plan update, the purpose of this study is to provide the City of Victorville with the necessary information and analysis to facilitate paleontological resources considerations in the planning process and in formulating municipal policies. In order to inventory previously identified paleontological resources and prepare a sensitivity assessment of the planning area, CRM TECH initiated records searches at the San Bernardino County Museum and the Natural History Museum of Los Angeles County, conducted a literature search, and carried out a reconnaissance-level field survey. The following report is a complete account of the methods and results of the research, and the final conclusion of this study.

DEFINITION OF PALEONTOLOGICAL RESOURCES

Paleontological resources constitute the remains of prehistoric life, exclusive of any human remains, and include the localities where fossils were collected as well as the sedimentary rock formations from which they were derived. The defining character of fossils or fossil deposits is their geologic age which is typically regarded as older than 10,000 years, the generally accepted temporal boundary marking the end of the last late Pleistocene glaciation and the beginning of the current Holocene epoch.

Paleontological resources are defined as the remains or traces of prehistoric plant and animal life. Fossil remains commonly include marine shells; the bones and teeth of fish, reptiles, and mammals; leaf assemblages; and petrified wood. Fossil traces include internal and external molds (impressions) and casts created by these organisms. It is often the case that fossil resources generally occur only in areas of sedimentary rock (e.g., sandstone, siltstone, mudstone, claystone, or shale).

Occasionally fossils will be exposed at the surface through the process of natural erosion or as a result of disturbances associated with man made excavations; however, they generally lay buried beneath the surficial soils. Thus, the absence of surface fossils does not preclude the possibility of their being present within subsurface deposits, while the presence of fossils at the surface is often a good indication that more remains may be found below the surface.

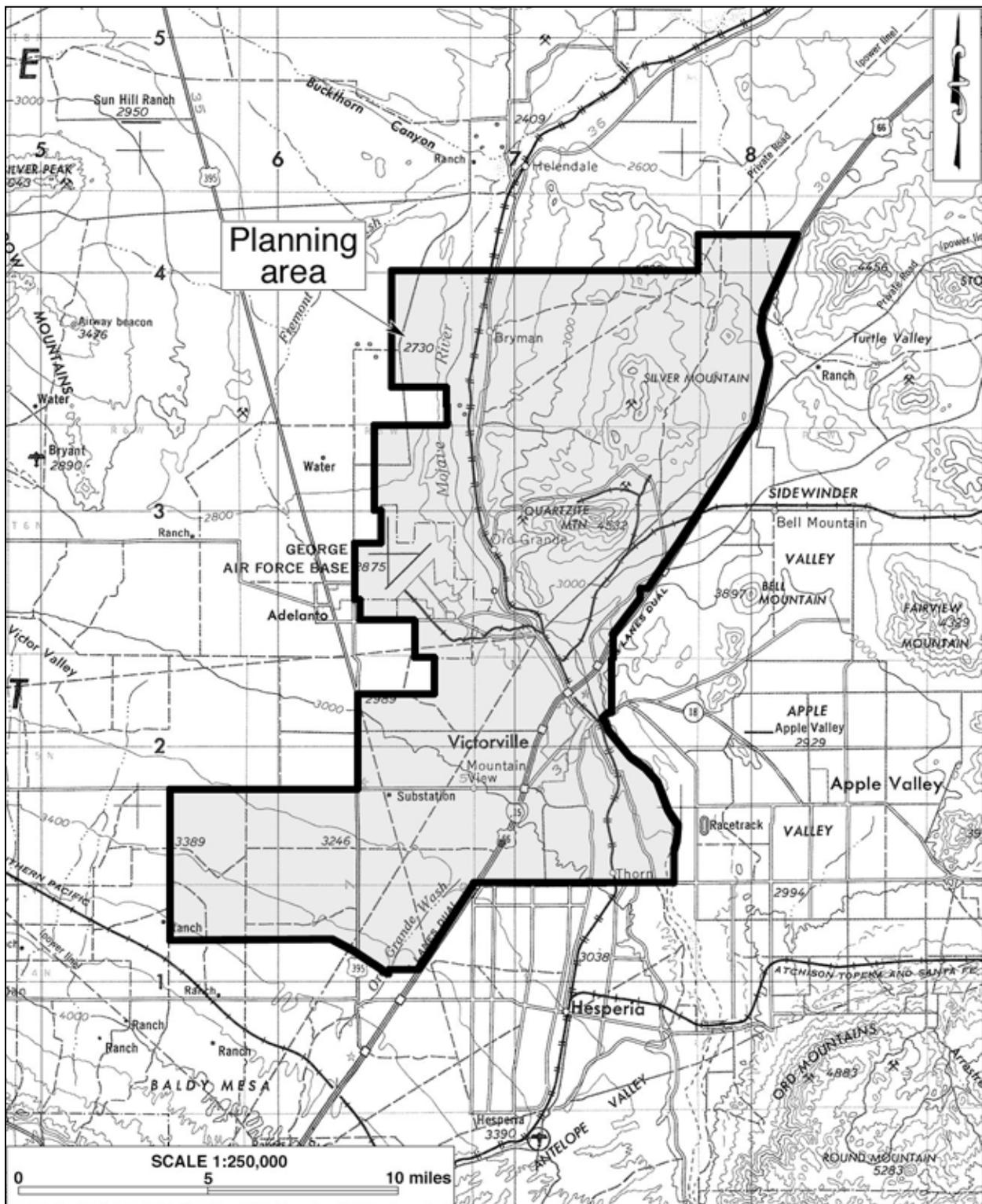


Figure 1. Project vicinity. (Based on USGS San Bernardino, Calif., 1:250,000 quadrangle [USGS 1969])

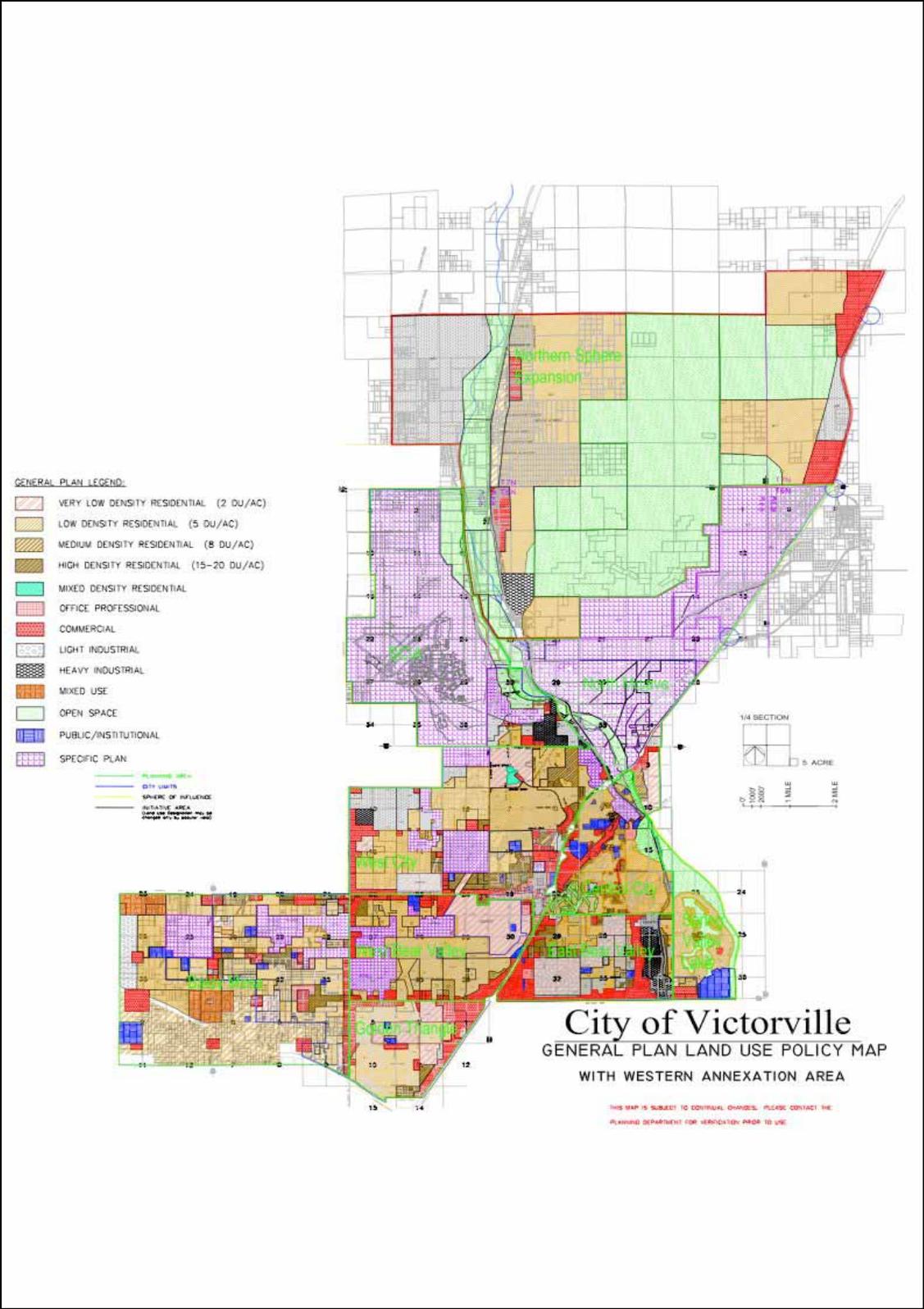


Figure 2. Proposed general plan update. (Diagram provided by Comprehensive Planning Services)

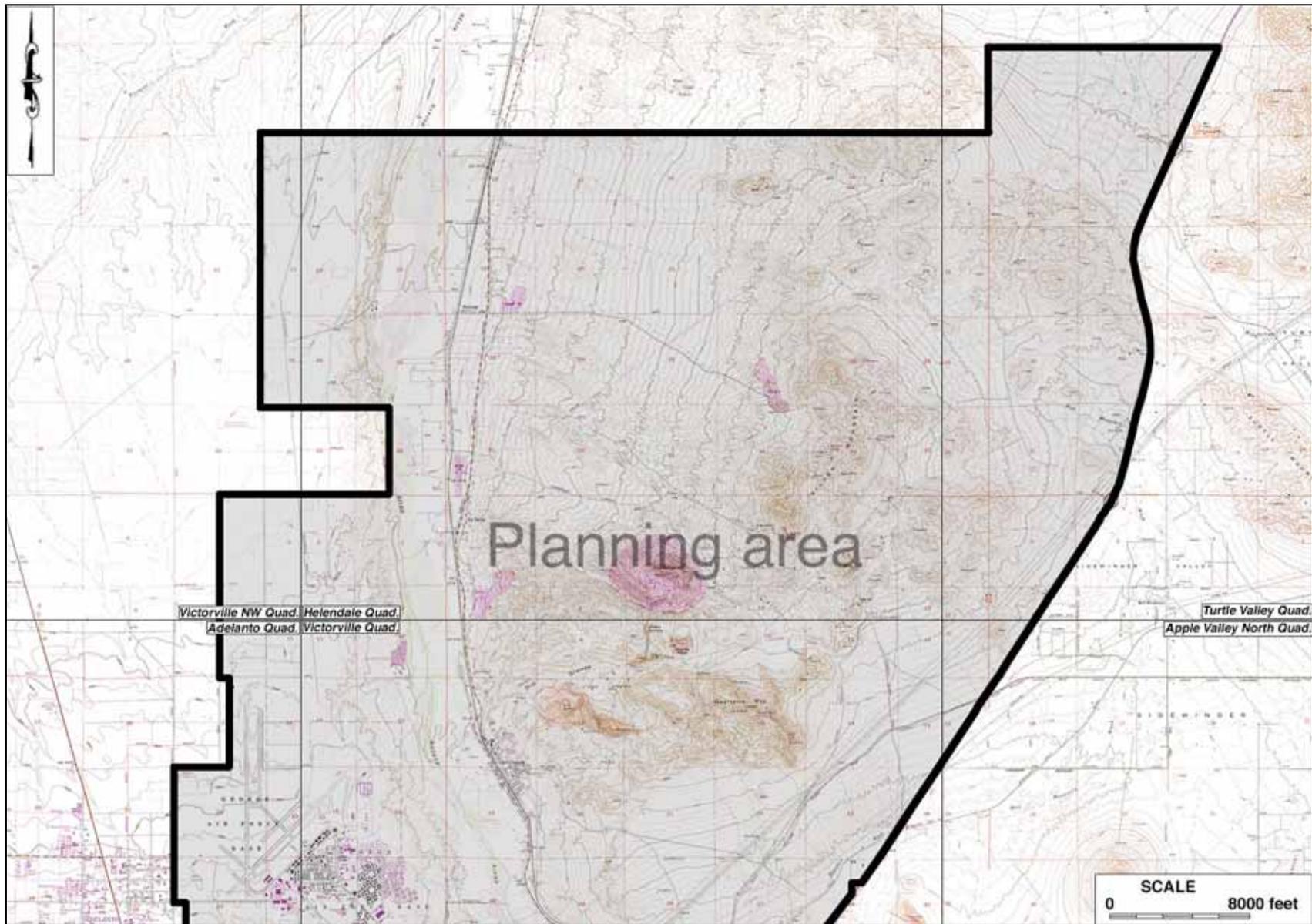


Figure 3a. The northern half of the planning area. (Based on USGS Victorville NW, Adelanto, Helendale, Victorville, Turtle Valley, and Apple Valley North Calif., 1:24,000 quadrangles)

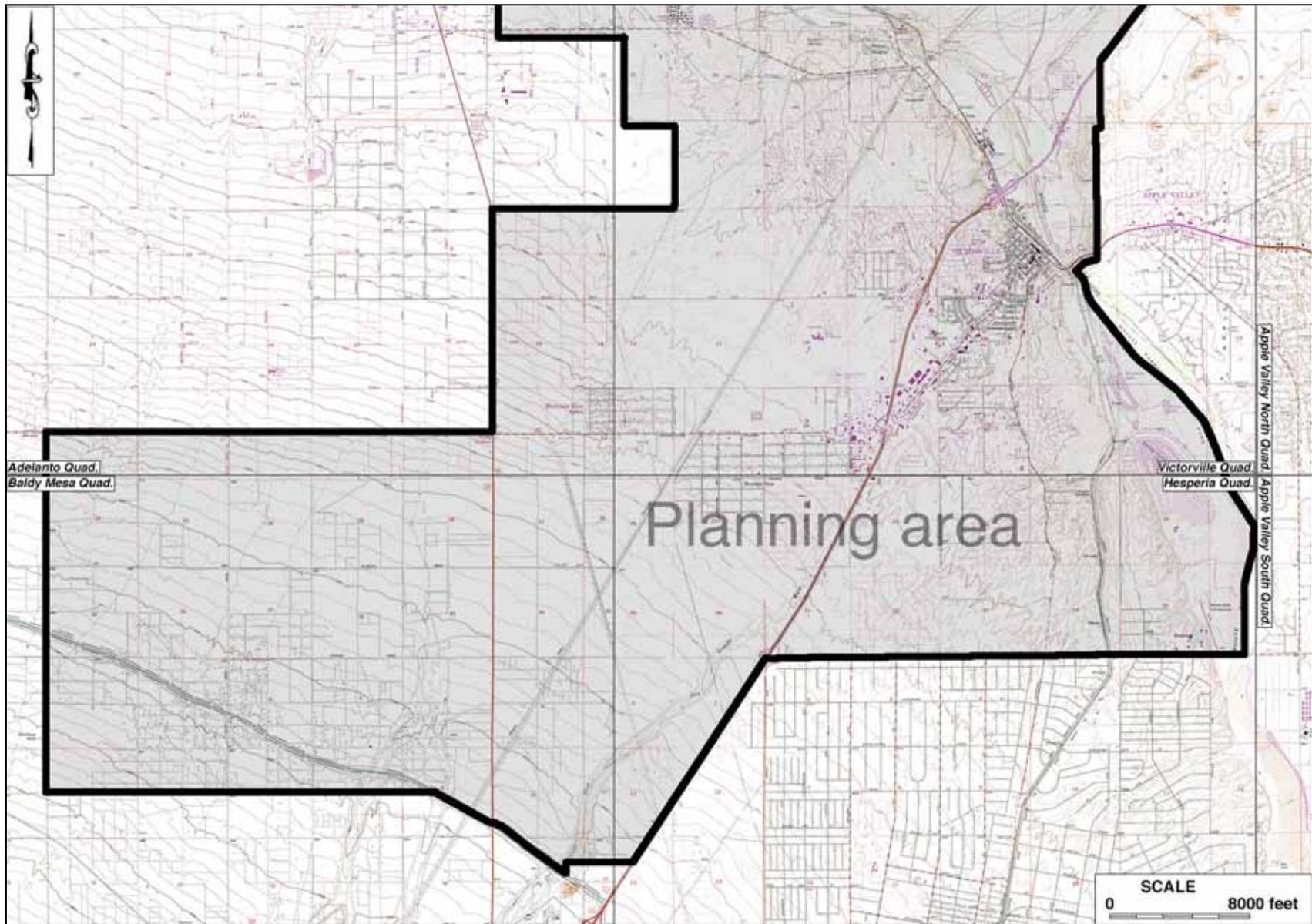


Figure 3b. The southern half of the planning area. (Based on USGS Adelanto, Baldy Mesa, Victorville, Hesperia, Apple Valley North, and Apple Valley South, Calif., 1:24,000 quadrangles)

PALEONTOLOGICAL SENSITIVITY CRITERIA

The fossil record is unpredictable, and the preservation of organic remains is rare, requiring a particular sequence of events involving physical and biological factors. Skeletal tissue with a high percentage of mineral matter is the most readily preserved within the fossil record; soft tissues not intimately connected with the skeletal parts, however, are the least likely to be preserved (Raup and Stanley 1978). For this reason, the fossil record contains a biased selection not only of the types of organisms preserved but also of certain parts of the organisms themselves. As a consequence, paleontologists are unable to know with certainty, the quantity of fossils or the quality of their preservation that might be present within any given geologic unit.

The paleontological sensitivity for a geologic formation is determined by the potential for that formation to produce nonrenewable significant fossils. This determination is based on what fossil resources it has produced in the past at other nearby locations. A geologic formation is defined as a stratigraphic unit identified by its lithic characteristics (e.g., grain size, texture, color, mineral content) and stratigraphic position. There is a direct relationship between fossils and the geologic formations within which they are enclosed, and with sufficient knowledge of the geology and stratigraphy of a particular area and its paleontological resource potential, it is possible for paleontologists to reasonably determine its potential to contain significant nonrenewable vertebrate, invertebrate, or plant fossil remains.

The Society of Vertebrate Paleontology (1995:22-27) issued a set of standard guidelines intended to assist paleontologists to assess and mitigate any adverse effects/impacts to nonrenewable paleontological resources. The Society of Vertebrate Paleontology defined three potential categories of potential paleontological sensitivity for geologic units that might be impacted by the proposed project. These categories are high, low, and undetermined.

- **High:** Geologic units assigned to this category are considered to have a high potential for containing significant nonrenewable vertebrate, invertebrate, or plant fossils because fossils have been recovered nearby from the same geologic formation.
- **Low:** Geologic units are assigned to this category when few significant nonrenewable vertebrate, invertebrate, or plant fossils have been recovered from the same unit nearby.
- **Undetermined:** Geologic units are assigned to this category when there is little or no past history available to base a sensitivity assessment on.

SETTING

The planning area is located within the Mojave Desert geomorphic province of southeastern California (Jenkins 1980:40-41; Harms 1996). Dibblee (1967) and Coombs et al. (1979:7) place the planning area within what they refer to as the Western Mojave Desert, characterized by a high-elevation desert landscape marked by scattered, isolated mountains and numerous broad, shallow basins, some with dry lake beds at their low points. Many of these basins have pediment surfaces developed along the margins, separating the mountains from the basins (Coombs et al. 1979:9). These pediment surfaces are commonly covered by desert pavement that protects them from sheetwash and

channeling (*ibid.*). The mountains and intermountain valleys of the Western Mojave Desert tend to have a northwest-southeast trend that is controlled mainly by faulting (*ibid.*:7).

The basin areas are filled with sediments ranging in geologic age from Miocene to Recent (Dibblee 1967:49-82; Meisling and Weldon 1989:110). In the Barstow area, these sedimentary rocks are interbedded with both acidic and basic flows of volcanic rocks (Bowen 1954; Dibblee 1967:82-110). The Hesperia-Victorville area is located on the Victorville Fan, which was generally considered to have a high potential for containing nonrenewable vertebrate fossil remains (Meisling and Weldon 1989:108; Reynolds and Reynolds 1994). However, recent studies indicate that these sediments, while potentially fossiliferous, are not as fossiliferous as the ancestral Pleistocene-age Mojave River sediments (Scott 2007).

Cox and Tinsley (1999:51) indicate the distribution of what they mapped as the Plio-Pleistocene Mojave River deposits between the Cajon Pass and Barstow areas. Based on their mapping, these older Mojave River sediments pass through the planning area in roughly a linear fashion, beginning in the north where the river enters the planning area today and exiting the southeast corner around Spring Valley Lake.

California's 11 geomorphic provinces are naturally defined geologic regions that display a distinct landscape or landform as each region displays unique, defining features based on geology, fault lines, topographic relief, and climate. The Mojave Desert constitutes the southwestern quadrant of the Basin and Range Province, a vast region dominated by rugged mountain ranges and alluvium-filled basins. The City of Victorville is located within the Victor Valley, which lies on the southern edge of the Mojave Desert in western San Bernardino County. The climate and environment of the planning area is typical of the high desert region, marked by extremes in temperature and aridity. Summer highs reach well over 110°F and winter lows dip below freezing. Average annual precipitation is less than five inches.

Natural and man-made features that approximate the boundaries of the 150-square-mile expanse of the planning area include the sloping alluvial fan north of the Silver Mountain between Interstate 15 and Helendale Road along the northern boundary and Bear Valley Road, a portion of Interstate 15, a segment of the California Aqueduct and Mesa Road for the southern boundary. Its eastern boundary is defined by Interstate 15 in the north, to the Upper Narrows of the Mojave River, where the boundary line follows the west bank of the river and ends at Bear Valley Road. Its western boundary follows Helendale Road in the north, to the western edge of the Southern California Logistics Airport, before passing to the west of the unincorporated community of Mountain View Acres and finally along Caughlin Road.

The geomorphology within the planning area is characterized by mountains, terraces, and basins. It features elevated and mountainous terrain of igneous and metamorphic bedrock in the northeast; relatively level areas of coalescing alluvial fans within the north-central portion and the eastern and western edges of the midsection; ancestral and current Mojave River sediments; Recent alluvium at lower elevations in the northwest and southwest corners; and surficial deposits of Holocene alluvium that likely cover subsurface deposits of the Victorville Fan in the vicinity of the Oro Grande Wash in the south central region of the planning area.



Figure 4. Typical landscapes in and around the planning area. *Clockwise from upper left*: bedrock outcrops in the northeastern portion (view to the northeast); lower-elevation areas with younger Quaternary alluvial deposits, Silver Mountain in the distance (view to the south); active gravel wash deposits of the Mojave River (view to the north); alluvial fan deposits south of the Southern California Logistics Airport (view to the north). (Photos taken on December 7, 2007)

Features of the landscape reflect an area shaped by dynamic forces of sediments carried by wind and water (Fig. 4). Elevations across the planning area range between approximately 2,500 feet above mean sea level in the lower southwestern portion and 4,200 feet above mean sea level in the mountainous northeastern portion.

Much of the surface soils within the relatively level areas are classified as Recent alluvial deposits, which may overlie older Pleistocene-age alluvium at unknown depths. Meanwhile, the elevated and mountainous terrain around the Quartzite, Silver, and Sparkhule Mountains is represented by bedrock materials of quartz monzonite, undifferentiated granites and the Sidewinder volcanic series of Mesozoic age, and granitic gneiss and Oro Grande soils of Paleozoic age. Soils along the banks of the Mojave River consist of undifferentiated older alluvium from the Plio-Pleistocene to Recent ages.

Native vegetation in the Mojave Desert, including the Victor Valley, is characterized by the Creosote Bush plant community (Ornduff 1974:112). These plants include creosote bush (*Larrea divaricata*), brittle bush (*Encelia farinose*), ocotillo (*Fouquieria splendens*), burro weed (*Franseria dumosa*), cheese bush (*Larrea divaricata*), and cholla/prickly pear (*Opuntia* sp.). Another plant community identified on well-drained mesas and desert slopes is the Joshua Tree Woodland (*ibid.*:111), characterized mainly by widely spaced stands of Joshua trees separated by scattered desert brush.

Native fauna in the vicinity include mammals such as desert bighorn sheep, desert kit fox, coyote, spotted skunk, spotted bat, black-tailed jackrabbit, ground squirrels, kangaroo rat, and white-footed mouse (USFS n.d.). Avian fauna consist of eagles, hawks, owls, quail, roadrunners, finches, warblers, and orioles. Typical reptiles include desert tortoise, several species of rattlesnakes, and chuckawalla lizard.

METHODS AND PROCEDURES

RECORD SEARCHES

The records search service was provided by the Regional Paleontologic Locality Inventory located at the San Bernardino County Museum (SBCM) in Redlands and by the Natural History Museum of Los Angeles County (NHMLAC) in Los Angeles. These institutions maintain files of regional paleontological localities as well as supporting maps and documents. The records search results identify any known paleontological localities within the planning area and in the general vicinity.

LITERATURE REVIEW

In addition to the records searches, a literature search was conducted using materials in the CRM TECH library, including unpublished reports produced during surveys of other properties in the area, and the personal library of CRM TECH geologist/paleontologist Harry M. Quinn, California Registered Geologist #3477 (see App. 1 for qualifications).

FIELD RECONNAISSANCE

On December 7, 2007, CRM TECH paleontological surveyor John J. Eddy (see App. 1 for qualifications) carried out a reconnaissance-level field survey of the planning area. Due to the size of the planning area and the nature of this study, the survey methods consist mainly of conducting a "windshield survey" along Interstate 15, State Route 18, Bear Valley Road, Air Expressway Boulevard, Hesperia Road, Helendale Road and other public roadways, but also included inspecting and identifying geological formations and exposed soils along the way. The main purpose of the field reconnaissance was to verify geologic deposits and formations and to help evaluate the sensitivity of the planning area for paleontological resources that may be encountered during future excavation and construction activities.

RESULTS AND FINDINGS

RECORDS SEARCHES

The Natural History Museum of Los Angeles County and the San Bernardino County Museum report a number of vertebrate paleontological localities within the planning area and several more in the general vicinity from within sediment lithologies similar to those known to occur as subsurface deposits in the planning area (McLeod 2007; Scott 2007; see App. 2).

The NHMLAC reports that the elevated areas in the northeastern portion of the planning area—e.g., along the south side of the Helendale Fault, around the Silver, Sparkhule, and Quartzite Mountains, and extending to the Lower Narrows of the Mojave River—consist of bedrock formed of igneous and metamorphic rocks that are devoid of any recognizable vertebrate fossils (McLeod 2007:1). These rock formations are also exposed along the western banks of the Mojave River on the bluffs at the Lower Narrows, on the bluffs across

the Mojave River at the Upper Narrows, and on the elevated terrain east of Interstate 15 to State Route 18 (*ibid.*).

The lower-lying and relatively level terrain on the western margin of the planning area have surficial deposits of younger Quaternary alluvium derived as fan deposits from the San Gabriel Mountains to the south, especially in the southwestern portion, north of the California Aqueduct. These deposits also occur on the eastern side of the Mojave River in the lower-lying areas, on the eastern flanks of the mountains in the northeast portion and in all major drainages (McLeod 2007:2). Typically, these deposits do not contain significant vertebrate fossil remains, at least in the uppermost layers, but they are often underlain, at least in the western portion of the planning area, by older Quaternary deposits that may contain significant vertebrate fossils (*ibid.*).

Older Quaternary deposits are exposed along the western flanks of the mountains in the northeastern portion down to the Mojave River, where they are represented as fan deposits derived from the elevated terrain (*ibid.*). These deposits are also found along the bluffs on the western side of the Mojave River from fluvial sources. Similar older Quaternary deposits, mostly as fan deposits, are exposed between the area around the Southern California Logistics Airport, from Interstate 15 eastwards to the Mojave River, and in any of the major drainages, especially the Oro Grande Wash in the southwestern portion of the planning area (*ibid.*).

Several fossil vertebrate localities were found within these older Quaternary deposits inside the planning area. All of them are located on the western side of the Mojave River and primarily on or near the bluffs (*ibid.*). These localities include fossil specimens of *Equus* (horse) and *Mammuthus columbi* (extinct mammoth) southwest of Bryman, *Equus occidentalis* (extinct horse) and *Bison latifrons* (extinct bison) in the central portion of the planning area, and *Camelops* (camel) in the southern portion between Interstate 15 and Spring Valley Lake (*ibid.*).

Igneous and metamorphic rocks exposed in the mountains and other areas of elevated terrain within the northeastern portion are not likely to contain any vertebrate fossils. Gravel wash deposits in the current Mojave River drainage channel represent active fluvial deposits that rarely contain significant vertebrate fossils (McLeod 2007). The uppermost few feet of the younger Quaternary sands and alluvium exposed in the majority of the western portion of the planning area, as well as along the eastern margins of the mountains and in all drainages in the elevated terrain, are unlikely to yield significant vertebrate fossil remains (*ibid.*:3). However, deeper excavations in the drainages in the elevated terrain and along the eastern margins of the mountains, as well as any excavations in the older Quaternary deposits exposed along the Mojave River bluffs and in any of the major drainages in the planning area, have a good chance of encountering significant fossil vertebrate remains (*ibid.*:3).

The results of the records search conducted by the SBCM indicate the planning area includes several different lithostratigraphic units of differing geologic ages (Scott 2007). Listed in chronological order, they include the Cambrian and Uppermost Precambrian meta-sedimentary rocks, Upper Paleozoic limestone and marble, Mesozoic limestone, calcareous sandstone and siltstone of the Fairview Formation, Mesozoic plutonic and volcanic rocks, undifferentiated Pleistocene older alluvium, Pleistocene fan alluvium of the

Victorville fan, Pleistocene sediments of the ancestral Mojave River, Holocene sediments of the Victorville fan, Holocene and Recent active wash sediments, and the latest Recent (Holocene) disturbed ground (*ibid.*).

Pleistocene alluvium of the ancestral Mojave River and undifferentiated Pleistocene alluvium have a high potential to contain significant nonrenewable paleontologic resources, and are assigned a high paleontologic sensitivity (Scott 2007). Pleistocene sediments of the Victorville Fan may be present at depth, overlain by Holocene sediments, but may lack a lithology conducive to the preservation of fossils and, furthermore, they have not yielded many temporally diagnostic paleontological resources. They have therefore been assigned a low paleontologic sensitivity, along with the Holocene and Recent sediments, which are too young to have any potential to contain any fossil resources. However, these sediments may overlie older fossil-bearing formations present in the subsurface, and so excavations that penetrate into these older formations may impact significant paleontological resources (*ibid.*).

Scott points out that Pleistocene sediments within the relatively level areas of the planning area were laid down by the ancestral Mojave River, which has repeatedly demonstrated this formation's high paleontologic sensitivity, having yielded some 18 different fossil specimens to the west of Victorville (Scott 2007:2). Among some of these fossil specimens are *Mammuthus meridionalis* (extinct southern mammoth), *Equus* (extinct horse), *Hemiauchenia* (extinct llama), *Camelops* (extinct large camel), *Lepus* (jackrabbit), *Sylvilagus* (cottontail rabbit), *Thomomys* (pocket gopher), *Dipodomys* (kangaroo rat), *Perognathus* (pocket mouse), *Paramylodon harlani* (extinct giant ground sloth), *Arctodus* sp. cf. *A. simus* (extinct short-faced bear), and *Sorex* sp. (shrew) (*ibid.*).

The SBCM has determined that fossils from the Victorville and Hesperia regions appear to be derived primarily from exposures of the Mojave River sediments rather than from the Victorville Fan. Exposures of the Victorville Fan are deemed less fossiliferous than previously reported, except where the nature of the sediments of the fan suggest an environment that may be conducive to fossil preservation (Scott 2007:3). In conclusion, the SBCM reports excavation into undisturbed subsurface Pleistocene sediments in the Victorville region may have a high potential to impact paleontologic resources, depending upon the lithology and depositional context of this alluvium.

LITERATURE REVIEW

Bowen (1954:Plate 1) mapped portions of the planning area except for those that fall within the Baldy Mesa, Hesperia, and Apple Valley South quadrangles. Most of the valley and pediment areas were mapped as **Qal**, or alluvium of Recent age (*ibid.*). A narrow strip along the Mojave River is mapped as mainly **Qoal** and some **Qt**, or older alluvium of Pleistocene age and river terrace deposits of Recent age, respectively (*ibid.*). A large pediment area east of the Mojave River and north of Oro Grande contains **Qoal** (*ibid.*). The mountains, or elevated areas within the project area, are mapped as bedrock features, mainly **qm**, **Cog**, **Trsv**, **g**, and **gn** (*ibid.*). The **qm** is quartz monzonite of Mesozoic age, the **Cog** belongs to the Oro Grande series of Paleozoic age, the **Trsv** represents the Sidewinder volcanic series of Mesozoic age, the **g** is undifferentiated granite of Mesozoic age, and the **gn** is Paleozoic-age granitic gneiss (*ibid.*).

Of all the bedrock materials present within the planning area, only the limestone portion of the Oro Grande series is known to have produced invertebrate fossils (Bowen 1954:34). However, recrystallization of the limestone by later granitic intrusion has likely obliterated most fossils that may have been originally present within the sediments of this series (*ibid.*). In addition, much of the **Cog** mapped within the project area has since been quarried as a binding agent to make cement after this mapping was completed.

Bowen (1954:91) notes:

Pleistocene alluvium closely resembles Recent alluvium and much of the latter is reworked Pleistocene material. However, most Pleistocene deposits have been uplifted and dissected whereas Recent deposits are being built into a new base level of different aspect and elevation. Scattered occurrences of mammalian remains serve to date the deposits.

Dibblee (1967:Plate 1) mapped almost the entire planning area and most of the valley and pediment areas as **Qa**, or alluvium of Pleistocene and Recent age. He mapped the area along the Mojave River, the area west of the river, near Phelan and north Adelanto (the Victorville Fan area), and a pediment area east of the Mojave River and north of Oro Grande as **Qoa**, or alluvium of Pleistocene age (*ibid.*). The mountains, or elevated areas within the planning area, are mapped as bedrock features, mainly **qm**, **og**, **qd**, **pc**, **gn**, and **hd** (*ibid.*). The **qm** is described as a quartz monzonite of Mesozoic age, the **og** as the Oro Grande Formation of Paleozoic age, the **qd** as quartz diorite of Mesozoic or older age, the **pc** as the Porphyry complex of Mesozoic or Older age, the **gn** as Gneissic rocks of Precambrian age, and the **hd** as the Hodge Volcanic Formation of Permian and Mesozoic age (*ibid.*). Dibblee also maps a small amount of Plio-Pleistocene-age Mojave River sediments, **Qoa** and **Qot**, as being exposed at or near the surface along the southern and western edges of the present Mojave River drainage in the planning area, especially near the Southern California Logistics Airport (*ibid.*).

Dibblee (1967:25) contends that some crinoid stems, suggestive of a Carboniferous age, were recovered from the Oro Grande Formation. These would be the only fossils to have been recovered from any of the bedrock materials within the planning area.

Dibblee (1967:109) also notes:

Along the southern margin of Mojave Desert and Cajon Pass, older alluvium forms dissected a north-sloping piedmont alluvial fan that was elevated by a northward tilt and beheaded by Cajon Creek drainage system. Older alluvium of this area lays unconformably on the Crowder Formation where present, lapping onto pre-Tertiary rocks; about 1,000 feet thick; composed of coarse gravel derived from plutonic rocks, gneissic rocks, and Pelona Schist of San Gabriel and San Bernardino Mountains. These were largely mapped by Noble (1954a, 1954b) and are sometimes referred to as the Shoemaker Gravels. In the Cajon Pass area, at elevations lower than 300 feet above mean sea level these gravels are composed of greenish-gray finer gravel, sand, and silt.

Bortugno and Spittler (1986) mapped the entire planning area and the area within the Mojave River bed as **Qw**, or wash deposits of Holocene age. Most of the valley and pediment areas were mapped as **Q**, or alluvium of Holocene age (*ibid.*). The area along the

Mojave River and west of the river to near the town of Phelan (Victorville Fan area) was mapped as **Qo**, or alluvium of Pleistocene age (*ibid.*). North of Victorville, the area along the river and the pediment areas east of the river and north of Oro Grande are mapped as **Qoa**, or well-dissected alluvial fans of Pleistocene age (*ibid.*). The mountains, or elevated areas within the planning area, are mapped as bedrock features, mainly **KJqm**, **Mzv**, **Pzls**, **ms**, and **m**. The **KJqm** is described as quartz monzonite of Mesozoic age, the **Mzv** as metavolcanic rocks of Mesozoic age, the **Pzls** as limestone and marble of upper Paleozoic age, the **ms** as metasedimentary of unknown age, and the **m** as sheared and deformed metamorphic rocks of unknown age.

Meisling and Weldon (1989:108) depict a generalized geologic map of the planning area north of Victorville and south to the Cajon Pass. The area along the Mojave River and near Phelan are mapped as part of the Victorville Fan; they do not differentiate between this older alluvial fan and Mojave River sediments (*ibid.*). The surface sediments west of the Victorville Fan are considered younger in age (*ibid.*) and appear to be deposited by recent drainages emanating from the San Gabriel Mountains. By measuring stratigraphic sections and magnetostratigraphy dating, they determined that the older alluvium of the Victorville Fan rests directly on top of the Shoemaker Gravels at Phelan Peak and Crowder Canyon and estimate that this change in deposition occurred about 0.73 million years ago (*ibid.*:110).

Cox and Tinsley (1999:51) found the distribution of what they show as the Plio-Pleistocene Mojave River deposits to be between the Cajon Pass and Barstow areas. Based on their mapping, a large portion of these Plio-Pleistocene Mojave River sediments are located within the planning area. Sibbett (1999:66) mapped the same sediments within and north of the City of Victorville. Scott (2007) considers these sediments to have a high potential for containing nonrenewable paleontological remains.

Tugel and Woodruff (1986:Map Sheets 17-19, 24-26, 30, 31) mapped the surface soils in the planning area while Connell et al. (1994:95-105) studied the surface soils along the Mojave River in the Victorville area. According to these studies, soils within the planning area include the Badlands, Bryman^{*1}, Cajon•, Cajon-Arizo complex•, Cajon-Wasco•, Cave, Haplargids-Calciorthids, Helendale-Bryman*, Joshua*, Kimberlina, Lavic, Lucerne•, Mirage-Joshua*, Mohave variant, Nebona-Cuddeback*, Rock outcrops-Lithic Torriorthents[^], Rosamond, Sparkhule-Rock outcrop complex[^], Trigger, Trigger-Sparkhule-Rock outcrop association[^], Victorville•, Victorville variant•, Wasco•, Yermo, and Yermo-Kimberlina• series (Connell et al. 1994; Tugel and Woodruff 1986; see App. 3 for a detailed list of soil types and their locations). There is also some open pit or quarry material (Soil Type 155) and some river wash (Soil Type 157) that is forming in intermittent stream courses today (*ibid.*).

The Badlands series (Soil Type 103) are found on cliffs and bluffs with steep to very steep slopes (Tugel and Woodruff 1986:20).

The Bryman series (Soil Types 105, 106, 107, 108, and 109) consist of deep, well-drained soils that formed in alluvium from dominantly granitic sources. Bryman soils are found on terraces and older alluvial fans with slopes of 0 to 15% (*ibid.*:22-25).

1. [^] Bedrock soils; *Pleistocene- or •Holocene-age soils as assigned by Connell et al. (1994); others not assigned age.

The Cajon series (Soil Types 112, 113, 114, 115, 116, and 117) consist of very deep, somewhat excessively drained soils that formed in sandy alluvium from dominantly granitic rocks. Cajon soils are located upon alluvial fans, fan aprons, fan skirts, inset fans and river terraces with slopes of 0 to 15% (*ibid.*:27-29).

The Cajon-Arizo complex soils (Soil Type 118) form on alluvial fans with slopes of 2 to 5% (*ibid.*:31).

The Cajon-Wasco soils (Soil Type 119) develop on alluvial fans that have been moderately dissected by intermittent drainages, with slopes of 2 to 9% (*ibid.*).

The Cave series (Soil Type 120) consist of very shallow and shallow to a hardpan, well-drained soils formed in mixed alluvium. Cave soils are located on fan terraces, fan piedmonts, and stream terraces and have slopes of 0 to 35% (*ibid.*:32).

The Haplargids-Calciorthids series (Soil Type 130) consist of soils which have developed on terrace escarpments, dissected hills, and terrace remnants that lie between the Mojave River and the higher terraces, with slopes of 15 to 50% (*ibid.*:40).

The Helendale-Bryman series (Soil Type 133) consist of loamy sands, which develop on terraces and old alluvial fans that have been deeply dissected by intermittent drainages, with slopes of 2 to 5% (*ibid.*:43).

The Joshua series (Soil Types 135 and 136) consist of moderately deep, well-drained soils that formed in material derived from mixed sources. Joshua soils are on situated upon old terraces with a well-developed erosion pavement and have slopes of 2 to 15% (*ibid.*:45).

The Kimberlina series (Soil Types 137 and 138) consist of very deep, well-drained soils on flood plains and recent alluvial fans. These soils formed in mixed alluvium derived dominantly from igneous and/or sedimentary rock sources with slopes between 0 and 9% (*ibid.*:47).

The Lavic series (Soil Type 140) consist of very deep, moderately well-drained soils that formed in mixed alluvium mostly from granitic sources. Lavic soils are found on fan piedmonts, alluvial fans and basin rim positions and have slopes of 0 to 5% (*ibid.*:47-48).

The Lucerne series (Soil Types 142 and 143) consist of very deep, well-drained soils that formed in alluvium from dominantly granitic sources. Lucerne soils are on located upon alluvial fans, fan terraces and terraces and have slopes of 0 to 15% (*ibid.*:50).

The Mirage-Joshua series of soils (Soil Type 149) form on old terraces that have developed desert pavement and are deeply dissected by intermittent drainages, with slopes of 2 to 5% (*ibid.*:54).

The Mohave variant loamy sand series (Soil Type 150) consist of very deep, well-drained soils formed in mixed alluvium. Mohave soils are found on fan terraces, basin floors, and stream terraces with slopes of 0 to 8% (*ibid.*:55).

The Nebona-Cuddeback series of soils (Soil Type 151) form on old terraces that have developed desert pavement and are moderately dissected by intermittent drainages, with slopes of 2 to 9% (*ibid.*:55).

The Rock outcrops-Lithic Torriorthents (Soil Type 158) are areas of exposed bedrock in mountains and hills, with slopes of 15 to 50% (*ibid.*:59).

The Rosamond series (Soil Types 159 and 160) consist of deep, well-drained soils that formed in material weathered mainly from granitic alluvium. Rosamond soils are on the lower margin of the alluvial fans between the sloping fans and the playas and have slopes of 0 to 2% (*ibid.*:60-61).

The Sparkhule-Rock outcrop complex (Soil Type 162) consists of approximately 60% Sparkhule gravelly loam and 35% rock outcrop, found on slopes with 15 to 50% (*ibid.*:62).

The Trigger gravelly loam series (Soil Type 164) consist of shallow, well-drained soils that formed in material weathered from hard sedimentary rocks. Trigger soils are on uplands and have slopes of 5 to 50% (*ibid.*:62).

The Trigger-Sparkhule-Rock outcrop association (Soil Type 165) consists of approximately 30% Trigger gravel, 30% Sparkhule gravelly loam, and 30% rock outcrop (*ibid.*:63).

The Victorville series (Soil Type 169) consist of deep, moderately well-drained soils that formed in mixed alluvium, dominantly from granitic sources. Victorville soils are found on low river terraces and flood plains and have slopes of 0 to 2% (*ibid.*:65).

The Victorville Variant sand (Soil Type 170) forms on the lower margins of alluvial fans and in small basins (*ibid.*:66).

The Wasco series (Soil Types 173 and 174) consist of very deep, well-drained soils on recent alluvial fans and flood plains. These soils formed in mixed alluvium derived mainly from igneous and/or sedimentary rock sources (*ibid.*:68).

The Yermo series (Soil Type 176) consist of deep, well-drained soils that formed in mixed, moderately coarse textured, calcareous, gravelly or cobbly alluvium. Yermo soils are situated upon long, smooth, alluvial fans or uplands and have slopes of 0 to 50% (*ibid.*:70).

The Yermo-Kimberlina soils (Soil Type 177) form on broad, smooth alluvial fans or hills (*ibid.*:70).

FIELD RECONNAISSANCE

The purpose of the field reconnaissance, as stated above, was to examine the geological formations and soil types present in the planning area in order to help evaluate the area's sensitivity for paleontological resources. During the field reconnaissance, it was observed that the area around the Quartzite, Sparkhule and Silver Mountains consisted of bedrock materials that are not conducive to the preservation of fossil resources due to their igneous and metamorphic origins. Slightly to moderately sloping alluvial-fan deposits were noted further north in the Brisbane Valley and Wild Wash area where the surface soils are

probably Holocene-age alluvium of coarse-grained sand with high concentrations of gravel and large cobbles. This type of rough and rocky soil is not conducive to the preservation of paleontologic resources because of their pulverizing and grinding nature.

To the northwest of this elevated and mountainous area, along the eastern bank of the Mojave River, are Pleistocene-age coarse-grained alluvial soils with islands of well-developed desert pavement. These soil types also have a low potential to contain paleontological resources. Surface exposures west of the Mojave River did not exhibit desert pavement and are probably Holocene-age alluvium.

The Lower Narrows area contain Pleistocene-age alluvial fan deposits formed by the erosion of the western flanks of the Silver and Sparkhule Mountains and from the elevated terrain outside of the planning area to the southeast. Similar older Quaternary sediments are also present along the western side of the Mojave River and around the area where the Southern California Logistics Airport is located.

The south-central portion of the planning area contains soils consistent with that of the Victorville Fan deposits. These Pleistocene-age alluvial soils are medium-to-coarse grained with low-to-moderate concentrations of gravels and cobbles. This type of soil has the potential to contain fossil remains.

The areas along Mojave River drainage contain fine- and medium-grained sediments attributable to depositional processes of the ancestral Mojave River. These soils are conducive to the preservation of fossil remains, and have been determined to have a high potential to contain fossil remains of extinct Pleistocene-age mammals from the last Ice Age. Soils within the present-day bed of the Mojave River, however, appear to be recent sands and small gravels washing down from higher elevations. These sediments are considered to have a low level of sensitivity because fluvial activity within the river channel would have likely destroyed any discernable trace of fossil remains.

The relatively level terrain of the southwestern portion of the planning area contains fine-grained alluvial soils that have developed on the surface over time. The surface exposures in these portions of the planning area are, in all likelihood, Holocene-age alluvium with a low level of sensitivity for yielding paleontological resources.

DISCUSSION

The results of the record searches, literature review, and field reconnaissance suggest that the likelihood of encountering paleontological resources during future development projects depends on the location within the planning area, depth of disturbance, and the sediment lithologies encountered. These lithologies have been ranked according to their paleontological sensitivity, ranging from low to high (Figs. 5a, 5b).

Geologic maps consulted for this study indicate the planning area contains several different lithostratigraphic units of differing geologic ages, but that the surface geology appears to be mainly fine-grained Holocene-age alluvium. However, this Recent alluvium is known to develop on top of, and in some cases from, older potentially fossil-bearing sediments. In fact, geologic mapping indicates Pleistocene-age sediments outcrop exist within some

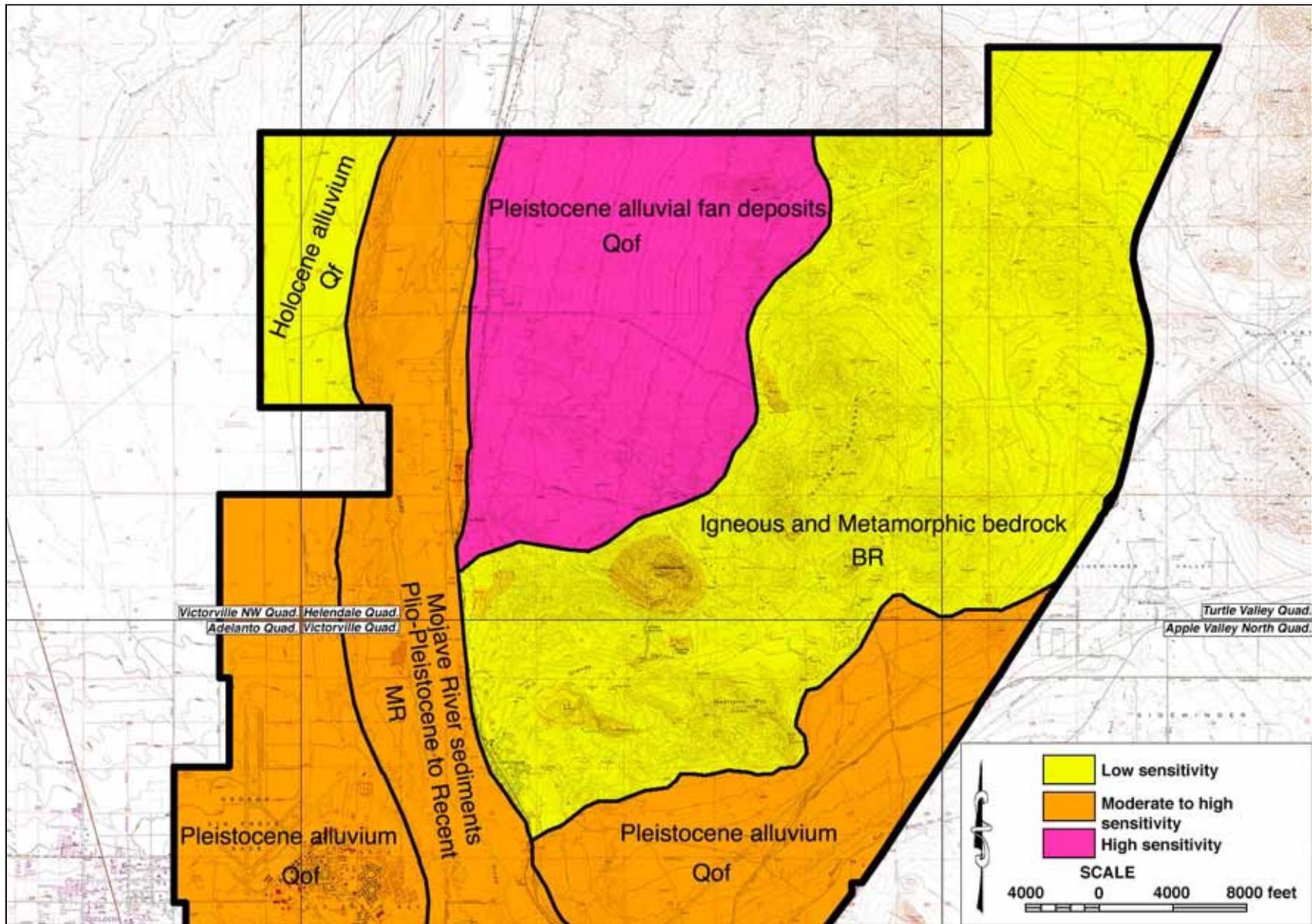


Figure 5a. Sensitivity assessment for paleontological resources (northern portion of the planning area).

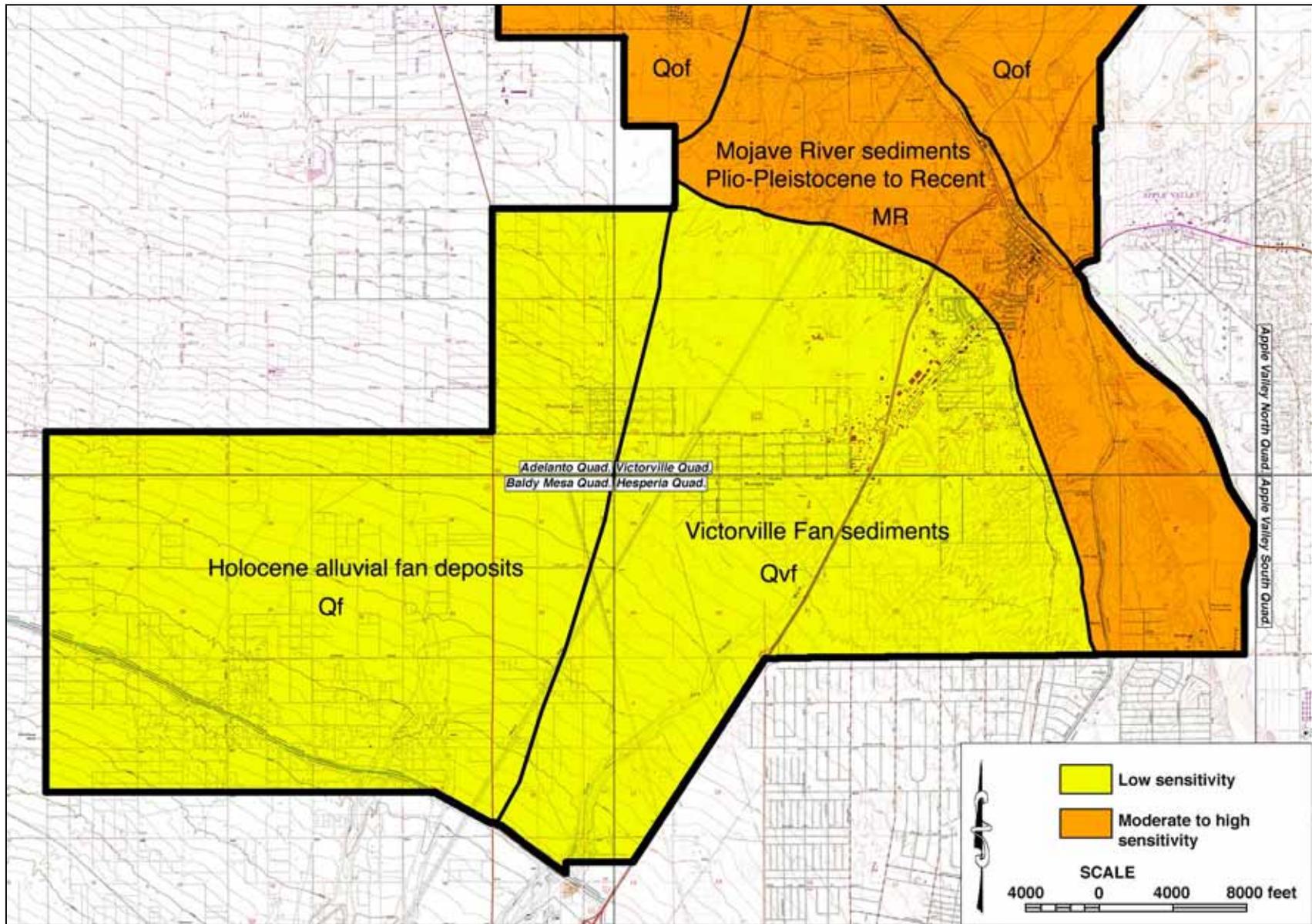


Figure 5b. Sensitivity assessment for paleontological resources (southern portion of the planning area).

portions of the planning area. This implies, that the Recent alluvium on the surface has a variable thickness, which might be determined from geotechnical boring logs, should they be available.

In general terms, the lower-lying and relatively level terrain of the southwestern portion of the planning area consists of surficial deposits of younger Quaternary/Holocene alluvium derived as fan deposits from the San Gabriel Mountains to the south. Similar Holocene alluvial deposits also occur in the northwestern portion of the planning area (Figs. 5a, 5b). Generally, these deposits do not contain significant vertebrate fossil remains, at least in the uppermost layers, but they are often underlain by older Quaternary deposits that may contain significant paleontologic resources.

The elevated terrain around the Silver, Sparkhule, and Quartzite Mountains and extending to the Lower Narrows consists of bedrock of igneous and metamorphic origins and is considered low in sensitivity for paleontological resources (Fig. 5a).

Older Quaternary/Pleistocene deposits are exposed to the northwest of the mountains (Fig. 5a). Similar sediments are also found along the western side of the Mojave River, around the Southern California Logistics Airport, in the central portion of the planning area (Figs. 5a, 5b). These deposits have a moderate to high level of sensitivity for containing fossil resources.

The southeastern portion of the planning area, in general, consists of Victorville Fan sediments (Fig. 5b). Recent paleontologic investigations reported to the San Bernardino County Museum indicate that these Pleistocene-age alluvial fan deposits are not as fossiliferous as the ancestral Plio-Pleistocene Mojave River sediments (Scott 2007). Numerous paleontological resources assessment studies have been conducted within portions of, or very near to, the planning area (Quinn and Wetherbee 2004; Quinn et al. 2005; Quinn and Bodmer 2007; Quinn and Smallwood 2007).

In addition, monitoring programs have been completed at many project sites within the planning area (Love 2002; Hogan 2003; 2004a; 2004b; 2004c; 2006a; 2006b; 2006c; 2007a; 2007b; 2007c; 2007d). Most of these have been located within the Victorville Fan sediments. The findings from these projects substantiate the findings that the Victorville Fan sediments generally have a low potential for containing any significant nonrenewable paleontological resources but, if appropriate lithologies are present, fossils may be preserved within these sediments.

Gravelly sandy surface wash deposits in the current Mojave River drainage channel represent active fluvial deposits that are unlikely to contain significant vertebrate fossils. However, sediments of the ancestral Mojave River may contain Pleistocene-age soils at an unknown depth and therefore this area is considered moderately to highly sensitive for paleontological remains, especially if excavations are deep. Also, the areas with Plio-Pleistocene-age Mojave River sediments exposed at or near the surface are considered sensitive for significant, non-renewable paleontological resources. These areas are confined mainly to the southern and western edges of the present Mojave River drainage, especially near the Southern California Logistics Airport.

CONCLUSION AND RECOMMENDATIONS

The California Environmental Quality Act (CEQA Appendix G) provides that "a project may be deemed to have a significant effect on the environment if it will ... disrupt or adversely affect a ... paleontological site except as a part of a scientific study." The present study, conducted pursuant to this provision, is designed to inventory any previously identified paleontological resources in the planning area, and to assess the area's sensitivity for such resources for CEQA compliance purposes.

The results of this study suggest that the potential for future development projects in the planning area to impact significant nonrenewable paleontological resources ranges from low to high, depending on the location, depth of disturbance, and the sediment lithologies encountered. Thus, an appropriate paleontological monitoring program would differ for different projects according to these variables.

No monitoring is needed in areas that are made up of igneous and metamorphic bedrock. The most notable area containing this type of geological formation (**BR**) is the mountainous terrain in the northeastern portion of the planning area (Fig. 5a).

In the Holocene- and/or Pleistocene-age alluvial fan sediments and presently active areas of the Mojave River (**Qf**, **Qof**, and **Qvf**; Figs. 5a, 5b), geotechnical investigations required for development projects and the soil borings from such investigations should be reviewed by a qualified paleontologist to determine the depth at which older, potentially fossiliferous sediments will be encountered underneath the less sensitive Recent surface alluvium. If the boring logs are not available, or if they do not indicate the thickness of the Recent alluvium, periodic monitoring is recommended for all earth-moving operations, and continuous monitoring will be needed once the potentially fossiliferous sediments are reached. Note that the Pleistocene alluvial fan deposits (**Qof**) in the northern portion of the planning area (Fig. 5a) may be somewhat more sensitive for paleontological resources than other **Qof** areas.

Continuous monitoring is recommended from the beginning of all earth-moving operations where Plio-Pleistocene-age Mojave River sediments (**MR**) are exposed at or near the surface. As mentioned above, these areas are confined mainly to the region along the southern and western edges of the present Mojave River drainage, especially near the Southern California Logistics Airport (Figs. 5a, 5b).

Because of possible geological variability within such a large study area, it is recommended that focused paleontological studies be conducted prior to earth-moving operations in any area that is considered relatively sensitive for paleontological resources (**MR**, **Qf**, **Qof**, and **Qvf**). These studies should consist of, at minimum, a records check and literature review, a field visit, and a review of geotechnical studies, if those records are made available. The site-specific studies should be used to aid in the determination of the precise sensitivity of each project area, the appropriate level of monitoring needed, and the depth at which monitoring should start.

When continuous monitoring becomes necessary, a program to mitigate impacts to the paleontological resources that may be unearthed is also recommended. The program should be developed in accordance with the provisions of CEQA and the proposed

guidelines of the Society of Vertebrate Paleontology, and should include, but not be limited to, the following:

- In areas of potential but uncertain sensitivity, field surveys before ground disturbances shall be required to determine the geologic formations and soils that are present and to determine the level of paleontologic monitoring that would be appropriate. A review of the geotechnical study for the property would be helpful in this regard.
- During paleontological monitoring, the monitor should be prepared to quickly salvage fossils as they are unearthed to avoid construction delays. The monitor should also remove samples of sediments that are likely to contain the remains of small fossil invertebrates and vertebrates. The monitor must have the power to temporarily halt or divert grading equipment to allow for removal of abundant or large specimens.
- Collected samples of sediments should be washed to recover small invertebrate and vertebrate fossils. Recovered specimens should be prepared so that they can be identified and permanently preserved.
- Specimens should be identified, curated, and placed into an accredited repository with permanent retrievable storage.
- A report of findings, including an itemized inventory of recovered specimens, should be prepared upon completion of the steps outlined above. The report should include a discussion of the significance of all recovered specimens. The report and inventory, along with confirmation of curation, when submitted to the appropriate Lead Agency, would signify completion of the program to mitigate impacts to paleontologic resources.

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2004b Paleontological Monitoring of Earth-Moving Activities, Foxborough Grading Project, City of Victorville, San Bernardino County, California. Letter report on file at the San Bernardino County Museum, Redlands, California.
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APPENDIX 1

PERSONNEL QUALIFICATIONS

PROJECT GEOLOGIST/PALEONTOLOGIST
Harry M. Quinn, M.S.

Education

1968 M.S., Geology, University of Southern California, Los Angeles, California.
1964 B.S, Geology, Long Beach State College, Long Beach.
1962 A.A., Los Angeles Harbor College, Wilmington, California.

- Graduate work oriented toward invertebrate paleontology; M.S. thesis completed as a stratigraphic paleontology project on the Precambrian and Lower Cambrian rocks of Eastern California.

Professional Experience

2000- Project Paleontologist, CRM TECH, Riverside/Colton, California.
1998- Project Archaeologist, CRM TECH, Riverside/Colton, California.
1992-1998 Independent Geological/Geoarchaeological/Environmental Consultant, Pinyon Pines, California.
1994-1996 Environmental Geologist, E.C E.S., Inc, Redlands, California.
1988-1992 Project Geologist/Director of Environmental Services, STE, San Bernardino, California.
1987-1988 Senior Geologist, Jirsa Environmental Services, Norco, California.
1986 Consulting Petroleum Geologist, LOCO Exploration, Inc. Aurora, Colorado.
1978-1986 Senior Exploration Geologist, Tenneco Oil E & P, Englewood, Colorado.
1965-1978 Exploration and Development Geologist, Texaco, Inc., Los Angeles, California.

Previous Work Experience in Paleontology

1969-1973 Attended Texaco company-wide seminars designed to acquaint all paleontological laboratories with the capability of one another and the procedures of mutual assistance in solving correlation and paleo-environmental reconstruction problems.
1967-1968 Attended Texaco seminars on Carboniferous coral zonation techniques and Carboniferous smaller foraminifera zonation techniques for Alaska and Nevada.
1966-1972, 1974, 1975 Conducted stratigraphic section measuring and field paleontological identification in Alaska for stratigraphic controls. Pursued more detailed fossil identification in the paleontological laboratory to establish closer stratigraphic controls, mainly with Paleozoic and Mesozoic rocks and some Tertiary rocks, including both megafossil and microfossil identification, as well as fossil plant identification.
1965 Conducted stratigraphic section measuring and field paleontological identification in Nevada for stratigraphic controls. Pursued more detailed fossil identification in the paleontological laboratory to establish closer stratigraphic controls, mainly with Paleozoic rocks and some Mesozoic and Tertiary rocks. The Tertiary work included identification of ostracods from the Humboldt and Sheep Pass Formations and vertebrate and plant remains from Miocene alluvial sediments.

Memberships

Society of Vertebrate Paleontology; American Association of Petroleum Geologists; Canadian Society of Petroleum Geologists; Rocky Mountain Association of Geologists, Pacific Section; Society of Economic Paleontologists and Mineralogists; San Bernardino County Museum.

Publications in Geology

Five publications in Geology concerning an oil field study, a ground water and earthquake study, a report on the geology of the Santa Rosa Mountain area, and papers on vertebrate and invertebrate Holocene Lake Cahuilla faunas.

PALEONTOLOGICAL SURVEYER

John J. Eddy, B.A.

Education

- 2005- Graduate Program, Department of Anthropology, California State University, Northridge (M.A. expected, Fall 2008).
2003 B.A., Anthropology/History, California State University, San Bernardino.

Professional Experience

- 2004- Field Crew Chief/Report Writer, CRM TECH, Riverside/Colton, California.
1988 Field technician management/training; Native American consultation under Section 106, SB 18, and CEQA provisions; reports and site records preparation; curation/collections management.
- 2003- Project Archaeologist/Paleontological Monitor, CRM TECH, Riverside, California.
1989 Surveys; test excavations; data recoveries; monitoring of earth-moving operations; computer-assisted cartography; site record preparation.
- 2001 Cultural Anthropology internship, California State University, San Bernardino; Genealogy of Gabrielino Band of Mission Indians; Dr. Alan Turner, Director.
- Oral interviews; record searches; special collections research; participation in/observation of traditional cultural and religious ceremonies.
- 2000 Archaeological Field School; Willow II survey and data recovery of prehistoric and historic sites, Big Bear, California.
- Generated site maps, feature maps, and stratigraphic profiles; excavated disturbed remains of prehistoric campsite; recorded historic-era mine shafts and associated trash scatters; trained in historic-era artifact analysis.

Memberships

Society for American Archaeology.
Society for California Archaeology.
Archaeological Conservancy.
National Parks Conservation Foundation.
National Trust for Historic Preservation.
Coachella Valley Archaeological Society.

APPENDIX 2
RECORDS SEARCHES RESULTS

APPENDIX 3
DETAILED SOIL INFORMATION

The different surface soils' found along the Mojave River in the Victorville area were studied by Connell et al. (1994:95-105) and assigned to ages of either Holocene or Pleistocene. In this list, the plain numbers denote soils assigned to a Holocene age, the bold numbers denote soils assigned to a Pleistocene age, the underlined numbers denote soils not assigned any age, and the italic numbers denote bedrock formations. Using these age determinations, there are surface soils of potential Pleistocene age present in most of the sections that comprise the planning area. Starting from the north, the surface soil types in the planning area are shown as follows:

VICTORVILLE NW QUADRANGLE (MAP SHEET 17)

T7N, R5W: Sections

14: **107**, 112, **132**, & 150
 23: **106**, **107**, **132**, & 150
 26: **105** & **106**

T6N, R5W: Sections

02: **105**
 03: **105** & 112
 10: **105**
 11: **105**

HELENDALE QUADRANGLE (MAP SHEET 18)

T7N, R4W: Sections

13: *162*
 14: **149** & *162*
 15: 118, **136**, **149**, & *162*
 16: 115, 118, **135** & **136**
 17: 115, **135**, & **136**
 18: 113, 115, **135**, **136**, 137, 157, & 171
 20: 115, **135**, **136**, & **149**
 21: 115, 118, **135**, **136**, **149**, & *162*
 22: 118, **136**, **149**, & *162*
 23: **149** & *162*
 24: **149** & *162*
 25: 118, **133**, **149**, & *162*
 26: **133**, **149**, & *162*
 27: 118, **149**, & *162*
 28: 115, 118, **135**, & **149**
 29: 115 & **135**
 30: 113, 115, & **135**
 31: 113, 115, **135**, & 155
 32: 115, 116, & **135**
 33: 115, **135**, & **149**
 34: 118, **149**, & *162*

35: *162*
 36: 118, **149**, & *162*

T7N, R5W: Sections

13: 103, 113, **132**, 157, & 171
 14: 113, **132**, 138, & 140
 23: **106**, 113, **132**, & 150
 24: 103, **106**, 113, 138, 157, & 171
 25: 103, 113, 114, 169, & 171
 26: 103, **106**, 114, 113, **132**, & 150
 35: **105**, **106**, 112, 113, 114, 130, & **132**
 36: 113, 114, 130, 157, 169, & 171

T6N, R4W: Sections

01: 118, *162*, & *165*
 02: 118, *162*, & *165*
 03: **149** & *162*
 04: 115, 135, **149**, 155, *162*, *166*, & 176
 05: 115, 116, **135**, **136**, & 176
 06: 115, 116, **135**, **136**, & 176
 07: 115, 155, 169, & 176

• Maps showing these soil types are available from Soil Survey Office in the Department of Agriculture's Victorville office.

08: 176
09: 155, 158, 162, & 176
10: 158, 162, & 177
11: 118, 165, & 177

T6W, R5W: Sections

01: 113, 114, 130, 157, 169, & 171
02: **105**, **106**, 113, & 114
11: **105**, 113, & 114
12: 113, 114, 130, 157, 169, & 171

TURTLE VALLEY QUADRANGLE (MAP SHEET 19)

T7N, R3W: Sections

07: 118 & 119
08: 118, **149**, **151**, & 158
09: 118 & **149**
16: 118 & **149**
17: 118, 119, **149**, 158, & 162
19: 118, **133**, **149**, & 162
20: 118, 119, **149**, & 162
29: 118, **133**, **149**, 158, & 162
30: 118, **133**, **149**, & 162
31: 118, **133**, 158, & 162
32: 118, **133**, & 158

13: 118 & 162
24: 149 & 162
25: 118, **133**, **149**, & 162
36: 118, **133**, **149**, & 162

T6N, R3W: Sections

05: 118, **133**, & 177
06: 118, **133**, 162, & 177
07: 118, **133**, 158, 162, & 177

T6N, R4W: Sections

01: 162
12: 118, **133**, & 162

T7N, R4W: Sections

12: 118 & 162

ADELANTO QUADRANGLE (MAP SHEET 24)

T6N, R5W: Sections

10: **105**
11: **105**
14: **105** & 150
15: **105**, 112, & 150

22: **105**
23: **105** & 150
26: **105**
27: **105**

VICTORVILLE QUADRANGLE (MAP SHEET 25)

T6N, R5W: Sections

11: **105**, 113, 114, & 130
12: 113, 114, 130, 150, 157, 169, & 171
13: 113, 114, 130, 150, 157, & 171
14: **105**, 113, 114, 130, & 150
22: **106**, 112, 113, **131**, & **132** & 173
23: **105** & 150
24: 114, 130, **131**, 150, 157, & 171
25: **105**, 114, 130, & 150
26: **105** & 150

35: **105**, **106**, & **131**
36: **105**, **106**, 113, 114, 130, & 155

T6N, R4W: Sections

07: 115, 155, 169, 171, & 176
08: 166 & 176
09: 158, 165, 166, 176, & 177
10: 165, 166, & 177
11: 118, **133**, 155, & 165
12: 118 & **133**

13: 116, **133**, & **151**
 14: 118, **151**, & *165*
 15: 118, *158*, *165*, & *177*
 16: 155, *158*, *165*, & *166*
 17: 115, 155, *158*, *166*, 176, & 177
 18: 115, 155, *158*, *166*, 176, & 177
 19: 114, 115, 130, 157, & 171
 20: 115, 138, & *158*
 21: 118 & *158*
 22: 118, **151**, & *158*
 23: 118, **149**, **151**, & *162*
 24: 118, **133**, **149**, **151**, & *162*
 26: 118, **149**, 155, *158*, & *165*
 27: 118, **149**, **151**, & *158*
 28: 113, 118, & *158*
 29: 113, **132**, 137, 138, 157, *158*, & 171
 30: 113, 114, 130, 137 157, 169, & 171
 31: **107**, 113, 130, **132**, 137, & 171
 32: **107**, **108**, 113, 114, 115, 130, **132**, 137,
158, & 171
 33: 113, 118, **149**, 157, *158*, 169, & 171
 34: 113, 118, **149** 158, & 177

T5N, R5W: Sections

01: **106**, **107**, **108**, 113, 114, **132**, & 140
 02: **105**, **106**, **107**, 131, **132**, 137, 138, & 140
 11: **106**, **107**, 112, 113, **132**, 137, 138, 140, &
159

12: **106**, **107**, **108**, 113, **132**, 138, & 140
 13: **106**, 113, **132**, & 137
 14: **106**, 113, & 138
 23: **106** & 113
 24: **105**, **106**, & 137

T5N, R4W: Sections

03: 113, 115, 157, *158*, 169, & 171
 04: 113, 120, 130, 140, 157, & 171
 05: **107**, 113, 130, **132**, & 140
 06: **107**, 113, 138, & 140
 07: **106**, **107**, 113, & 140
 08: **107**, **108**, 113, 120, & 140
 09: **107**, 113, 130, & **132**
 10: **107**, 113, 115, 130, 138, 157, *158*, 169, &
 171
 14: **106**, 113, 114, 114, **132**, 157, 169, & 171
 15: **107**, 130, 138, 157, 169, & 171
 16: **107**, 113, 130, & 140
 17: **106**, **107**, 113, 120, **132**, & 140
 18: **106**, 113, **132**, 137, 138, 140, & 159
 19: **105**, **106**, 112, **131**, 140, & 159
 20: **105**, **106**, **107**, 112, 113, 120, & 140
 21: **106**, **107**, **108**, 130, & 140
 22: **107**, **108**, 130, 138, & 169
 23: **107**, **108**, 113, 157, 169, & 171
 24: **106**, 113, 114, 131, 138, 157, 171, & 174

APPLE VALLEY NORTH QUADRANGLE (MAP SHEET 26)

T6N, R4W: Sections

12: 118, **133**, & *158*
 13: 118 & **133**

T6N, R3W: Section

07: 118, **133**, **151**, *158*, & 177

BALDY MESA QUADRANGLE (MAP SHEET 30)

T5N, R6W: Sections

25: **106**, 113, & **133**
 26: **105**, **106**, 113, & **133**
 35: **106**, 112, & **133**
 36: **106**

27: **105**, **106**, 112, & **132**

28: 112
 29: 112 & **133**
 30: **106**, 112, & **133**
 31: **106**, 112, & **133**
 32: 112 & **133**
 33: 112 & 114
 34: **105**, 112, & **132**
 35: **105**, **106**, & 113

T5N, R5W: Section

26: **105**, **106**, & **132**

T4N, R6W: Sections

01: **106**, 113, & **133**
02: **106**, 112, 113, & **133**
11: 112, 113, & **133**
12: **106**, 112, 113, & **133**

T4N, R5W: Sections

02: **105** & 112
03: **105**, 112, & 173

04: **108**, 112, 113, & 114
05: 112, 114, & **133**
06: **106**, 112 & **133**
07: 112 & **133**
08: **105**, 112, & 114
09: **105**, **108**, 112, 113, & 114
10: 112; 113, 114, & 173
11: 112, 113, & 114
14: 112, 114, & 134
15: 112, 113, 114, & 134

HESPERIA QUADRANGLE (MAP SHEET 31)

T5N, R5W: Sections

25: **105**, **106**, 112, & **131**
26: **106**
35: **105**, **106**, 112, & **131**
36: **105**, 112, 113, 114, & **131**

31: **106**, 112, 113, 114, & **131**
32: **106** & 174
33: **106** & **107**
34: **106**, **107**, **108**, & 113
35: **106**, **107**, **108**, 130, & 169
36: 112, 157, 160, & 171

T5N, R4W: Sections

25: **106**, 112, 113, 114, 157, 169, & 171
26: **106**, **107**, **108**, 130, & 169
27: **107**, **108**, 113, & 130
28: **106**, **107**, **108**, 113, & 130
29: **105**, **106**, **107**, 112, 113, & 140
30: **105**, **106**, 112, 113, 114, & **131**

T4N, R5W: Sections

01: **105**, **106**, 112, 113, 114, & 155
02: 112, 113, & 114
11: 112, 113, 113, & 173
12: 105, 112, 113, & 173
14: 112 & 134

CITY OF VICTORVILLE GENERAL PLAN UPDATE

INFRASTRUCTURE SUMMARY



Prepared for the City of Victorville



Prepared by: Parsons Brinckerhoff



July 2008



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APPENDICES

Appendix A:

- Existing Condition Aerial Map, dated 2003
- Proposed General Plan Land Use Policy Map, dated 2007

Appendix B:

- Figure 2-3: Connection to the VVWRA Interceptor System and Nearby Temporary Flow Meter Sites
- Figure 3-1: Land Use and Flow Monitoring Tributary Areas
- Figure 3-2: Flow Monitoring Locations and Tributary Areas
- Figure 5-3: Manhole Loading for Modeling Current (Year 2006) Conditions
- Figure 5-4: Hydraulic Evaluation Results for Year 2006 Conditions
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- Figure 5-8: Hydraulic Evaluation Results for Year 2030 Conditions
- Figure 6-1: Potential Reclaimed Water Users and Demands by Planning Area

Appendix C:

- Figure 2.1, Existing Water Facilities Map, by Carollo Engineers
- Figure 2.2, Existing System Pipelines by Size, by Carollo Engineers
- Carollo Engineers Letter: Water Supply Availability in the City of Victorville

Appendix D:

- San Bernardino County Flood Control District High Desert Victorville Area

Appendix E:

- Table 4.3 – Peak Flow Rate Summary (8 pages)
- Table 5.1 – Drainage Comparison
- Table 6.1 – Facility Sizing (8 pages)

Appendix F:

- Baldy Mesa Master Plan of Drainage Figure
- Baldy Mesa Master Plan of Drainage Base Map

Appendix G:

- Recommended Alternative Major Alignments and Drainage Divides

Appendix H:

- Photos of Existing Drainage Facilities per Site Visit



1.0 Introduction

The infrastructure network within a City serves as the back bone for development and growth for a municipality whereas it can also impede expansion. Hence the Infrastructure Element of a City's General Plan, is an important tool for assuring provision of consistency with its land use and forecasted plans for growth and future within a City. The purpose of this report is to compile and review all available infrastructure data and reports, which is an update to all previous sewer, water and drainage master plans for the City of Victorville. In addition, it sets out guidelines to enhance the infrastructure network to adequately serve future needs of the City and adjacent areas that will have direct effect on the City's infrastructure system.

This Infrastructure Report has been prepared as part of the City of Victorville's General Plan update, to document technical analysis of existing infrastructure conditions within the City and to serve as an input for the Land Use Element of the General Plan. This report includes a review of recent studies (completed or underway) that relate to infrastructure needs or opportunities in the City and an inventory of existing facilities through December 2005.

2.0 Study Area

Located in the heart of San Bernardino County, the analysis area for the City of Victorville includes its sphere of influence. It is located approximately 35 miles northeast of the City of San Bernardino and about 97 miles northeast of the City of Los Angeles. Nestled just north of the San Bernardino Mountains and at the edge of the Mojave Desert, the city is in an area known as Victor Valley and commonly referred to as the 'High Desert'. The city shares boundaries with the City of Adelanto to the northwest, the Town of Apple Valley to the east, the City of Hesperia to the south and unincorporated San Bernardino County to the southwest and to the north. There are also portions of unincorporated San Bernardino County nested within the City of Victorville.

With a residential population of 100,000 and growing rapidly, the City of Victorville's daytime population is anticipated to grow to double this figure to accommodate the needs of the more than 300,000 people. Victorville is home to the largest enclosed regional shopping center between San Bernardino and Las Vegas, along the I-15 corridor.



3.0 Victorville Land Use and Population

The City of Victorville's General Plan adopted a land use map dated October 27, 1988. This land use map and the 2003 Existing Condition Aerial Map were used to compare any land use changes with the most recent General Plan Land Use Policy Map, dated March 1, 2007, provided by the City of Victorville as shown in Appendix A. The 2003 Existing Condition Aerial Map is also in Appendix A. There have been several changes within the City of Victorville, but there are three notable differences to be mentioned.

The first area is located west of Monte Vista Road between Palmdale Road and Mesa Street. This new area consists mostly of 'rural residential' development, but also includes 'very low density residential', 'low density residential', 'medium density residential', 'high density residential', 'commercial', 'Specific Plan use', and 'light industrial' developments.

The second area is located between the northerly and southerly borders for Township 6 North, between Adelanto Road and El Evado Road, mainly known as George Air Force Base. This area has been designated mostly as 'specific land use', but also contains 'rural residential' development and 'limited open space'.

The third area is located along the northerly Victorville city limits, between National Trails Highway and Interstate 15. This area extends to approximately four (4) miles north of the existing city limits has been dedicated to be mostly 'urban conservation' and 'open space'. 'Specific plan use', 'light industrial', 'commercial', and 'heavy industrial' developments can also be found within this region.

According to the City of Victorville Economic Development Departments webpage, "Victorville's population grew from 61,500 to 95,145 between 2001 and 2006 (an average annual rate of 9.1%)." This population has surpassed 100,000 people as of May 1, 2007 as indicated by the City of Victorville's webpage. These statistics were used to determine the approximate current infrastructure demand within the city limits.



4.0 Existing Sewer Facilities

Two previous Sewer Master Plans (SMP), dated August 1981 and October 1990, were used to compare the current condition in the city of Victorville. During a recent visit to the Engineering Department at the City of Victorville, PB was permitted access to review the Sewer Atlas Book, Volumes I and II, dated November 2006, which were still under review. From our findings, the Victor Valley Water Reclamation Authority (VWVRA) has added a new 21”-24” VCP trunk sewer line along Stoddard Wells Road, between the northern city limit and Dante Road. More recently, Earth Tech has prepared the “Sewer System Master Plan and Collection System”, Final Draft dated March 2008. In addition, the “Southern California Logistics Airport (SCLA) Water and Wastewater System Master Plan” was prepared by RBF Consulting in January 2007.

4.1 Sewer System Master Plan and Collection System

Earth Tech’s report describes in detail Victorville’s system of trunk and interceptor sewers, pumping facilities, current and forecasted sewer capacities, future deficiencies and a capital improvement program to be implemented by the city.

The 2005 population and dwelling unit counts were provided to Earth Tech by the City as shown below. In addition, the City provided projected populations for the years 2014 and 2030. At the time Earth Tech’s report was prepared, future population figures had not yet been developed; Earth Tech worked with the City to estimate a future population in 2014 and 2030.

Table 2-2 City of Victorville December 2005 Traffic Analysis Zone (TAZ) Population and Dwelling Unit Data

Land Use*	Totals
Single Family Dwelling Units (SDU)	25,970
Multi-Family Dwelling Units (MDU)	6,953
Total Dwelling Units	32,923
Retail Employees (RET)	10,105
Non Retail Employees (NRET)	17,159
Total Employees	27,264
Avg. persons/occupied Dwelling Unit**	2.94
Est. Dec. 2005 Population	96,794

* Data from spreadsheet filename: VVSED-SubtotalbyPIngAreaDistricts-010208.xls

**The average number of persons per occupied dwelling unit defines an EDU. Therefore, based on TAZ data the population equivalent of one EDU equals 3.2 persons. Note that the City of Victorville Planning Department uses a value of 2.9 persons per EDU for both single family and multi family land uses. This value was used to develop wastewater flows in the hydraulic model.

*Table from the “Sewer System Master Plan and Collection System” by EarthTech, Inc.

There are two alternatives for computing wastewater flow: multiply the population by the estimated per capita wastewater flow generation factor, and the EDU method in which the number of people per dwelling unit are estimated. In the Earth Tech SMP, the EDU method was used to determine the wastewater flow generation within the City of Victorville’s sphere of influence. Table 2-5 below shows the Flow Generation Factor (FGF) per EDU. Also, Table 2-6 below compiles Population per EDU data from the *City of Victorville General Plan* and a spreadsheet titled “Land Use Data rev 9-12-06.xls”.



According to the Earth Tech report, “the City of Victorville Planning Department is currently using a value of 2.94 people per EDU for both single and multi-family dwelling units. This value was used in this study to define population in residential land use areas.”

Table 2-5 City of Victorville and VVWRA Flow Generation Factors by Land Use (Average Daily Flow)

Land Use	City of Victorville* FGF	VVWRA** FGF	Hydraulic Model FGF ¹
Equivalent Dwelling Unit (SDU/MDU)	256 gpd	235 gpd ²	235 gpd
Residential	75 gpcd	80 gpcd	80 gpcd
Office/Retail (RET/NRET)	35 gped	35 gped	35 gped
Industrial	--	75 gped	varies
Institutional	--	35 gped	--
High School	--	15,000 gpd	15,000 gpd
Junior High School	--	10,000 gpd	10,000 gpd
Elementary School	--	5,000 gpd	5,000 gpd

* From flow meter data recorded in October 2006, based on TAZ data for EDU counts.

** Data from Victor Valley Wastewater Reclamation Authority "Sewage Facilities Plan Update, Year 2005 Amendment".

gpd – gallons per day

gpcd – gallons per capita per day

gped - gallons per employee per day

¹ See Chapter 4 for development of the hydraulic model

² SDU/MDU FGF calculated as 2.94 people per SDU or MDU multiplied by Residential FGF.

*Table from the "Sewer System Master Plan and Collection System" by EarthTech, Inc.

Table 2-6 Average Single Family Size

Year	Population per EDU
1990	3.270*
1995	3.122*
2000	3.174*
2005	3.204**
2006	2.94***

*Data from City of Victorville General Plan

** Data from TAZ spreadsheet filename: Land Use Data rev 9-12-06.xls

***Data from City of Victorville Planning Department

*Table from the "Sewer System Master Plan and Collection System" by EarthTech, Inc.

Hydraulic criterion of the sewer pipelines was established in the Earth Tech SMP report as shown in table 2-9. The depth of flow to pipe diameter (d/D) ratio was determined for both sewer mainlines (pipes between 8-12 inches) and sewer trunk lines (pipes greater than 12-inches). In addition, minimum and maximum velocity criterion was established for the City’s sewer systems. Using the minimum velocity of 2 feet/second, Mannings equation was used to determine what the minimum slope would be in each pipe size. A table with the minimum pipe slope is summarized in the Earth Tech SMP as shown below. Each sewer in need of rehabilitation, replacement, or new City sewers shall be designed on an individual basis.



Table 2-9 Hydraulic Criteria

Condition	d/D Criteria	
	Mainlines 8"-12" Dia.	Trunks > 12" Dia.
Threshold for rehabilitation of existing sewers	0.50	0.75
Maximum design depth allowed in new sewers	0.50	0.75

*Table from the "Sewer System Master Plan and Collection System" by EarthTech, Inc.

Table 2-10 Minimum Allowable Pipe Slope

Pipe Size	Min. Slope	Pipe Size	Min. Slope
4-inch	2.00%*	16-inch	0.14%
6-inch	1.00%*	18-inch	0.12%
8-inch	0.40%	21-inch	0.10%
10-inch	0.28%	24-inch	0.08%
12-inch	0.22%	27-inch	0.07%
14-inch	0.17%	30-inch	0.06%
15-inch	0.15%	36-inch	0.05%

*4- and 6-inch pipe is allowed for side sewers only. Additional slope may be required to achieve adequate flushing velocity.

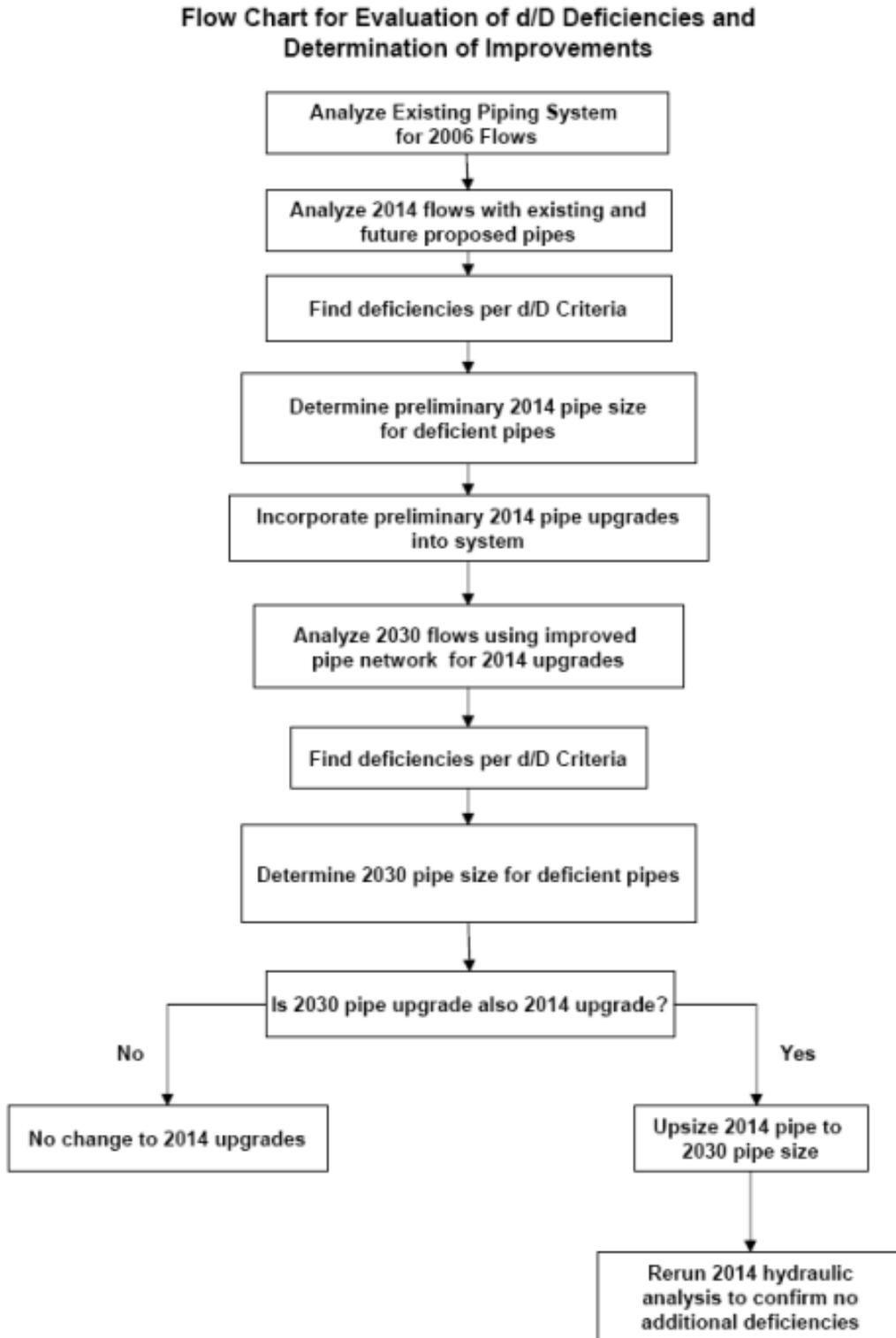
*Table from the "Sewer System Master Plan and Collection System" by EarthTech, Inc.

Fourteen flow meters were installed to measure the per capita flow rates for each land use and to create weekend and weekday diurnal flow patterns within the City. Earth Tech made "every attempt to isolate the different land uses in the City (single family residential, multi family residential, commercial and industrial)." The flow meter locations (shown in Appendix B) were also used as calibration points for the hydraulic model. The calibration process of the hydraulic model is completely described in the Earth Tech SMP, but includes digitizing as-builts to GIS data, calibration of field recorded flows to be consistent with average model flows, which was then matched to diurnal varying flows in the sewer system.

The existing and future (years 2014 and 2030) hydraulic models were run based on current and future wastewater demands. However, the future system had to be extended to evaluate the deficiencies based on d/D criteria. The existing system was also evaluated based on d/D criteria and was determined to be deficient if the d/D ratio exceeded the criteria as previously mentioned. Earth Tech provided a flow chart, as shown in the figure below, of their iterative process in determining the future system pipe sizes and pipe deficiencies.



Figure 5-1 Flow Chart for Evaluation of d/D Deficiencies and Determination of Improvements





The hydraulic evaluation deficiencies for the years 2006, 2014 and 2030 are shown on Figures, 5-4, 5-6 and 5-8, accordingly, in the Appendix. The Manhole Loading for Modeling figures for the years 2006, 2014, and 2030 are shown in the Appendix Figures 5-2, 5-5 and 5-7, accordingly.

Reclaimed water production and usage was also discussed in the Earth Tech report. VVWRA has researched alternatives to treat wastewater and pump the reclaimed water to major land use areas such as the Westwinds Golf Course. This option may not be cost effective due to the long distances to potential customers for reclaimed water, and the requirement to pump from low elevation of the VVWRA treatment facility. The second option is to provide subregional facilities throughout the City's sphere of influence.

A report was prepared by Boyle Engineering Corp for the VVWRA in 2005 titled "Planning and Environmental Services to Develop Subregional Reclamation Facilities", which identifies three locations for these facilities. Upper Narrows, Green Tree and Apple Valley are all located in Victorville's sphere of influence. Earth Tech summarizes the locations of the subregional facilities from the Boyle Engineering report as follows: "The Green Tree site is centrally located near several potential users and is within a reasonable distance of good storage reservoir sites. The Green Tree site has been removed from consideration by VVWRA at this time; however the City should consider a site near the same location, due to its beneficial location from a hydraulic perspective. The Upper Narrows site is also centrally located; however fewer potential users are nearby, with the notable exception of Spring Valley Lake and the cement mixing industries. The Apple Valley Facility is located in the Baldy Mesa planning area. This facility has excellent potential, as it is currently largely undeveloped, but growth is anticipated soon. Additionally, its viability has increased due to planning work of the Baldy Mesa Water District (Victorville Water District Improvement District #2)." A figure by Earth Tech titled "Potential Reclaimed Water Users and Demands by Planning Area" is provided in the Appendix.

4.2 Victor Valley Water Reclamation Plant

PB investigated the reclamation plant which is located at the north end of Shay Road. The reclamation plant began operation in 1981, processing a capacity of approximately 4.5 million gallons a day (MGD). Pat Johnson, from the VVWRA, stated that upgrades to the facility were being done at this time to increase the capacity of the treatment plant and more detailed information was available on their website. She clearly stated that the VVWRA only owns the sewer lines on the VVWRA easements and that the city owns and maintains all other trunk lines in Victorville. She also mentioned that the VVWRA treats water from five (5) different areas: Town of Apple, City of Hesperia, City of Victorville, Area 42 (Oro Grande) and Area 64 (Spring Valley Lake).

Improvements at the site were noted and further investigation of the VVWRA revealed the current capacity of the treatment facility and the proposed capacity of the treatment facility after improvements. Currently, the treatment facility can process 12.5 MGD. After two stages of improvements, the capacity will be increased to 14.5 MGD by the end of 2007 and later increased to 18 MGD. Improvements to the treatment facility include four new primary clarifiers, four additional aeration basins, a second blower building, four new secondary clarifiers, two new anaerobic digesters, seven additional sludge drying beds, four additional percolation ponds, generator upgrades, a new septage receiving station, and other miscellaneous improvements.



According to the VVWRA, the treatment plant currently treats a portion of the waste to the tertiary level, with the remaining waste treated to the secondary level prior to onsite percolation. The higher quality effluent from the treatment facility discharges to the Mojave River, onsite irrigation at the treatment facility and landscape irrigation at the Westwinds Golf Course.

Equalization basins have been provided at the treatment facility to store peak wastewater flows for later treatment. The typical daily flows will range from about 2,400 gallons per minute at night to over 8,500 gallons per minute in the afternoon. The equalization basins also help alleviate the peak flows produced during rainstorms. This allows for the treatment processes to occur at a more constant rate which is important to the activity of the biological organisms in the secondary treatment process.

The aforementioned improvements are necessary to keep up with the population growth within the five (5) communities that impact the treatment plant. The VVWRA has projected to the year 2025 on the service population, equivalent dwelling units (EDU) and the wastewater flow (MGD) for the areas impacting the reclamation plant as shown in the following table. As the table explains for 2005, the treatment plant currently treats sewage for approximately 141,000 people, with an average flow of 12.55 MGD.



VVWRA
 2005 SEWERAGE FACILITIES PLAN UPDATE
 VVWRA Service Population, Wastewater Flows, and EDU Projections

Year	Victorville including SCLA			CSA's 42 and 64			Town of Apple Valley			Hesperia			Totals			Fiscal Year EDUs
	Sewered Population	Flow MGD	EDU's Current	Sewered Population	Flow MGD	EDU's Current	Sewered Population	Flow MGD	EDU's Current	Sewered Population	Flow MGD	EDU's Current	Sewered Population	Flow MGD	EDU's Current	
2004	81,514	7.41	30,249	12,612	0.85	3,450	20,610	1.81	7,383	15,720	1.47	5,900	130,456	11.53	47,073	
2005	87,859	7.99	32,594	12,967	0.88	3,579	22,863	2.04	8,314	17,382	1.65	6,739	141,071	12.55	51,226	4,153
2006	94,205	8.56	34,959	13,333	0.91	3,712	23,698	2.13	8,703	19,171	1.83	7,450	150,407	13.43	54,824	3,598
2007	100,024	9.11	37,174	13,710	0.94	3,851	24,551	2.23	9,099	21,155	2.02	8,226	159,459	14.30	58,351	3,527
2008	105,165	9.60	39,191	14,098	0.98	3,997	25,488	2.33	9,525	23,344	2.22	9,073	168,096	15.14	61,785	3,434
2009	109,484	10.04	40,965	14,497	1.02	4,149	26,446	2.44	9,959	25,667	2.44	9,905	176,095	15.93	65,037	3,252
2010	112,853	10.40	42,456	14,909	1.06	4,308	27,493	2.55	10,424	28,131	2.67	10,906	183,385	16.68	68,093	3,056
2011	116,322	10.78	44,009	15,333	1.10	4,474	28,562	2.67	10,898	30,742	2.91	11,897	190,959	17.46	71,280	3,186
2012	119,895	11.18	45,628	15,770	1.14	4,650	29,726	2.79	11,406	32,717	3.11	12,684	198,108	18.22	74,368	3,089
2013	123,576	11.59	47,316	16,220	1.18	4,834	30,915	2.92	11,924	34,787	3.31	13,505	205,497	19.01	77,579	3,211
2014	127,367	12.02	49,076	16,683	1.23	5,028	32,204	3.06	12,477	36,933	3.52	14,354	213,187	19.83	80,936	3,357
2015	131,272	12.47	50,913	17,160	1.28	5,234	33,521	3.20	13,042	39,131	3.73	15,223	221,084	20.68	84,412	3,476
2016	135,294	12.94	52,830	17,652	1.34	5,451	34,944	3.34	13,644	41,411	3.95	16,122	229,300	21.57	88,048	3,636
2017	139,436	13.43	54,831	17,832	1.37	5,576	36,396	3.49	14,259	43,747	4.18	17,044	237,412	22.47	91,710	3,662
2018	143,703	13.95	56,922	17,832	1.38	5,651	37,962	3.65	14,913	47,135	4.49	18,313	246,632	23.47	95,799	4,089
2019	148,098	14.48	59,107	17,832	1.41	5,738	39,561	3.82	15,582	50,643	4.81	19,624	256,134	24.51	100,051	4,252
2020	152,625	15.04	61,391	17,832	1.43	5,837	41,279	3.99	16,292	54,312	5.14	20,993	266,047	25.61	104,514	4,463
2021	157,287	15.63	63,780	17,832	1.46	5,952	43,033	4.17	17,018	58,109	5.49	22,408	276,261	26.74	109,158	4,644
2022	162,090	16.24	66,280	17,832	1.49	6,084	44,823	4.35	17,759	62,081	5.85	23,885	286,826	27.93	114,008	4,850
2023	167,036	16.88	68,897	17,832	1.53	6,235	46,651	4.54	18,516	66,193	6.23	25,413	297,712	29.17	119,060	5,053
2024	172,131	17.55	71,637	17,832	1.57	6,409	48,518	4.73	19,290	70,493	6.62	27,007	308,973	30.46	124,343	5,282
2025	177,379	18.25	74,508	17,832	1.62	6,610	50,423	4.92	20,080	74,942	7.02	28,655	320,576	31.81	129,853	5,510

NOTE: Dates shown are as of July 1, the beginning of the annual fiscal year. The EDU's shown are based only on gallons of domestic wastewater (245 gpd) and do not reflect the greater number of EDU's typical of high strength commercial and industrial wastewater.

*Table from the VVWRA Capacity Fee Update (Nexus) Study on the VVWRA website



4.3 Southern California Logistics Airport (SCLA) Specific Plan

From the land use maps, it was discovered that a Specific Plan has been provided for the Southern California Logistics Airport (SCLA), formerly known as George Air Force Base. The “Southern California Logistics Airport Water and Wastewater System Master Plan” has been prepared by RBF Consulting, final draft dated January 2007. This master plan addresses all of the sewer items within the SCLA specific plan area and should be referred to for more detail. The report specifies that the land use for the SCLA is mostly commercial and industrial, with no residential development, noting that sewer flow estimations are based on the proposed employee count. All existing sewer interceptors are expected to remain in commission and the Adelanto 15-inch Adelanto Sewer may be reactivated, if feasible, to serve the west-side of the airport and Adelanto parcels.



5.0 Existing Water Facilities

The City of Victorville obtains their water from the Victorville Water District, a sub to the City of Victorville. Within the Victorville Water District (VWD), two improvement districts exist: Victorville Water District Improvement District #1 (formerly known as the Victor Valley Water District) and Victorville Water District Improvement District #2 (formerly known as the Baldy Mesa Water District). PB was able to obtain from the Victorville Water District Improvement District #1 (VWD ID#1) the “20-Year Comprehensive Water Master Plan, 100% Draft” dated January 2007 by Carollo Engineers. The VWD ID#1 operates the larger of the two improvement districts within the city of Victorville and serves potable water to approximately 72,000 customers. The infrastructure system at the end of 2005 for the VWD ID#1 includes nearly 400 miles of distribution and transmission mains, 23 active wells, 1 booster pumping station (3 booster pumps), 18 water storage reservoirs, and 8 pressure-regulating stations. The sole source of water for the city is the groundwater aquifer located in the High Desert.

The Victorville Water District Improvement District #2 (VWD ID#2) serves a portion of the City of Victorville which encompasses 26.7 square miles. There are three pressure zones within the district from 3180-feet to 3680-feet, governed by level of water in reservoirs. The district is generally bounded by Palmdale Road to the north, Mesa Street to the south, Caughlin Road to the west and Interstate 15 to the east.

5.1 Evaluations and Sizing Criteria

Criteria were established by Carollo Engineers to determine what existing facilities are being fully optimized and where deficiencies exist in the infrastructure. The criteria include, but are not limited to:

1. The water provided to VWD’s consumers shall meet all federal, state, and local regulations governing water quality for potable use.
2. The water system shall be capable of providing the minimum fire flow with a minimum residual pressure of 20psi. (American Water Works Association (AWWA) M31, Manual of Water Supply Practices, Distribution System Requirements for Fire Protection, Chapter 2, Section: Rates of Water Use; Fire Marshall, NFPA).
3. The water system shall be capable of providing at least 40psi (CDHS) for the following demand periods: average day, maximum day, and peak hour. A maximum static pressure should be maintained below 80psi. Where the maximum pressure exceeds 80psi, individual pressure regulators should be equipped at connections in accordance with the UPC.
4. The water system and each pressure zone shall have at least two independent supply sources (AWWA).
5. The water system shall have adequate storage (AWWA M32, Manual of Water Supply Practices, Distribution Network Analysis for Water Utilities, Chapter 3, Section: Design Criteria as Analysis Considerations) for all of the following: operational storage, fire flow, and emergency storage.
6. The water system and each pressure zone shall be capable of providing adequate service for each of the following emergency scenarios:



- a. Loss of the largest water supply source for 24 hours of maximum demands.
 - b. A district-wide power outage for 24 hours of maximum demands.
7. To meet pressure and velocity objectives, a minimum diameter of 8-inches for new pipelines is recommended.

Carollo Engineers also provided a detailed analysis on the Victor Valley Water Districts facilities and included Evaluation Criteria as shown in Table 6.2. The table was used as a basis for determining the deficiencies of the Victorville Water District ID#1 water distribution system.

Table 6.2 Evaluation Criteria 20-Year Comprehensive Water Master Plan Victor Valley Water District		
Analysis	Evaluation Criteria	Demand Condition⁽¹⁾
Low-Pressure	Minimum pressure of 40 psi	PHD
Residual Pressure	Minimum pressure of 20 psi	MDD + Fire Flow
High-Pressure	Maximum pressure of 120 psi	ADD
Velocity	Maximum velocity of 7 fps	MDD
Supply	Meet demands with firm well capacity	MDD
Reservoir Balance	Full recovery of water levels over 24-hour period	MDD
Reservoir Capacity	Meet the combined storage capacity per zone, which is comprised of: <ul style="list-style-type: none"> • Operational Storage: 25 percent of MDD. • Fire Flow Storage: Maximum fire flow demand times duration (e.g., 4,000 gpm for 4 hours). • Emergency Storage: 50 percent of MDD. 	
Notes: (1) PHD = Peak Hour Demand. MDD = Maximum Day Demand. ADD = Average Day Demand.		

*Table from the “20-Year Comprehensive Water Master Plan, 100% Draft” by Carollo Engineers

5.2 Existing Water Infrastructure

Several improvements since the 1995 Master Plan (MP) have been completed, including wells in newly developed areas and one reservoir being completed, in addition to hundreds of miles of pipeline. After meeting with Christy Bartley at VWD ID#1, it was learned that the VWD ID#1 is in the process of changing the pressure zone boundaries within the VWD ID#1. She mentioned that the current pressure change between zones 3065 and 3290 is approximately 100psi. When the zone 3170 conversion is complete, there will be a steady 50psi drop across each pressure zone boundary. She also gave PB further information from the “20-Year Comprehensive Water Master Plan, 100% Draft” dated January 2007 by Carollo Engineers, which had figures representing the new boundaries of the pressure zones. Figure 2.1, Existing Water Facilities Map (in Appendix C), done by Carollo Engineers, describes the different pressure zones as of December 2005, within the VWD ID#1 service area. As shown on the figure, the VWD ID#1 now has four primary pressure zones, three sub-zones and one small, isolated pressure zone in an elevation range between 2700-feet and 3200-feet.



Nearly 400 miles of pipelines exist in the VWD ID#1 service area, ranging in size from 4-inches to 24-inches in diameter. Figure 2.2, Existing System Pipelines by Size (in Appendix C), created by Carollo Engineers, outlines the locations of the pipelines within the VWD ID#1 service area. The majority of the pipeline (77%) is asbestos cement pipe (ACP), with the remaining pipe material consisting of polyvinyl chloride (PVC – 13%), steel (STL – 5%), ductile iron (DIP – 4%), and cement mortar lined (CML), Cast Iron Pipe (CIP), and cement lined steel (CLS) (less than 1%).

5.3 Supply and Demand

The Upper Mojave Groundwater Basin is the sole supply of water for the VWD. Infiltration from the precipitation runoff in the San Bernardino and San Gabriel mountains is the only recharge of this groundwater supply. The VWD does not import or use surface water within its system. The wells most recently constructed are located within pressure zones 3065, 3170 and 3290, in areas where the greatest expansions have occurred. These wells pump water from the groundwater supply directly into the distribution system and storage tanks.

The quality of water in Victorville is of high importance to the newly appointed Victorville Water District and meets the state and federal potable water standards. Water testing at the districts wells occurs on a monthly basis, with weekly pipeline testing at 16 sampling stations. In 1999, the VWD ID#1 started a chlorination program to ensure that the water is safe for consumers. According to the annual publication provided on VWDs website titled *The Water Resource, 2005 Consumer Confidence Report*, an average of 0.60 parts per million (ppm) of chlorine are added to the wells prior to distribution into the system. The Maximum Residual Disinfectant Level (MRDL) for chlorine is 4 ppm, set forth by federal and state regulatory agencies. In January 2006, the EPA allowable maximum contaminant requirements for arsenic were lowered from 50µg/L to 10µg/L. In 2005, the average arsenic levels were approximately 7.26 parts per billion (ppb), with levels as high as 17ppb being detected at some wells. Arsenic is an inorganic contaminant caused from erosion of natural deposits, runoff from orchards, and is a byproduct of glass and electronics production wastes. With the decrease in allowable maximum contaminant requirements for arsenic, the VWD has been forced to provide ion exchange arsenic treatment plants to reduce the contaminants in the water. The location of the three treatment plants are as follows: The intersection of El Evado Road and Dos Palmas Road, the site of Reservoir 20, and near well 29 at the intersection of Amethyst Road and Sycamore Street. Ion exchange plants are typically used in potable water treatment in which ions are exchanged between a solution (water in this case) and a solid, such as an ion exchange resin.

Metered water usage has been tracked over the past ten years and has shown a few increases (as much as 8.5%) and decreases (as much as 4%) in water demand to consumers. The increases are shown to be caused by “municipal” and “fire”-related purposes in previous years, but the demand for water has risen in recently due to “multi-residential” usage.

Unaccountable water was also considered in calculating the VWD supply and demands. Past years have shown an average of 7% of unaccountable water that leaks out of the system such as but not limited to leaks in pipes, main breaks, fire hydrant testing and inaccurate meters.



The VWD ID#1 has taken measures to meet demands in case of emergencies, such as firefighting, unplanned outages or any other unforeseen emergencies. Eighteen (18) reservoirs currently exist that have a total storage capacity of 54.1 million gallons, with a 25 million gallon surplus. Table 2.3, Finished Water Storage Reservoirs, by Carollo Engineers, provides the capacity of each reservoir and is shown below. Also, Figure 2.1, Existing Water Facilities Map, by Carollo Engineers, provides locations of all reservoirs within the VWD ID#1 and is provided in Appendix C.

Table 2.3 Finished Water Storage Reservoirs 20-Year Comprehensive Water Master Plan Victor Valley Water District							
Reservoir Number	Material/ Shape	Base Elevation (ft-MSL)	Diameter (ft)	Overflow		Pressure Zone	Capacity (MG)
				Depth (ft)	HWL (ft-MSL)		
2	Welded Steel Tank	2,874	95	28	2,902	2890	1.5
4	Welded Steel Tank	2,874	95	28	2,902	2890	1.5
5	Welded Steel Tank	3,049	104	31	3,080	3065	2.0
6 ⁽¹⁾	Welded Steel Tank	2,840	20	43	2,883	3065	0.1
7	Welded Steel Tank	3,269	105	39	3,308	3290	2.5
8	Welded Steel Tank	3,269	104	39	3,308	3290	2.5
9	Welded Steel Tank	2,894	60	24	2,918	2906	0.5
10	Welded Steel Tank	3,150	110	35	3,185	3170	2.5
11	Welded Steel Tank	3,150	104	39	3,189	3170	2.5
12	Welded Steel Tank	3,268	150	38	3,306	3290	5.0
13	Welded Steel Tank	3,050	129	31	3,081	3065	3.0
14	Welded Steel Tank	3,268	150	38	3,306	3290	5.0
15	Welded Steel Tank	3,050	165	31	3,081	3065	5.0
16	Welded Steel Tank	3,150	150	38	3,188	3170	5.0
17	Welded Steel Tank	3,150	104	39	3,189	3170	2.5
18	Welded Steel Tank	3,050	129	31	3,081	3065	3.0
19	Welded Steel Tank	3,050	165	31	3,081	3065	5.0
20	Welded Steel Tank	3,055	182	27	3,081	3065	5.0
Total Storage Capacity							54.1
Notes:							
1. Reservoir abandoned in 2006.							

*Table from the "20-Year Comprehensive Water Master Plan, 100% Draft" by Carollo Engineers

To ensure that the water demands are met in case of crisis, such as short term emergencies or planned shutdowns, an interconnecting pipeline to share water supplies is provided between neighboring water systems. One emergency interconnection has been made with the Apple Valley Ranchos Water Company (AVRWC) and an additional interconnection may be made with the VWD ID#2 in the near future.

Table 4.2, Existing Water Supply Wells, by Carollo Engineers, provides the capacities of all existing wells within the VVWD service area. From the Carollo Engineers Master Plan,



“the report titled “*Alternatives for Water Supply for the California Aqueduct*” notes that the existing basin extraction rate has increased rapidly within the past few years and that a serious shortfall could occur in as little as 10 years”. With the future population and land use increasing over time, the constant supply of water within the aquifer may not be sufficient to keep up with the consumer demands. An additional 5 wells are scheduled to come online in the near future to help alleviate the need for water within the City of Victorville. Alternative water sources may have to be investigated, such as the California Aqueduct, to provide enough water to the Victorville Water District service areas.

Table 4.2 Existing Water Supply Wells 20-Year Comprehensive Water Master Plan Victor Valley Water District				
Supply Source	Pressure Zone	Pump Test Data (Test Company - Date)	Well Capacity (gpm)	Total Capacity (mgd)
Well No. 5	3065	Pump Check - 04/16/2004	469	0.68
Well No. 9 ⁽¹⁾	3290	Pump Check - 04/16/2004	1,000	1.44
Well No. 15	3065	unspecified - 11/10/2004	523	0.75
Well No. 16	3065	unspecified - 08/21/2002	899	1.29
Well No. 18	2906	unspecified - 09/01/2004	756	1.09
Well No. 19	2906	unspecified - 11/24/2004	509	0.73
Well No. 20	3170	Pump Check - 04/14/2004	1,930	2.78
Well No. 21	3065	unspecified - 04/29/2004	452	0.65
Well No. 22	3170	Pump Check - 05/25/2004	1,910	2.75
Well No. 23	3290	unspecified - 12/21/2004	969	1.40
Well No. 25	3290	unspecified - 12/09/2004	1,360	1.96
Well No. 26	3290	Pump Check - 05/25/2004	1,041	1.50
Well No. 27	3065	unspecified - 11/24/2004	1,020	1.47
Well No. 28	3290	Pump Check - 05/25/2004	759	1.09
Well No. 29	3290	unspecified - 06/10/2004	710	1.02
Well No. 30	3065	Pump Check - 04/16/2004	492 ⁽⁴⁾	0.71 ⁽⁴⁾
Well No. 31	3290	SCE - 12/20/1999	1,302	1.87
Well No. 32	3065	unspecified - 03/19/2004	780	1.12
Well No. 33	2890	unspecified - 01/15/2003	1,000	1.44
Well No. 34	3290	SCE - 01/10/2000	1,025	1.48
Well No. 35	2890	unspecified - 01/12/2005	880	1.27
Well No. 36	3065	unspecified - 01/13/2005	581	0.84
Well No. 37	3065	unspecified - 08/13/2002	1,266	1.82
Total Well Capacity⁽²⁾			21,633	32.7
Firm Well Capacity⁽²⁾⁽³⁾			15,321	23.7

Notes:
 (1) Includes re-equipment, which increased the well capacity from 573 gpm to 1,000 gpm.
 (2) The firm capacity is the total well capacity without the largest well in each major pressure zone (Wells 18, 20, 25, 33, and 37 are assumed to be out of service).
 (3) Totals may not agree due to rounding.
 (4) Based on 50 percent operation due to Fluoride issues.

*Table from the “20-Year Comprehensive Water Master Plan, 100% Draft” by Carollo Engineers



Historical data shows a 22% increase in metered water usage since 1996. The water production has also increased 28% since 1996. Land use categories have been identified within the City of Victorville and average daily demands have been provided per acre for the existing condition. Table 3.8 shown below is from the Carollo Engineer 20-Year Comprehensive Water Master Plan and provides the average day demand per acre of land based on land use.

Table 3.8 Existing System Demand by Land Use Category 20-Year Comprehensive Water Master Plan Victor Valley Water District			
Land Use Category	Calibrated WDF (gpd/ac)	Area (ac)	Average Day Demand(mgd)
Low-Density Residential	1200	6436	7.72
Medium-Density Residential	2000	274	0.55
High-Density Residential	2500	676	1.69
Commercial	1800	1681	3.03
Industrial	2600	569	1.48
Open Space ⁽¹⁾	1900	380	0.14
Other	1900	1540	2.93
Vacant	0	16257	0.00
Total		27813	17.50
Estimated Average Day Water Demands (ac-ft/yr)			19634
<u>Notes:</u>			
(1) Only 72.4 acres of this category was assigned a demand, as the remaining portion was identified right-of-way of Interstate 15.			

*Table from the “20-Year Comprehensive Water Master Plan, 100% Draft” by Carollo Engineers

Several peaking factors were calculated by Carollo Engineers to determine the minimum supply that the VVWD must have available on any given day. The average day demands (ADD), maximum day demands (MDD) were obtained to calculate the maximum peak factor for 2005. A ratio of the total production on the maximum day in 2005 compared with the average production rate in 2005 calculated to be 1.83, which is the maximum day factor. Table 3.10, Existing System Demands, by Carollo Engineers, shows the peaking factors for three demand periods for the year 2005.

Table 3.10 Existing System Demands 20-Year Comprehensive Water Master Plan Victor Valley Water District			
Demand Condition	Peaking Factor	Existing System Demand (gpm)	Existing System Demand (mgd)
Average Day Demand	1.00	12,173	17.5
Maximum Day Demand	1.83	22,277	32.1
Peak Hour Demands	2.90	32,867	n/a

*Table from the “20-Year Comprehensive Water Master Plan, 100% Draft” by Carollo Engineers

In May 2008, Carollo Engineers came out with additional information regarding water demands within each district, including the ID#1, ID#2, SCLA and Desert Gateway Specific Plan. Additional population data became available for Carollo Engineers to use to update there initial report. According to Carollo Engineers, “the demands within the



District are projected to increase from 24,005 acre-feet per year (afy) in 2005 to 69,740 afy in 2030.” These values are slightly higher than what was initially presented in the “20-Year Comprehensive Water Master Plan, 100% Draft” report. “The projected demand of 69,740 afy is used in all analyses presented in this letter to provide conservative estimates,” as the projected water demand according to the UWMPs is 20% less, at approximately 55,000 afy. Potable water and recycled water tables are provided in the appendix presenting information on the demands through the year 2030. In addition, water supply tables were provided explaining the amount of water that will be available through the year 2030. Carollo Engineers also states “the City is currently pumping beyond the safe yield of the aquifer to meet its water demand, requiring replenishment fees or purchase of water rights from other agencies in the sub-basin.” For more information regarding Carollo Engineers findings, please refer to Appendix C.

5.4 Water Facility Deficiencies

Additional sources of water are currently being explored for the Victorville Water District service areas. Conservation, water reuse (recycling), additional well production, and importing water from the California State Water Project (SWP) are just a few ways the VVWD are considering for additional water. Five wells have recently been installed (prior to the end of 2006), and an additional five wells will be operational by the summer of 2008. Studies have also been done on importing water to the city of Victorville, mainly the report titled “*Alternatives for Water Supply from the California Aqueduct*”. This report, which was prepared for four desert agencies, suggests supplementing the groundwater supply with the water from the California Aqueduct, which is a main transport structure for the SWP.

Water conservation has been a major concern in the City of Victorville in reducing the water consumption and lowering water demands among the Victorville customers. There are numerous programs that currently exist in the City of Victorville and additional programs that may be implemented in the future. Some of the programs in the VWD’s 2005 Urban Water Management Plan are listed as follows:

- Water Audits
- Residential Plumbing Retrofits
- Rate Structure and Conservation Ordinance
- Public Information Programs
- Awareness Events with Alliance for Water Awareness and Conservation (AWAC)
- Community Outreach
- Education Programs
- Developer Incentives
- High Efficiency Spray Wash Valves
- Water Conservation Specialists
- Water Waste Prohibition Ordinance

Additional sources of water may also have to be considered, due to limitations by the Mojave Water Agency (MWA) on the amount of groundwater VWD can extract. Five new wells are planned to be operational by the summer of 2008, but additional sources of water may be necessary to support the population growth in the city.

Currently, the Westwinds Golf Course is the only location in the City of Victorville that uses recycled water. Recycled water could potentially be used for landscape and agricultural irrigation around the city.



6.0 Existing Drainage Facilities

The 1992 Master Plan of Drainage (MPD) was used as a guide to determine the local basin areas based off of the location of the local drainage facilities. Additional engineering analyses have recently been performed with detailed information on the drainage facilities in Victorville. The “Baldy Mesa Master Plan of Drainage, San Bernardino County Flood Control District” report was finalized in December 2006 and is currently being used as a guide by the City of Victorville. In addition, “Victor Valley Development Association Drainage Master Plan” draft report was completed in January 2007. Finally, the SCLA Master Plan of Drainage, performed by RBF Consulting provides detailed drainage information for the specific plan area of the SCLA.

The regional drainage basin has a general slope of 2% to the northeast, discharging to the Mojave River. Cajon Summit is the basins highest point near the southern end of the regional basin. Most of the basin is undeveloped; however, in recent years, Victorville has been expanding in residential and commercial growth.

6.1. Southern California Logistics Airport (SCLA) Master Plan of Drainage

The Southern California Logistics Airport (SCLA) is located in the downstream portion of the Mojave River Watershed at the site of the former George Air Force Base. The drainage study prepared by RBF Consulting consists of two main watersheds within the subject area, with one watercourse draining to the Fremont Wash to the north and the other draining to the Mojave River to the north and east.

The hydrology analysis in the RBF Consulting Master Plan of Drainage was performed using the Advance Engineering Software (AES) HydroWIN v. 2004 Rational Method Analysis computer program. For areas greater than 640 acres, the program switched to the Unit Hydrograph method. The 10-year, 25-year and 100-year storm events were calculated using the San Bernardino County Hydrology Manual as a reference to determine the precipitation, infiltration and soil types. According to RBF Consulting, “the 100-year and 25-year events are the primary criteria used to determine the classification of necessary drainage facilities as local, secondary or regional, as well as determining flood protection levels and street flow capacity. The 10-year event is useful for sizing wash crossings.” The drainage comparison tables RBF Consulting provided (Appendix E) follows this criterion, while comparing the existing condition flows to the proposed condition flows at each culvert.

RBF Consulting compiled an inventory of the locations of existing drainage facilities in the study area. An existing condition hydraulic analysis was not performed on the culverts because it was determined by the City of Victorville that the facilities were “not designed to convey any particular storm event”. A proposed condition analysis was performed and the existing culverts were evaluated using the proposed analysis. Table 4.3 in Appendix E provides the peak flow rate summary in the study area. A site specific map showing the exact locations of the nodes and culverts was not obtained for this report.

RBF Consulting also provided a table of the facility sizing, based on the 100-year storm event. A few guidelines were followed when designing the facilities: provide 100-year flood protection and minimize additional flood hazards, minimize underground conduits to minimize costs, and utilize AES software to determine the size of the facility based on normal depth calculations. Table 6.1 from the RBF Consulting report is provided in Appendix E to show preliminary sizes of proposed facilities.



In addition to the hydrology and hydraulic analyses that RBF Consulting performed in the SCLA Master Plan of Drainage, a discussion on permanent and temporary water quality devices was provided for guidance on individual projects that will be developed throughout the site. Please refer to the SCLA Master Plan of Drainage for more information.

As stated in the RBF Consulting report, “the recommended system outlined [in the SCLA MPD report] is intended to provide a framework of general criteria and guidelines to assist in long-term runoff quantity and quality objectives.” The SCLA Master Plan of Drainage is just a guide as project specific engineering analyses should be performed for design and construction purposes.

6.2. SBCFCD Baldy Mesa Master Plan of Drainage

The Baldy Mesa Watershed is directly west of the Victorville Watershed, bounded by Palmdale Road to the north, the Baldy Mesa ridgeline to the south and approximately between Wilson Ranch Road and Eaby Road to the west. The area encompasses approximately 58.4 square miles with nine major watersheds within the Baldy Mesa drainage basin. The Baldy Mesa analysis was prepared by the San Bernardino County Transportation / Flood Control Department using the AES software. The following table is a summary of the AES output provided in the Baldy Mesa Master Plan of Drainage.

Watershed ID	AES Node	Area (acreage)	Area (mile²)	Peak Q CFS
1	198	16252	25.4	5637
2	259	5401	8.4	2183
3	329	2345	3.7	1155
4	447	3092	4.8	1468
5	526	3265	5.1	1413
6	609	517	0.8	385
7	706	752	1.2	570
8	860	5158	8.1	2181
9	907	592	0.9	327

*Information from the Baldy Mesa Master Plan of Drainage; Table summarized by PB

Watersheds 1 – 4 traverse through the western portions of the City of Victorville limits. A base map from the Baldy Mesa Master Plan of Drainage has been provided in Appendix F for reference. Also, the “San Bernardino County Flood Control District High Desert Victorville Area” map has been provided as reference for the layout of the watersheds in this area. As the map shows, the Baldy Mesa Study Area discharges directly into the Adelanto Study Area and impacts the City of Adelanto.

6.3. SBCFCD Hesperia Master Plan of Drainage

The Hesperia watershed discharges through the eastern-most portion of the City of Victorville, along the eastern boundary of the Victorville watershed through the City of Hesperia. The Hesperia watershed discharges east to the Mojave River as shown on the San Bernardino County Flood Control District High Desert figure in Appendix D. Please refer to the SBCFCD Hesperia Master Plan of Drainage for detailed information.



6.4. Existing Regional Drainage Facilities

A site visit was performed on Thursday, May 17, 2007 to determine which facilities have been constructed and where possible deficiencies are in the City of Victorville. The drainage figures in the *Victorville Master Plan of Drainage* (MPD), dated March 1992, were used as a guide to determine the facilities to be investigated in the field. Select major facilities north of La Mesa Road were identified in the field and are shown on the “Recommended Alternative Major Alignments & Drainage Divides” figure in Appendix G.

PB was able to collect data for several facilities in the northern (downstream) part of the Victorville watershed. The naming conventions of the subsequent facilities are identical to the facilities in the *Victorville Master Plan of Drainage*, and the figures listed below are in the appendix.

- Facility E-01: Various locations where E-01 appears on the figure were investigated with no major facilities being discovered. Extensive field investigation occurred between Mojave Road and Hook Boulevard along the E-01 alignment, where a new development has risen. There was no major facility discovered in the development and downstream of the development was open natural land. Further upstream, the 1995 Victorville MPD indicates that there is a proposed facility that travels parallel to Highway 395. The portion of E-01 between La Mesa Road and Palmdale Road could not be located in the site visit and appears that improvements may still be necessary.
- Facility E-05: A large regional facility is located between Mojave Drive and Hook Boulevard traversing north under Mojave Drive (approx. 600-feet east of Cobalt Road) and discharging to an open natural channel through a double box culvert as shown in Figure 2 (the other double box culvert on the right is discharging water from another location). Upstream (south) of Mojave Drive is a new facility containing concrete sidewalls and the bottom is earthen lined as shown in Figure 3. The new facility traverses through a new development and is terminated upstream at Hook Boulevard where it reverts back to an existing open channel. Figure 4 shows the facility facing downstream (north) at Mojave Road as an open natural channel. Figures 5 & 6 are facing downstream (north) at the entrance to the facility on Hook Boulevard at Cobalt Road.

Deficiencies with the facility were discovered further upstream and downstream. At the intersection of Palmdale Road, just west of Cobalt Road, a regional facility was proposed in the 1992 MPD. This proposed regional facility was not constructed as of May 2007. Also, at the intersection of La Mesa Road and east of the Mesa Linda Middle School, a constructed concrete lined facility was present (Figure 7), but did not follow the direction of the proposed regional facility as indicated on the 1992 MPD plans. This channel was not investigated any further south (upstream) than this location.

- Facility E-06: This facility is similar to that of E-05 as it also travels through a new community and discharges northerly at the two box culverts at Mojave Drive (the double box culvert on the right in Figure 2). The upstream entrance to the double box culvert is located at Cobalt Road and Mojave Drive as shown in Figure 8. Just upstream of this entrance is approximately 500-feet of graded channel that transitions to a channel with concrete sidewalls and a tightly compacted graded



bottom (Figure 9). This channel passes through the new development and also terminates at Hook Boulevard, transitioning into an existing open natural channel (Figure 10).

The 1992 MPD indicates that the upstream terminus of this facility is at Palmdale Road. The facility could not be found in field investigations at this location.

- Facility E-03: The southern (upstream) end of this facility was located and determined to be a concrete headwall with wings.
- Facility D-01: At the intersection of Palmdale Road and San Mateo Road, the southern (upstream) end of this facility was located. This facility consisted of a triple concrete box culvert, traversing under Palmdale Road to the north.
- Facility A-01: Two portions along the A-01 alignment were constructed per the 1992 MPD, which PB found to be accurate in the site visit. The segment of this alignment between the two existing channels (north of Seneca Road along Hesperia Road) was built in the 1960s by the Corps of Engineers, according to the City. Further south (upstream) the facility was located but was not designed as a typical flood control facility. On Camelback Drive, near Arrowhead Drive (within the community north of Green Tree Boulevard), the facility appeared to be a golf cart path on a golf course. The golf cart path was located at a low point throughout the course, which would allow for positive drainage to the downstream existing facility. As shown below, Figure 11 is facing upstream (southwest), Figure 12 is facing downstream (northeast) and Figure 13 is the culvert crossing under Camelback Drive (in the northwest direction).

Facility A-01 was also investigated further upstream, east of Interstate 15 on Mariposa Road. This channel was found to be an unimproved natural channel. This is the furthest upstream location PB investigated at this time.

And even further south at Bear Valley Road, no major drainage infrastructure could be located as shown on the Victorville MPD.

- Facility A-02: This facility is similar to that of A-01 because it is also located in a small concrete ditch and has grassy lined side slopes, similar to the golf course. The location of this facility was discovered at the intersection of Green Tree Boulevard and slightly northwest of Wimbledon Drive. Figure 14 is facing downstream (northeast) and Figure 15 is facing upstream (southwest).
- Facility A-03: The local facility south of A-03 was located and determined to be a small concrete-lined drainage easement, with earthen slopes at Woodbine Drive and Wimbledon Drive, in a small community north of Green Tree Boulevard. In Figure 16 below, a double concrete box culvert is shown under Green Tree Boulevard and three circular pipes are shown crossing under Wimbledon Drive. The three circular culverts discharge to the north through an earthen ditch as shown in Figure 17.
- Facility A-04: Two locations along this alignment were investigated with no findings of major drainage infrastructure. The first location was at the intersection of Nisqually Road and 11th Avenue, and the second location was at the intersection of Bear Valley Road and Balsam Road.



6.5. Drainage Facility Deficiencies

There are several storm drain projects that are proposed, but have not yet been constructed. With the new development being constructed throughout Victorville, it is inevitable that an increase in flow will occur and larger pipe sizes will have to be constructed to avoid a major disaster. All local facilities to be constructed should be evaluated on an individual basis. It should be noted, that most of the costs for local facilities should fall upon the project developer as many of the local facilities may be located on private property. This, too, should be determined on an individual basis.

A few of the regional facilities were located in the field as previously discussed. Deficiencies on an individual basis for the facilities located were provided in detail in the previous section. Overall, a few of the regional facilities have been constructed since the 1992 Master Plan of Drainage was published; however, the City of Victorville is very deficient when it comes to regional drainage facilities. Several of the facilities were not connected to any downstream facilities and would discharge to open-unlined channels. Also, the facilities that were constructed appeared to be incomplete as far as lining in the bottom of the channel, or channels being through a golf path on a golf course. In these cases, the facilities may erode and not be adequate in years to come. As with the local facilities, the regional facilities must be evaluated on an individual basis to determine necessary improvements and deficiencies for each channel.



7.0 Conclusion

Due to the annual increase in the growth rate of 1.5% to 3% over a long term range (approximately through the year 2035), the current infrastructure within the city limits is not sufficient to keep up with the growth.

It appears that the sewer lines will have to be expanded into the ‘Specific Plan’ areas on the land use map and the existing capacity of the sewer trunk lines may need to be increased to meet the City’s demands.

Adding more potable water wells or more well production and increasing the efficiency to 70% may be alternatives to providing water for the city residents and businesses. Also, water conservation and water reuse would be very beneficial to the community and could be implemented by informing the public on various ways to save water. Additional water analyses are necessary to determine comprehensive and detailed alternatives.

As for the drainage infrastructure, it appeared that the facilities are far from complete. There are several deficiencies, since many of the upstream channels discharge to natural existing washes that have not yet been improved.

With the implementation of the sewer, water and drainage master plans provided recently by a few consultants, the City of Victorville will be able to meet the infrastructure needs to sustain the proposed growth in the coming years. The city’s capital improvement program, as well as developers required to install master plan improvements, will provide the infrastructure to support the city’s growth with funding from several sources including development impact fees, connection fees, assessment districts and community facility districts, to name a few.



8.0 References

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12. <http://www.vvwra.com/>, viewed on May 24, 2007
13. 20-Year Comprehensive Water Master Plan, 100% Draft, Carollo Engineers, January 2007
14. Pat Johnson was interviewed at the Victor Valley Wastewater Reclamation Authority's treatment facility on Thursday, May 17th, 2007.
15. Christy Bartley was interviewed at the Victor Valley Water District on Thursday, May 17th, 2007.
16. Sewer System Master Plan and Collection System Final Draft, Earth Tech, March 2008
17. Baldy Mesa Master Plan of Drainage, San Bernardino County Flood Control District, December 2006

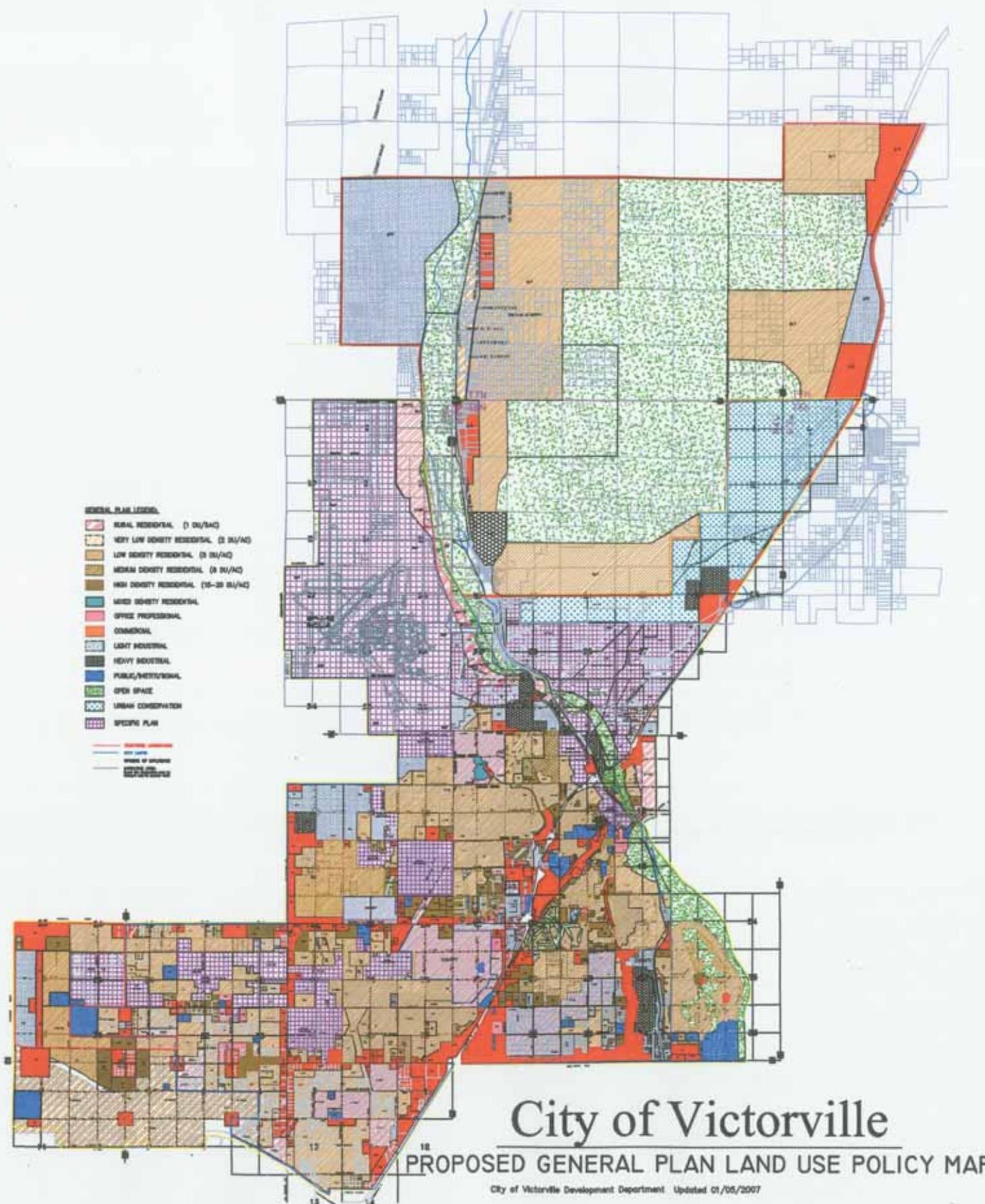


18. Victor Valley Development Association Drainage Master Plan, January 2007
19. Southern California Logistics Airport Water and Wastewater System Master Plan, RBF Consulting, January 2007
20. Southern California Logistics Airport Master Plan of Drainage, RBF Consulting, revised July 2005
21. Hesperia Master Plan of Drainage, San Bernardino County Flood Control District, 1996
22. Water Supply Availability in the City of Victorville, memorandum by Carollo Engineers, May 8, 2008

APPENDIX A

Existing and Proposed Maps





City of Victorville

PROPOSED GENERAL PLAN LAND USE POLICY MAP

City of Victorville Development Department Updated 01/05/2007

APPENDIX B

Sewer Information
Source: EarthTech



Legend

Wastewater Collection System

- Temporary Flow Meter Locations
- Victorville Sewer Discharge to VVWRA Meter Locations

VVWRA Interceptor System

- Trunk
- VVWRA Interceptor
- Sewer Network

Flow Meter Locations

- VVWRA Reclamation Plant
- Parcels
- Sphere of Influence



Earth Tech CITY OF VICTORVILLE
Department of Engineering

Figure 2-3
Connections to the
VVWRA Interceptor System
and
Nearby Temporary Flow Meter Sites

Sewer System Master Plan
City of Victorville, CA

DATE: March 07, 2008

SCALE: 1" = 100'

THE CITY OF VICTORVILLE

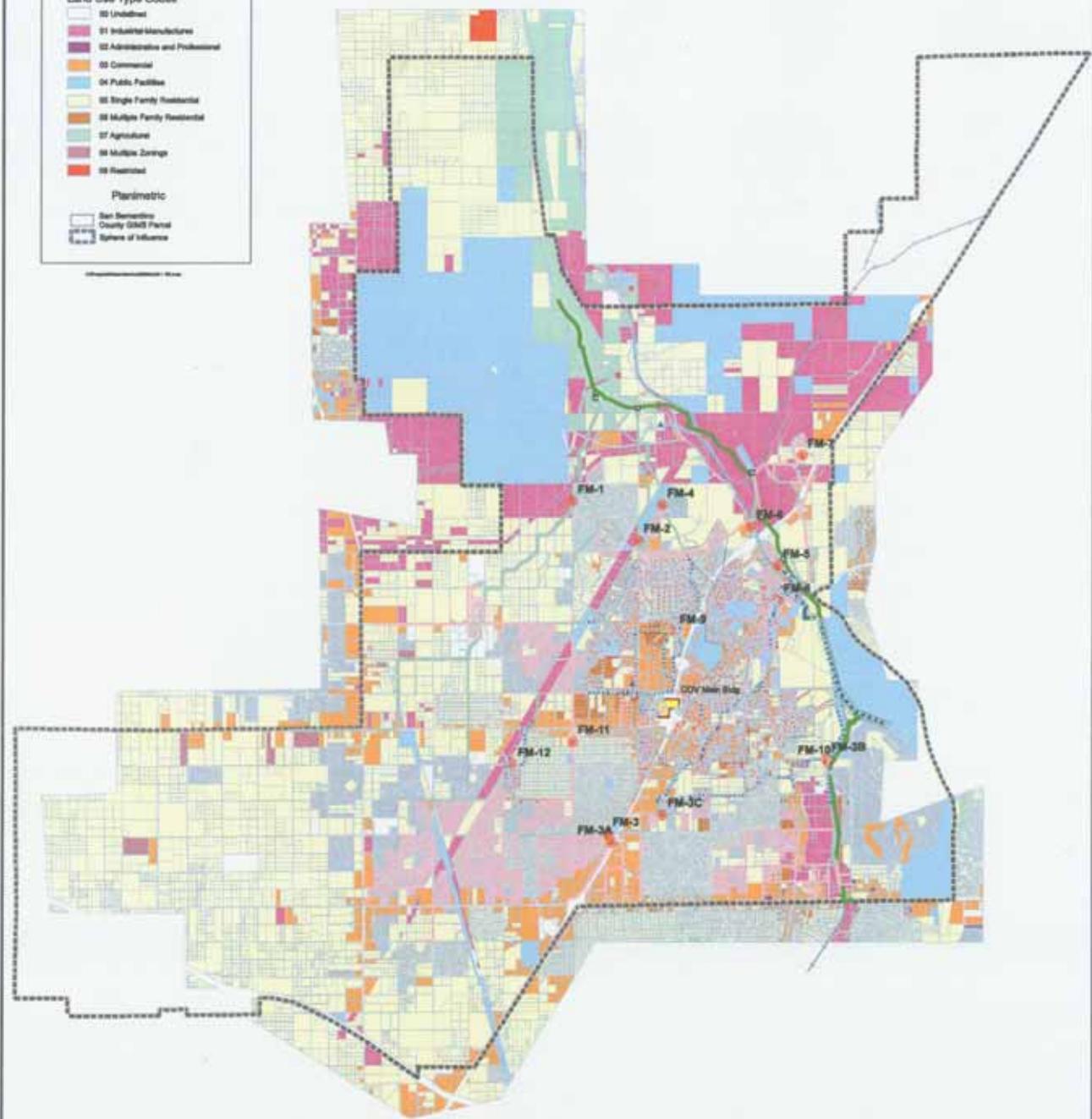
Legend

Land Use Type Codes

- 00 Unlabeled
- 01 Industrial/Manufacture
- 02 Administrative and Professional
- 03 Commercial
- 04 Public Facilities
- 05 Single Family Residential
- 06 Multiple Family Residential
- 07 Agriculture
- 08 Multiple Zoning
- 09 Restricted

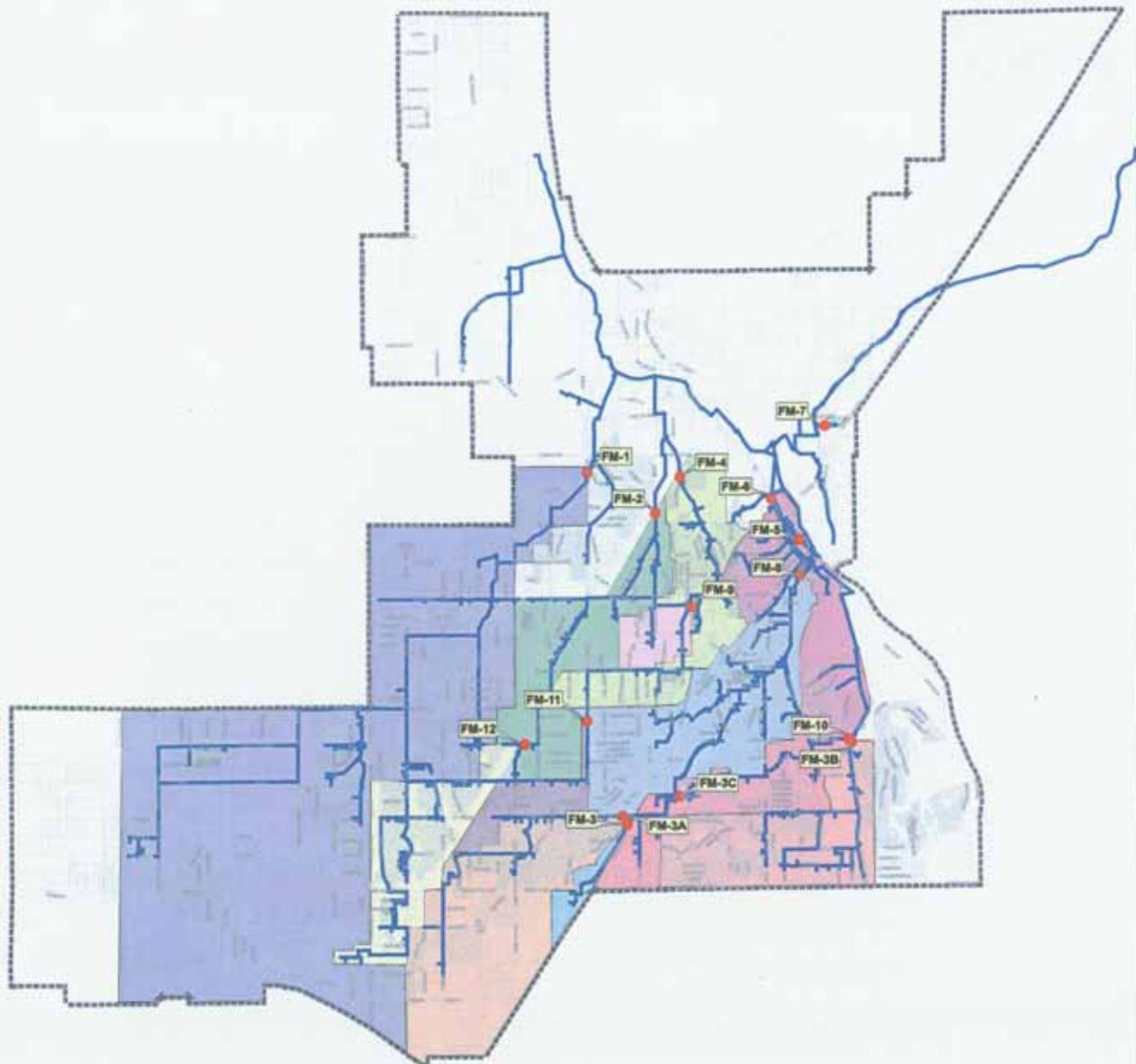
Planimetric

- San Bernardino County GIS Parcel
- Sphere of Influence



DRAFT FINAL

EarthTech	CITY OF VICTORVILLE Department of Development
Figure 3-1	
Land Use and Flow Monitoring Tributary Areas	
Sewer System Master Plan City of Victorville, CA	
DATE: March 27, 2018	SHEET
SOUTH TOWN HALL, 12000 BENTLEY, CA	100



Legend

Wastewater Collection System

- Flow Monitoring Locations
- Modelled Sewer Network
- Tributary Areas
 - FM-1
 - FM-2
 - FM-3
 - FM-3A
 - FM-3B
 - FM-4
 - FM-4A
 - FM-5
 - FM-6
 - FM-7
 - FM-8
 - FM-9
 - FM-10
 - FM-11
 - FM-12
- Planimetric
- Parcels
- Sphere of Influence



0 100 200
 DRAFT FINAL

	CITY OF VICTORVILLE DEPARTMENT OF UTILITIES
Figure 3-2 Flow Monitoring Locations and Tributary Areas	
Sewer System Master Plan City of Victorville, CA	
DATE: March 27, 2009	SHEET NO.
EARTH TECH INC., 10800 BEVELL, CA	100 00

Legend

Wastewater Collection System

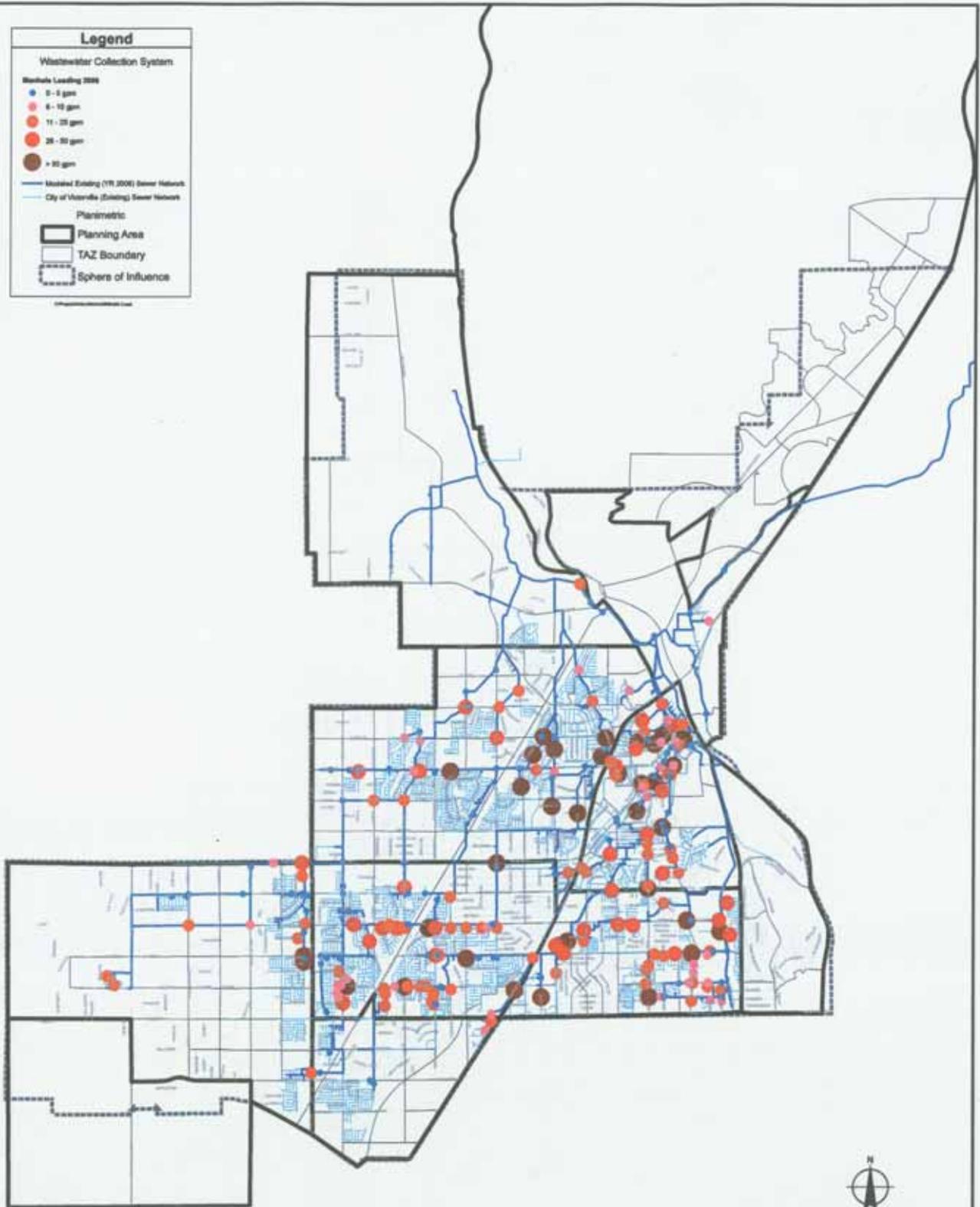
Manhole Loading 2046

- 0 - 5 gpm
- 6 - 10 gpm
- 11 - 20 gpm
- 21 - 30 gpm
- > 30 gpm

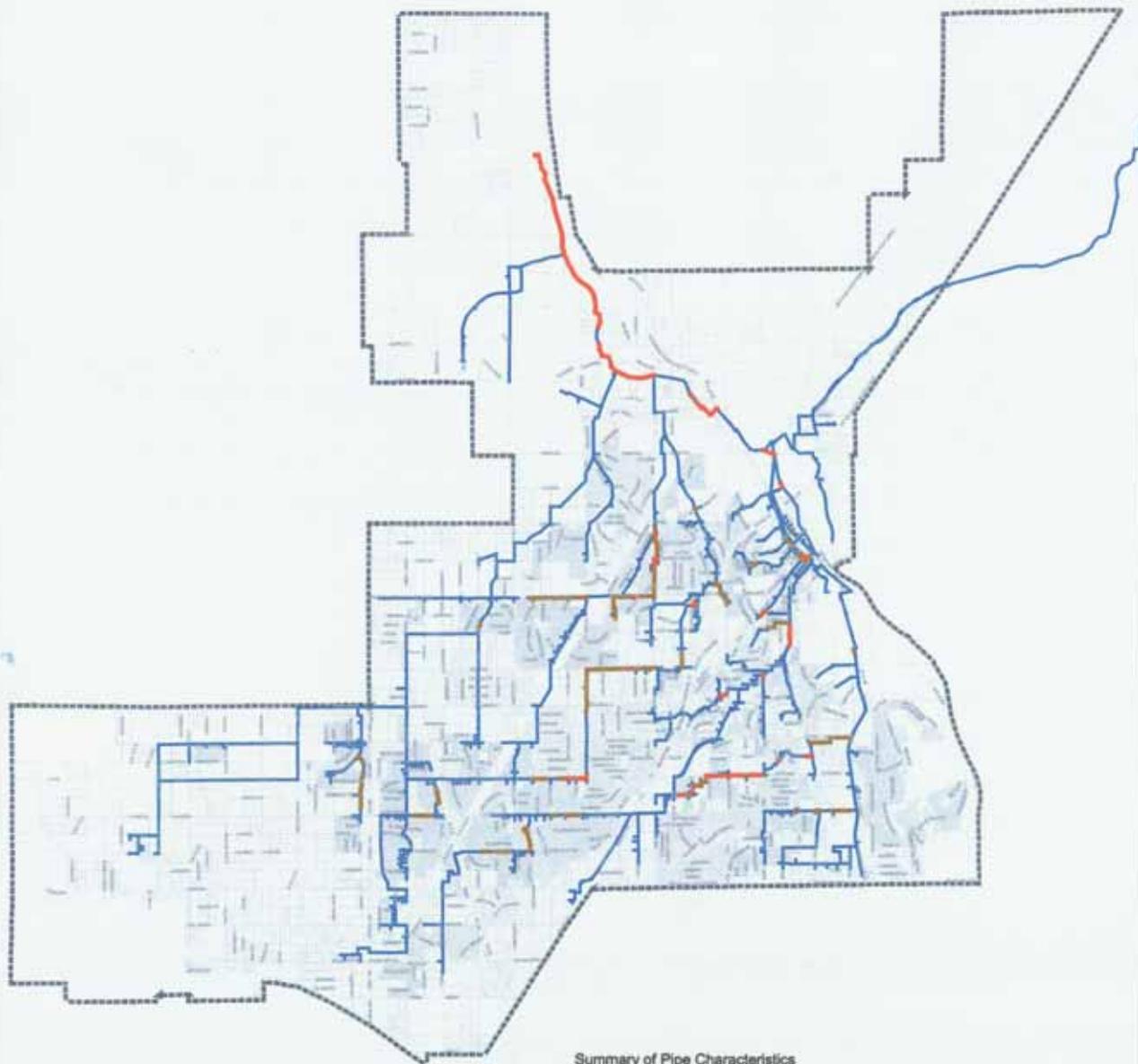
- Modified Existing (11/2006) Sewer Network
- City of Victorville (Existing) Sewer Network

Planimetric

- ▭ Planning Area
- ▭ TAZ Boundary
- ▭ Sphere of Influence



	CITY OF VICTORVILLE DEPARTMENT OF DEVELOPMENT
Figure 5-3 Manhole Loading for Modeling Current (Year 2046) Conditions	
Sewer System Master Plan City of Victorville, CA	
DATE: March 27, 2009 SHEET: 1000-001, 1000-002, 1000-003, 1000-004, 1000-005, 1000-006, 1000-007, 1000-008, 1000-009, 1000-010, 1000-011, 1000-012, 1000-013, 1000-014, 1000-015, 1000-016, 1000-017, 1000-018, 1000-019, 1000-020, 1000-021, 1000-022, 1000-023, 1000-024, 1000-025, 1000-026, 1000-027, 1000-028, 1000-029, 1000-030, 1000-031, 1000-032, 1000-033, 1000-034, 1000-035, 1000-036, 1000-037, 1000-038, 1000-039, 1000-040, 1000-041, 1000-042, 1000-043, 1000-044, 1000-045, 1000-046, 1000-047, 1000-048, 1000-049, 1000-050, 1000-051, 1000-052, 1000-053, 1000-054, 1000-055, 1000-056, 1000-057, 1000-058, 1000-059, 1000-060, 1000-061, 1000-062, 1000-063, 1000-064, 1000-065, 1000-066, 1000-067, 1000-068, 1000-069, 1000-070, 1000-071, 1000-072, 1000-073, 1000-074, 1000-075, 1000-076, 1000-077, 1000-078, 1000-079, 1000-080, 1000-081, 1000-082, 1000-083, 1000-084, 1000-085, 1000-086, 1000-087, 1000-088, 1000-089, 1000-090, 1000-091, 1000-092, 1000-093, 1000-094, 1000-095, 1000-096, 1000-097, 1000-098, 1000-099, 1000-100	30



Summary of Pipe Characteristics Meeting or Exceeding d/D Criteria

	Pipes Meeting d/D Criteria	Pipes Exceeding d/D Criteria ¹	Surcharged Pipes ²	Total Pipe Length ³
Pipe Diameter	Linear Feet	Linear Feet	Linear Feet	Linear Feet
8-inch	191,945	19,048	5,389	216,382
10-inch	87,779	12,782	302	100,863
12-inch	66,981	12,884	4,239	84,104
14-inch	3,537	--	--	3,537
15-inch	98,258	--	424	98,682
18-inch	94,572	--	--	94,572
21-inch	41,899	--	--	41,899
24-inch	22,513	--	--	22,513
27-inch	33,477	--	1,087 ²	34,564
30-inch	31	--	--	31
33-inch	927	--	--	927
36-inch	11,685	--	18,886 ²	30,551
Total	653,584	44,956	30,327	728,625

¹Excluding Surcharged Pipes
²Excluding Force Mains
³VWRA Lines

Legend

Wastewater Collection System

- Surcharged Pipe
- Pipes Exceeding d/D Criteria
- Pipes Meeting d/D Criteria

Planimetric

- Parks
- Streets
- Utilities of Vicinity

d/D Criteria for Existing and Future Pipe

Pipe Diameter	Max. d/D
8" to 12"	0.5
> 12"	0.75



DRAFT FINAL

Earth Tech CITY OF VICTORVILLE
 DEPARTMENT OF ENGINEERING

Figure 5-4
 Hydraulic Evaluation Results
 for
 Year 2006 Conditions
 Sewer System Master Plan
 City of Victorville, CA

DATE: March 07, 2006
 SHEET NO.: 1048 (REVISED) 200
 200
 1048

Legend

Wastewater Collection System

Manhole Loading 2014

- 0 - 25 gpm
- 25 - 50 gpm
- 50 - 100 gpm
- 100 - 500 gpm
- > 500 gpm

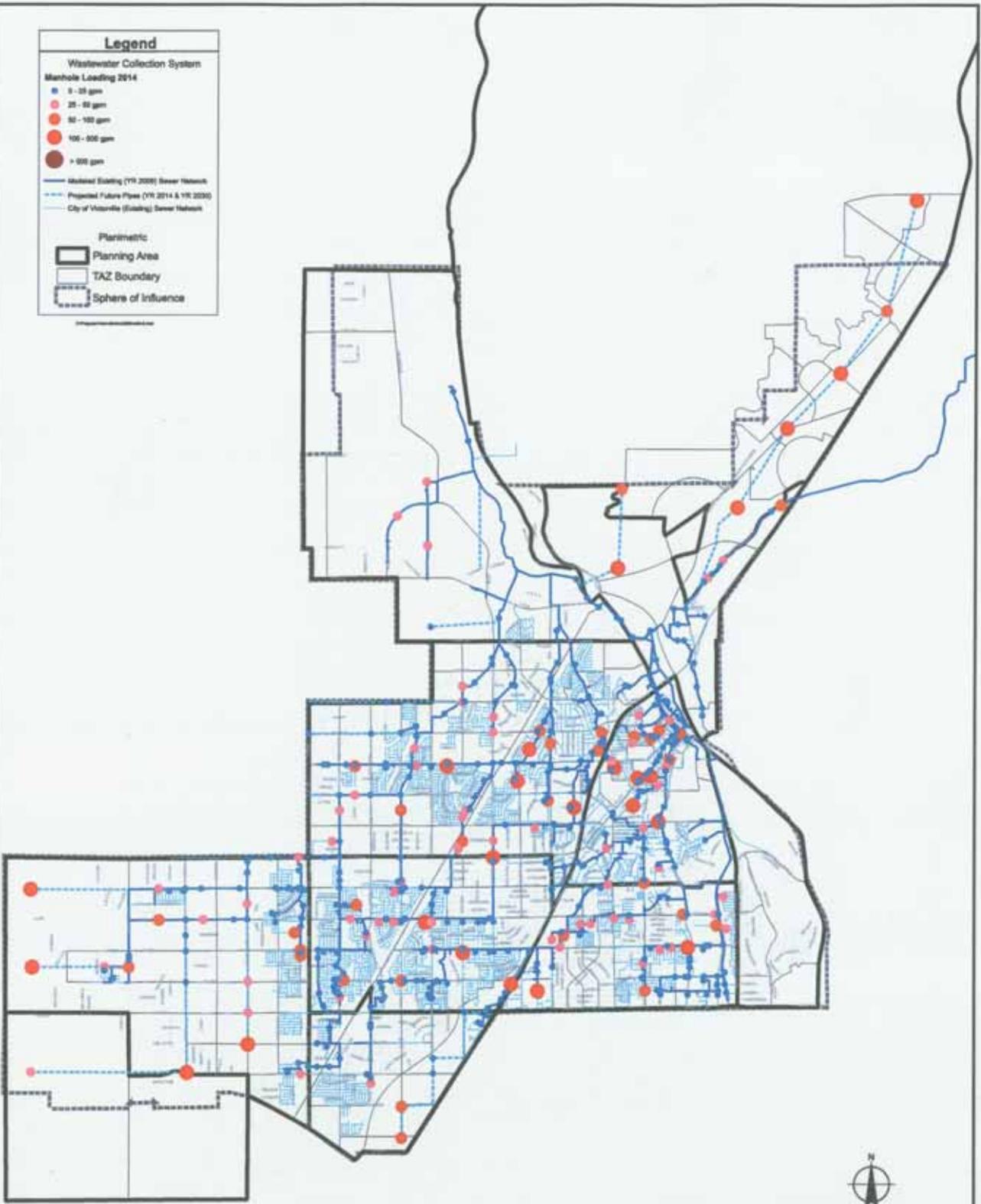
— Modelled Existing (YR 2030) Sewer Network

— Proposed Future Pipes (YR 2014 & YR 2030)

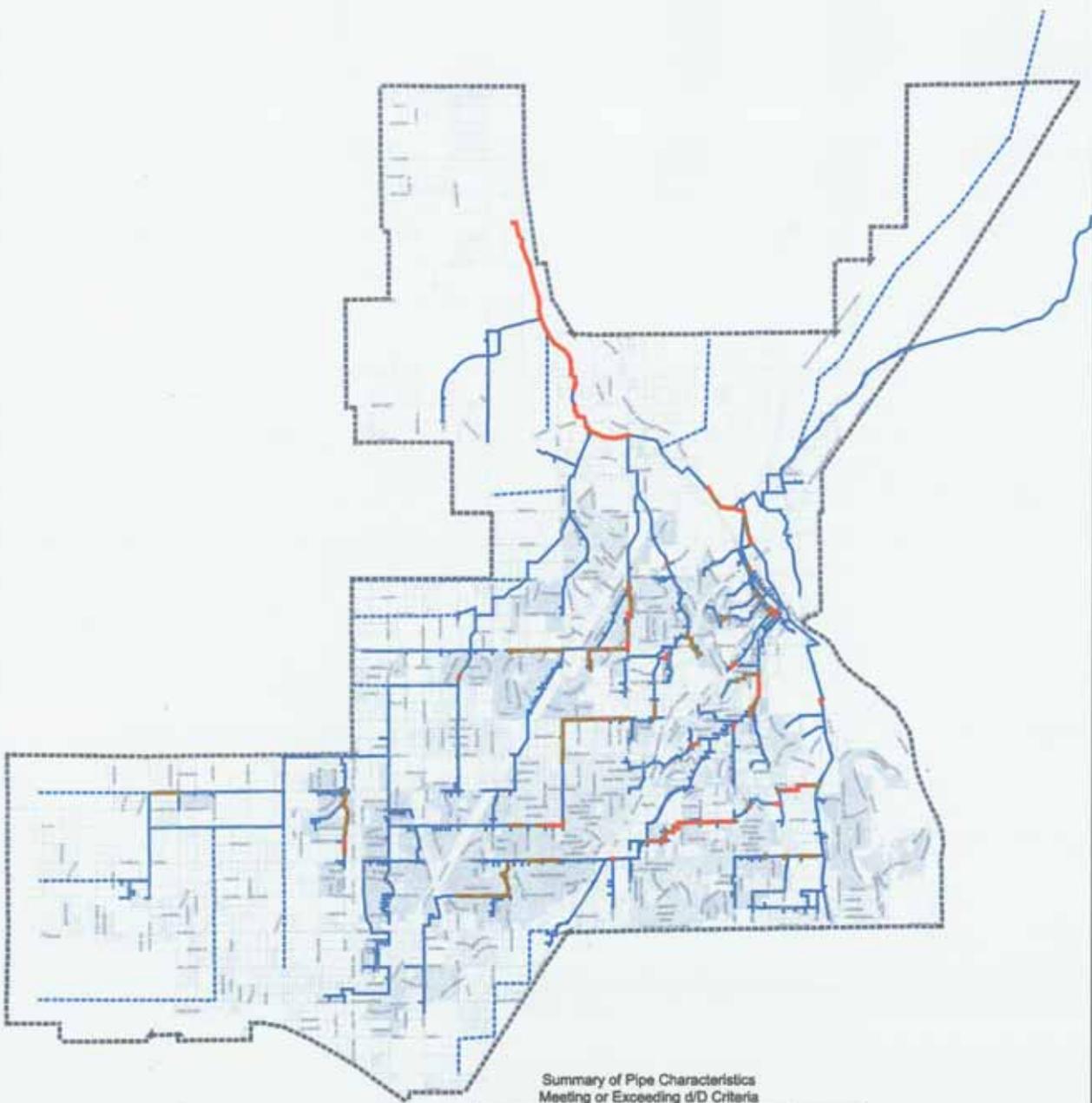
— City of Victorville (Existing) Sewer Network

Planimetric

- ▭ Planning Area
- ▭ TAZ Boundary
- ▭ Sphere of Influence



	CITY OF VICTORVILLE DEPARTMENT OF ENGINEERING
<p>Figure 5-5 Expansion for Year 2014 Planning Horizon and Manhole Loading for Modeling</p>	
<p>Sewer System Master Plan City of Victorville, CA</p>	
DATE: March 27, 2009	TITLE
GRAPHY: TERRY WOOD, LAND MANAGER, CA	NO.



Summary of Pipe Characteristics Meeting or Exceeding d/D Criteria

	Pipes Meeting d/D Criteria ¹	Pipes Exceeding d/D Criteria ²	Surcharged Pipes ³	Total Pipe Length ³
Pipe Diameter	Linear Feet	Linear Feet	Linear Feet	Linear Feet
8-inch	188,627	22,357	5,389	216,383
10-inch	149,570	14,016	603	164,189
12-inch	103,207	13,979	6,866	124,052
14-inch	3,537			3,537
15-inch	134,953	150	694	135,797
18-inch	110,872			110,872
21-inch	41,899			41,899
24-inch	22,513			22,513
27-inch	28,810	3,896 ⁴	1,859 ⁴	34,565
30-inch	31			31
33-inch	927			927
36-inch	11,665		18,885 ⁴	30,551
Total	796,611	54,406	34,297	885,316

¹Includes Projected Future Pipes
²Excluding Surcharged Pipes
³Excluding Force Mains
⁴VWRA Lines

Legend

Wastewater Collection System

- Surcharged Pipes
- Pipes Meeting d/D Criteria
- Pipes Exceeding d/D Criteria
- Projected Future Pipes

Parimetric

Parcels

Sphere of Influence

d/D Criteria for Existing and Future Pipe

Pipe Diameter	Max. d/D
8" to 12"	0.5
> 12"	0.75



© Earth Tech

CITY OF VICTORVILLE
DEPARTMENT OF ENGINEERING

Figure 5-6
Hydraulic Evaluation Results for Year 2014 Conditions

Sewer System Master Plan
City of Victorville, CA

DATE: March 07, 2008

SCALE: 1"=100' (AS SHOWN)

FIG. NO.

Legend

Wastewater Collection System

Manhole Loading 2030

- 0 - 25 gpm
- 25 - 50 gpm
- 50 - 100 gpm
- 100 - 500 gpm
- > 500 gpm

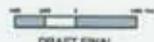
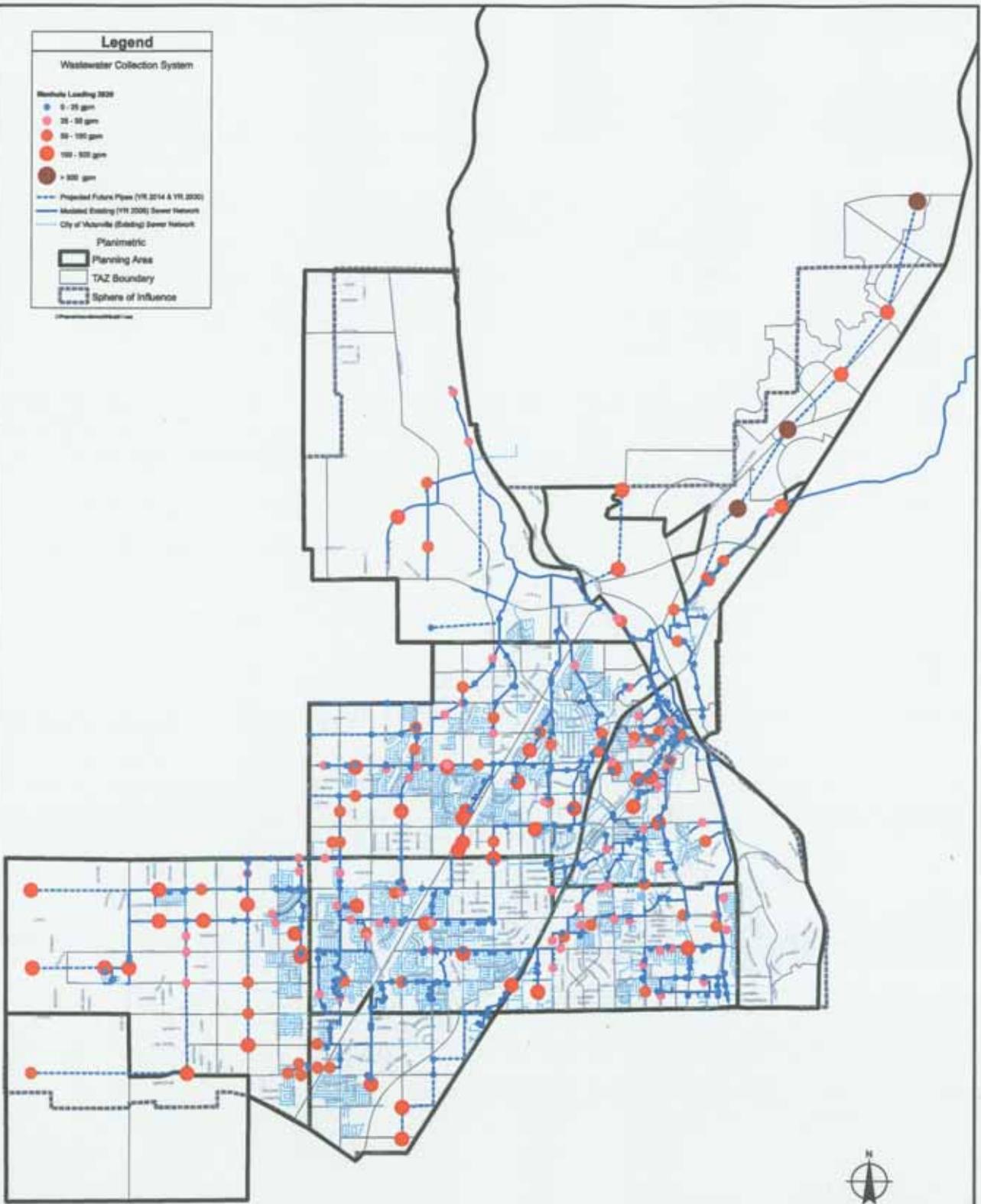
Projected Future Pipes (YR 2014 & YR 2030)

Modelled Existing (YR 2000) Sewer Network

City of Victorville (Existing) Sewer Network

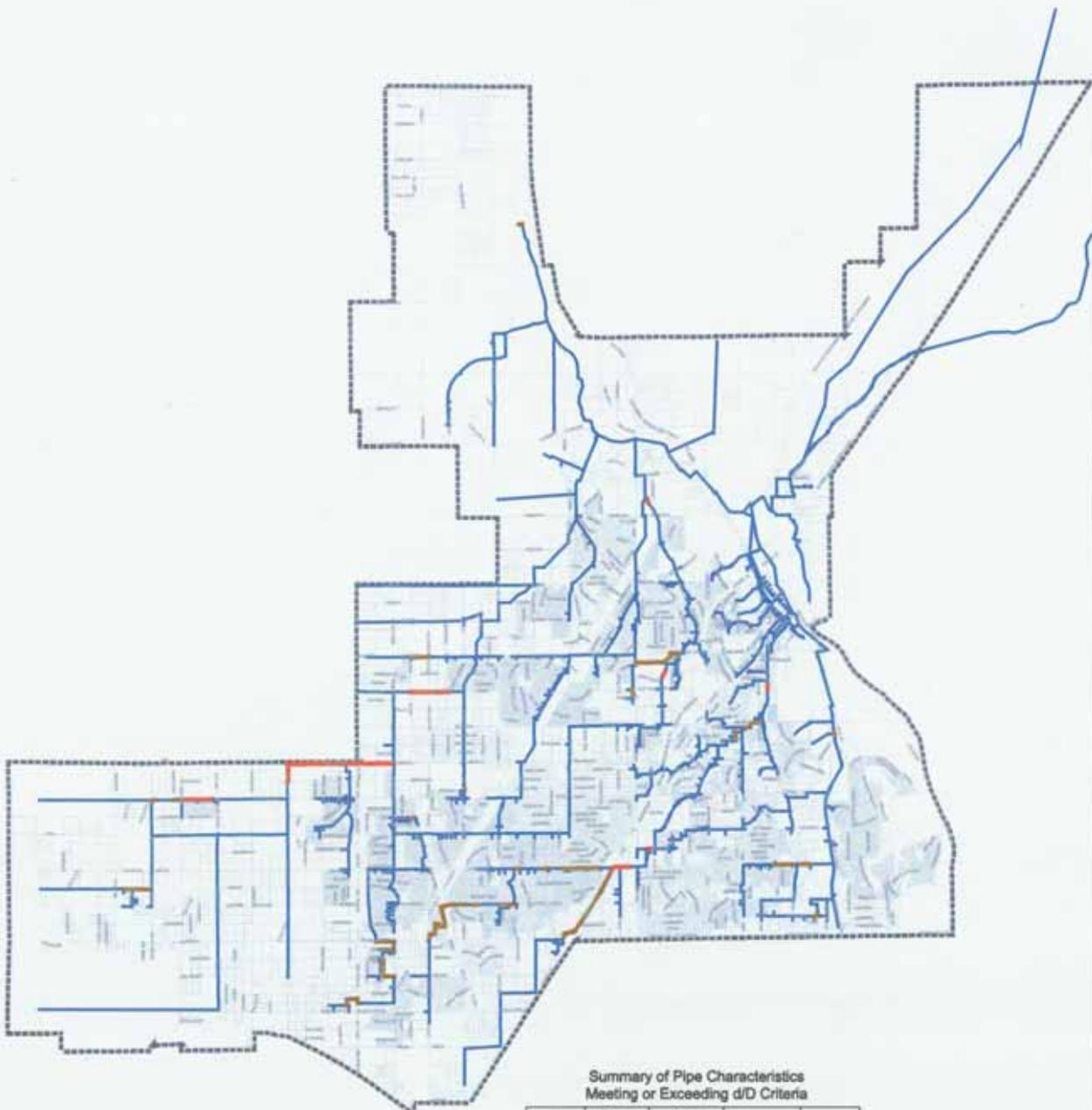
Planimetric

- Planning Area
- TAZ Boundary
- Sphere of Influence



DRAFT FINAL

Earth Tech	CITY OF VICTORVILLE DEPARTMENT OF ENGINEERING
<p>Figure 5-7 Expansion for Year 2030 Planning Horizon and Manhole Loading for Modeling</p>	
<p>Sewer System Master Plan City of Victorville, CA</p>	
DATE: March 27, 2009	TITLE:
PROJECT: 100001000 - 100001000 - 100001000	SCALE:



Summary of Pipe Characteristics Meeting or Exceeding d/D Criteria

Pipe Diameter	Pipes Meeting d/D Criteria ¹	Pipes Exceeding d/D Criteria ²	Surcharged Pipes ³	Total Pipe Length ⁴
	Linear Feet	Linear Feet	Linear Feet	Linear Feet
8-inch	170,118	12,208	--	188,326
10-inch	146,837	10,309	--	157,146
12-inch	114,338	10,432	--	124,770
14-inch	3,522	--	15	3,522
15-inch	158,664	332	3,545	162,541
18-inch	107,450	459	8,863	107,450
21-inch	42,666	231	--	42,666
24-inch	20,149	--	2,353	20,149
27-inch	29,213	--	--	35,210
30-inch	31	--	--	31
33-inch	926	--	--	926
36-inch	11,664	--	--	30,550
UPSIZED VVWRA PIPE (TBO) ⁴	24,883			
Total	836,461	33,871	14,878	885,307

¹Includes Projected Future Pipes.
²Excluding Surcharged Pipes.
³Excluding Force mains.
⁴Future pipe sizes for VVWRA trunk lines were not determined because future inflows to VVWRA trunk lines from outside the City of Victorville were not known. It is assumed that all VVWRA inflow lines were updated in year 2014.

Legend

Wastewater Collection System

- Surcharged Pipe
- Pipes Exceeding d/D Criteria
- Pipes Meeting d/D Criteria

Planimetric

- Parcels
- Sphere of Influence

d/D Criteria for Existing and Future Pipe

Pipe Diameter	Max d/D
8" to 12"	0.5
> 12"	0.75



EarthTech
 CITY OF VICTORVILLE
 DEPARTMENT OF ENGINEERING

Figure 5-6
 Hydraulic Evaluation Results for Year 2030 Conditions

Sewer System Master Plan
 City of Victorville, CA

DATE: March 27, 2018
 SHEET NO.: 1300-BRACH-04

APPENDIX C

**Water Supply Backup
Source: Carollo Engineers**

May 8, 2008

Reginald Lamson
Director of Water District
17184 Yuma Street
Victorville, CA 92395

Subject: Water Supply Availability in the City of Victorville

Dear Mr. Lamson:

The purpose of this letter is to describe the City of Victorville's (City) supply availability to meet water demands associated with planned land uses reflecting the City's Draft General Plan Update (December 2007). However, available information to support this analysis is limited to documents that projected water demands and supplies through year 2030, a reasonable duration for water system planning. Full buildout of the General Plan land uses is anticipated to occur much later than 2030..

Based on documents prepared previously, demand projections are presented for the following four areas within the City's Sphere of Influence (as designated by the Local Agency Formation Commission):

- Improvement District 1 (ID1), the former Victor Valley Water District (VWWD or District);
- Improvement District 2 (ID2), the former Baldy Mesa Water District (BMWD);
- Southern California Logistics Airport (SCLA); and
- Desert Gateway Specific Plan.

Water demand projections for each of these four service areas are presented in Table 1. The projections for ID1 and ID2 were taken from the most recent Urban Water Management Plans (UWMP) prepared in 2005 for VWWD and BMWD. The demand projections of the VWWD UWMP were based on General Plan land uses current at that time, while the demands presented in the BMWD UWMP were based on the estimated number of service connections. Water demand projections for the SCLA service area and the Desert Gateway development were projected using information provided by District staff based on General Plan land uses.

Table 1 shows that the demands within the District are projected to increase from 24,005 acre-feet per year (afy) in 2005 to 69,740 afy in 2030. As previously noted, there are lands designated for urban development in the General Plan Update that are not likely to be developed by 2030 and this analysis does not include an assessment of those demands.

Since the completion of the 2005 UWMPs additional information regarding population forecasting has become available. Based on this information, the projected water demand is approximately 55,000 afy, which is more than 20 percent less than the projections used in the attached tables. The projected demand of 69,740 afy is used in all analyses presented in this letter to provide conservative estimates.

Table 2 presents projected recycled water supplies along with anticipated demand of recycled water customers. Data were obtained from the 2007 Capacity Study prepared by the Victor Valley Water Reclamation Agency (VWRA), which evaluated available recycled water supply and a few specific large water users, but did not specifically look at demand potential of possible recycled water customers. As shown in Table 2, sufficient supply of recycled water is projected to be available after 2010 to meet the projected recycled water demands of the customers known at this time. The recycled water supply availability and potential demands presented in Table 2 will likely increase in the future from these projections once detailed recycled water demand and supply projections are developed for the City's sphere of influence. In addition, there are plans for localized wastewater treatment plants within VWRA's tributary area, which may reduce the recycled water supply availability in the future. The offset of potable water demands with recycled water is therefore not taken into consideration in the potable water supply availability discussed herein.

Tables 3 through 8 present planned potable water supplies for each of the four service areas of the District by planning year. Within each table, the anticipated supply availability of each supply source is provided for the following conditions.

- Normal Year
- Single Dry Year
- Multiple Dry Year (years 1 through 3)

It is assumed that State Water Project (SWP) water would be reduced during drought conditions (both single and multiple dry years), while groundwater would not be affected in the short term. The reductions of imported water are based on historical drought conditions that occurred in the period 1986 to 1992. However, more severe drought conditions may occur in the future due to climate change, resulting in greater reductions in imported supplies than assumed based on empirical data. In addition, a recent court decision that has yet to be finalized regarding water

supplies pumped from the Sacramento-San Joaquin River Delta have greatly reduced the reliability of SWP imported water supplies since the completion of the last UWMPs in 2005.

The City is currently pumping beyond the safe yield of the aquifer to meet its water demand, requiring replenishment fees or purchase of water rights from other agencies in the sub-basin. The District is planning projects to mitigate the additional pumping, however, pumping beyond the safe yield will be necessary until the acquisition of additional water entitlements occurs along with storage (e.g., groundwater storage) to increase the reliability of this new supply. It should also be noted that the additional groundwater pumping as listed in tables 3 through 5 is expected to increase the basin overdraft and could reduce groundwater levels such that the basin capacity is reduced.

Tables 9 through 11 presents a comparison of projected demands to supplies for each supply condition (normal, single dry year, multiple dry years). The demands for each dry year are reduced according to the water shortage contingency plans presented in the 2005 UWMPs of VVWD and BMWD. This includes a demand reduction up to 50 percent during a supply shortage of 36 to 50 percent, which is also referred to as a Stage 3 water shortage.

Tables 9 through 11 indicate that the City has planned sufficient water supply projects to meet demands through 2030 under each condition. It should be noted that this conclusion is based on the following assumptions:

1. Demand estimates for year 2030 as presented herein are accurate.
2. Target demand reductions during single and multiple dry years can be met;
3. Supply sources will reliably provide the amount of water presented in the attached tables;
4. The Regional Recharge and Recovery Project (R³) will be online by 2015 and provide 12,098 afy; and
5. Sufficient imported entitlements for SWP water can be secured to construct a new Water Treatment Plant (WTP) by 2020 that would deliver up to 44,806 afy (or 40 mgd) of treated water during normal years, 33,156 afy during single dry years, and 17,519 afy during multiple dry years.

Mr. Lamson
May 8, 2008
Page 4

Should you need additional information, or have questions regarding this request, please do not hesitate to contact me at 626-535-0180 or iwiersema@carollo.com.

Sincerely,

A handwritten signature in black ink, appearing to read 'Inge Wiersema', with a stylized flourish at the end.

Inge Wiersema, P.E.

Enclosures: Tables 1 through 11

Demand for Area	2005 (afy)	2010 (afy)	2015 (afy)	2020 (afy)	2025 (afy)	2030 (afy)
VWD ID1 ⁽¹⁾	19,603	26,996	28,452	30,132	31,700	33,380
VWD ID2 ⁽²⁾	4,402	7,315	9,476	11,650	13,811	15,973
SCLA ⁽³⁾	0	2,800	3,640	4,481	5,041	5,601
Desert Gateway ⁽⁴⁾	0	0	3,696	7,393	11,089	14,786
Total Demand	24,005	37,110	45,265	53,655	61,642	69,740

Notes:
 1. Source: 2005 VVWD UWMP.
 2. Source: 2005 BMWD UWMP.
 3. Source: 1/15/08 correspondence with VWD staff.
 4. Source: Desert Gateway Specific Plan. Projections based on 26,100 dwelling units and an average demand of 0.7 afy per connection.

Category	2005 (afy)	2010 ⁽¹⁾ (afy)	2015 (afy)	2020 (afy)	2025 (afy)	2030 (afy)
Recycled Water Supplies						
VWRA Treatment Plant	-	16,298	21,759	27,220	32,680	38,141
Total RW Supply	-	16,298	21,759	27,220	32,680	38,141
Recycled Water Demands						
Desert Gateway ⁽²⁾	-	-	2,240	2,240	2,240	2,240
Anticipated Large Users ⁽³⁾	-	3,542	4,227	4,530	4,651	4,651
Recycled Water Obligations ⁽⁴⁾	-	13,349	14,514	15,679	16,843	18,008
Total RW Demand	-	16,891	20,981	22,448	23,734	24,899
RW Supply Balance	-	-592	778	4,771	8,946	13,242

Notes:
 1. According to the 2007 VVWRA Capacity Study, the original treatment plant came online in 2005, but current obligations are anticipated to exceed recycled water supply until 2011, when an additional regional treatment plant is anticipated to come online.
 2. It is assumed that all parks, golf courses, and schools within the Desert Gateway development will be irrigated using recycled water (580 acres).
 3. Demands from the Victorville Power plant, SCLA golf course irrigation and other irrigation users (data provided by the District)
 4. Other obligations include High Desert Power Plant and the discharge into the Mojave River per the requirements of the California Department of Fish and Game.

Supply Source	Normal Year (afy)	Single Dry Year (afy)	Multiple Dry Years		
			Year 1 (afy)	Year 2 (afy)	Year 3 (afy)
VWD ID1 Groundwater ^(1,2)	11,501	11,501	11,501	11,501	11,501
VWD ID2 Groundwater ^(2,3)	4,013	4,013	4,013	4,013	4,013
SCLA ⁽⁴⁾	0	0	0	0	0
Regional Recharge and Recovery Project ⁽⁵⁾	0	0	0	0	0
New SWP WTP ⁽⁶⁾	0	0	0	0	0
Additional Groundwater Pumping ^(2,7)	10,406	10,406	10,406	10,406	10,406
Total Supply	25,920	25,920	25,920	25,920	25,920

Notes:

1. Safe yield from ID1 groundwater wells.
2. Groundwater production is not anticipated to be reduced under dry weather conditions.
3. Safe yield from ID1 groundwater wells.
4. SCLA does not provide any groundwater.
5. The Regional Recharge and Recovery (R³) project is anticipated to be operational in 2015.
6. A water treatment plant is planned to treat state water project water is anticipated to come online in 2020. Source: Victorville Water District 2005 Water Master Plan.
7. Historical production from ID1 and ID2 groundwater wells in excess of safe yield. This additional water required in-basin transfers or replenishment fees.

Supply Source	Normal Year (afy)	Single Dry Year (afy)	Multiple Dry Years		
			Year 1 (afy)	Year 2 (afy)	Year 3 (afy)
VWD ID1 Groundwater ^(1,2)	11,501	11,501	11,501	11,501	11,501
VWD ID2 Groundwater ^(2,3)	4,013	4,013	4,013	4,013	4,013
SCLA ⁽⁴⁾	0	0	0	0	0
Regional Recharge and Recovery Project ⁽⁵⁾	0	0	0	0	0
New SWP WTP ⁽⁶⁾	0	0	0	0	0
Additional Groundwater Pumping ^(2,7)	21,596	21,596	21,596	21,596	21,596
Total Supply	37,110	37,110	37,110	37,110	37,110

Table 4 2010 Supply Summary					
	Normal Year	Single Dry Year	Multiple Dry Years		
			Year 1	Year 2	Year 3
Notes:					
1. Safe yield from ID1 groundwater wells.					
2. Groundwater production is not anticipated to be reduced under dry weather conditions.					
3. Safe yield from ID1 groundwater wells.					
4. SCLA does not provide any groundwater.					
5. The Regional Recharge and Recovery (R3) project is anticipated to be operational in 2015.					
6. A water treatment plant is planned to treat state water project water is anticipated to come online in 2020. Source: Victorville Water District 2005 Water Master Plan.					
7. Anticipated production from ID1 and ID2 groundwater wells in excess of safe yield. This additional water will require in-basin transfers or replenishment fees.					

Table 5 2015 Supply Summary					
Supply Source	Normal Year (afy)	Single Dry Year (afy)	Multiple Dry Years		
			Year 1 (afy)	Year 2 (afy)	Year 3 (afy)
WWD ID1 Groundwater ^(1,2)	11,501	11,501	11,501	11,501	11,501
WWD ID2 Groundwater ^(2,3)	4,013	4,013	4,013	4,013	4,013
SCLA ⁽⁴⁾	0	0	0	0	0
Regional Recharge and Recovery Project ⁽⁵⁾	12,098	12,098	12,098	12,098	12,098
New SWP WTP ⁽⁶⁾	0	0	0	0	0
Additional Groundwater Pumping ^(2,7)	17,654	17,654	17,654	17,654	17,654
Total Supply	45,265	45,265	45,265	45,265	45,265
Notes:					
1. Safe yield from ID1 groundwater wells.					
2. Groundwater production is not anticipated to be reduced under dry weather conditions.					
3. Safe yield from ID1 groundwater wells.					
4. SCLA does not provide any groundwater.					
5. The Regional Recharge and Recovery (R3) project is anticipated to be operational in 2015.					
6. A water treatment plant is planned to treat state water project water is anticipated to come online in 2020. Source: Victorville Water District 2005 Water Master Plan.					
7. Anticipated production from ID1 and ID2 groundwater wells in excess of safe yield. This additional water will require in-basin transfers or replenishment fees.					

Supply Source	Normal Year (afy)	Single Dry Year (afy)	Multiple Dry Years		
			Year 1 (afy)	Year 2 (afy)	Year 3 (afy)
VWD ID1 Groundwater ^(1,2)	4,013	4,013	4,013	4,013	4,013
VWD ID2 Groundwater ^(2,3)					
SCLA ⁽⁴⁾	0	0	0	0	0
Regional Recharge and Recovery Project ^(5,6)	12,098	12,098	12,098	12,098	12,098
New SWP WTP ^(6,8)	44,806	33,156	17,519	17,519	17,519
Additional Groundwater Pumping ^(2,7)	0	0	0	0	0
Total Supply	72,417	60,768	45,131	45,131	45,131

Notes:

1. Safe yield from ID1 groundwater wells.
2. Groundwater production is not anticipated to be reduced under dry weather conditions.
3. Safe yield from ID2 groundwater wells.
4. SCLA does not provide any groundwater.
5. The Regional Recharge and Recovery (R³) project is anticipated to be operational in 2015.
6. A water treatment plant is planned to treat state water project water is anticipated to come online in 2020. Source: Victorville Water District 2005 Water Master Plan.
7. Anticipated production from ID1 and ID2 groundwater wells in excess of safe yield. This additional water will require in-basin transfers or replenishment fees.
8. State water project sources are anticipated to be reduced by approximately 26 percent for single dry years and by approximately 61 percent for multiple dry years. Reduction factors were calculated based on information in the Mojave Water Agency 2004 Regional Water Management Plan. It is assumed that the Regional Recharge and Recovery project will not be affected due to buffering in the aquifer.

Table 7 2025 Supply Summary					
Supply Source	Normal Year (afy)	Single Dry Year (afy)	Multiple Dry Years		
			Year 1 (afy)	Year 2 (afy)	Year 3 (afy)
VWD ID1 Groundwater ^(1,2)	11,501	11,501	11,501	11,501	11,501
VWD ID2 Groundwater ^(2,3)	4,013	4,013	4,013	4,013	4,013
SCLA ⁽⁴⁾	0	0	0	0	0
Regional Recharge and Recovery Project ^(5,8)	12,098	12,098	12,098	12,098	12,098
BMWD/VWD SWP WTP ^(6,8)	44,806	33,156	17,519	17,519	17,519
Additional Groundwater Pumping ^(2,7)	0	0	0	0	0
Total Supply	72,417	60,768	45,131	45,131	45,131

Notes:

1. Safe yield from ID1 groundwater wells.
2. Groundwater production is not anticipated to be reduced under dry weather conditions.
3. Safe yield from ID2 groundwater wells.
4. SCLA does not provide any groundwater.
5. The Regional Recharge and Recovery (R³) project is anticipated to be operational in 2015.
6. A water treatment plant is planned to treat state water project water is anticipated to come online in 2020. Source: Victorville Water District 2005 Water Master Plan.
7. Anticipated production from ID1 and ID2 groundwater wells in excess of safe yield. This additional water will require in-basin transfers or replenishment fees.
8. State water project sources are anticipated to be reduced by approximately 26 percent for single dry years and by approximately 61 percent for multiple dry years. Reduction factors were calculated based on information in the Mojave Water Agency 2004 Regional Water Management Plan. It is assumed that the Regional Recharge and Recovery project will not be affected due to buffering in the aquifer.

Supply Source	Normal Year (afy)	Single Dry Year (afy)	Multiple Dry Years		
			Year 1 (afy)	Year 2 (afy)	Year 3 (afy)
VWD ID1 Groundwater ^(1,2)	11,501	11,501	11,501	11,501	11,501
VWD ID2 Groundwater ^(2,3)	4,013	4,013	4,013	4,013	4,013
SCLA ⁽⁴⁾	0	0	0	0	0
Regional Recharge and Recovery Project ^(5,8)	12,098	12,098	12,098	12,098	12,098
BMWD/VWWD SWP WTP ^(6,8)	44,806	33,156	17,519	17,519	17,519
Additional Groundwater Pumping ^(2,7)	0	0	0	0	0
Total Supply	72,417	60,768	45,131	45,131	45,131

Notes:

1. Safe yield from ID1 groundwater wells.
2. Groundwater production is not anticipated to be reduced under dry weather conditions.
3. Safe yield from ID2 groundwater wells.
4. SCLA does not provide any groundwater.
5. The Regional Recharge and Recovery (R³) project is anticipated to be operational in 2015.
6. A water treatment plant is planned to treat state water project water is anticipated to come online in 2020. Source: Victorville Water District 2005 Water Master Plan.
7. Anticipated production from ID1 and ID2 groundwater wells in excess of safe yield. This additional water will require in-basin transfers or replenishment fees.
8. State water project sources are anticipated to be reduced by approximately 26 percent for single dry years and by approximately 61 percent for multiple dry years. Reduction factors were calculated based on information in the Mojave Water Agency 2004 Regional Water Management Plan. It is assumed that the Regional Recharge and Recovery project will not be affected due to buffering in the aquifer.

Category	2005 (afy)	2010 (afy)	2015 (afy)	2020 (afy)	2025 (afy)	2030 (afy)
Supply Sources	25,920	37,110	45,265	72,417	72,417	72,417
Demand	24,005	37,110	45,265	53,655	61,642	69,740
Supply Balance	1,915⁽¹⁾	0⁽²⁾	0⁽²⁾	18,762	10,776	2,677

Notes:

1. Since 2005 demand and supply information is from historical data, this balance is unaccounted for water.
2. Groundwater pumping beyond the safe yield of the aquifer is necessary to meet projected demands in 2010 and 2015. It was assumed that such pumping would occur as-needed, so no excess supply is planned.

Table 10 Projected Supply Balance – Single Dry Year						
Category	2005 (afy)	2010 (afy)	2015 (afy)	2020 (afy)	2025 (afy)	2030 (afy)
Supply Sources	25,920	37,110	45,265	60,768	60,768	60,768
Demand ⁽¹⁾	24,005	37,110	45,265	42,054	48,313	54,661
Supply Balance	1,915⁽²⁾	0⁽³⁾	0⁽³⁾	18,714	12,455	6,107
Notes:						
1. For years with supply shortages, demands were reduced according to the water shortage contingency plan within the 2005 VVWD UWMP and the 2004 BMWD UWMP. Demand reduction is based on thresholds of percent supply shortage.						
2. Since 2005 demand and supply information is from historical data, this balance is unaccounted for water.						
3. Groundwater pumping beyond the safe yield of the aquifer is necessary to meet projected demands in 2010 and 2015. It was assumed that such pumping would occur as-needed, so no excess supply is planned.						

Table 11 Projected Supply Balance – Multiple Dry Years						
Category	2005 (afy)	2010 (afy)	2015 (afy)	2020 (afy)	2025 (afy)	2030 (afy)
Supply Sources	25,920	37,110	45,265	45,131	45,131	45,131
Demand ⁽¹⁾	24,005	37,110	45,265	26,274	30,185	34,150
Supply Balance	1,915⁽²⁾	0⁽³⁾	0⁽³⁾	18,857	14,946	10,980
Notes:						
1. For years with supply shortages, demands were reduced according to the water shortage contingency plan within the 2005 VVWD UWMP and the 2004 BMWD UWMP. Demand reduction is based on thresholds of percent supply shortage.						
2. Since 2005 demand and supply information is from historical data, this balance is unaccounted for water.						
3. Groundwater pumping beyond the safe yield of the aquifer is necessary to meet projected demands in 2010 and 2015. It was assumed that such pumping would occur as-needed, so no excess supply is planned.						

Legend

-  Reservoir
-  Well - Active
-  Well - Inactive
-  PRV
-  Booster Pumping Station
-  System Interconnection
-  Study Area Boundary
-  Not in Service Area

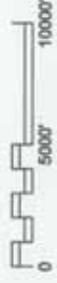
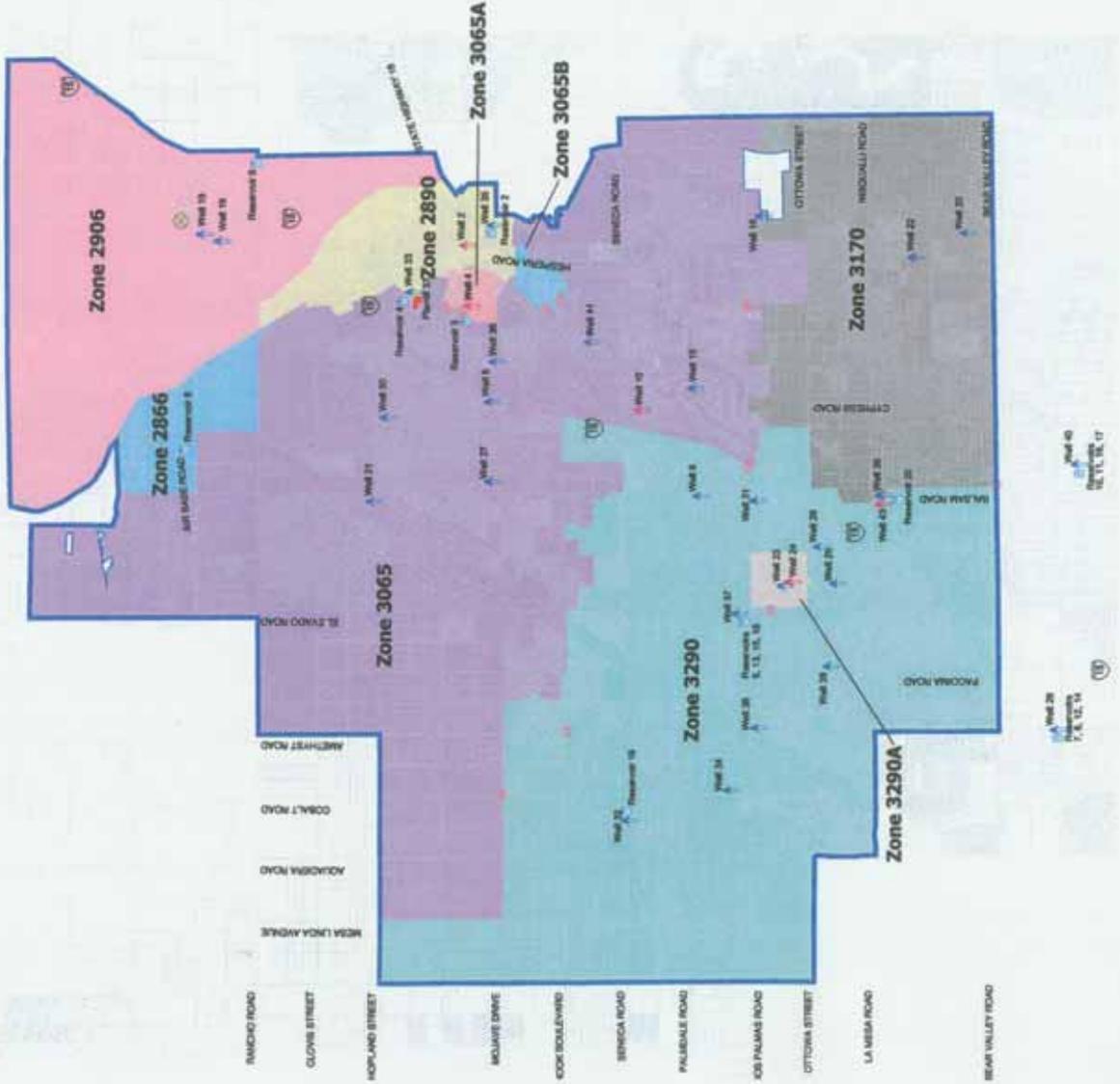


Figure 2.1
Existing Water
Facilities Map
 (as of December 2005)

20-Year Comprehensive Water Master Plan
 Victor Valley Water District



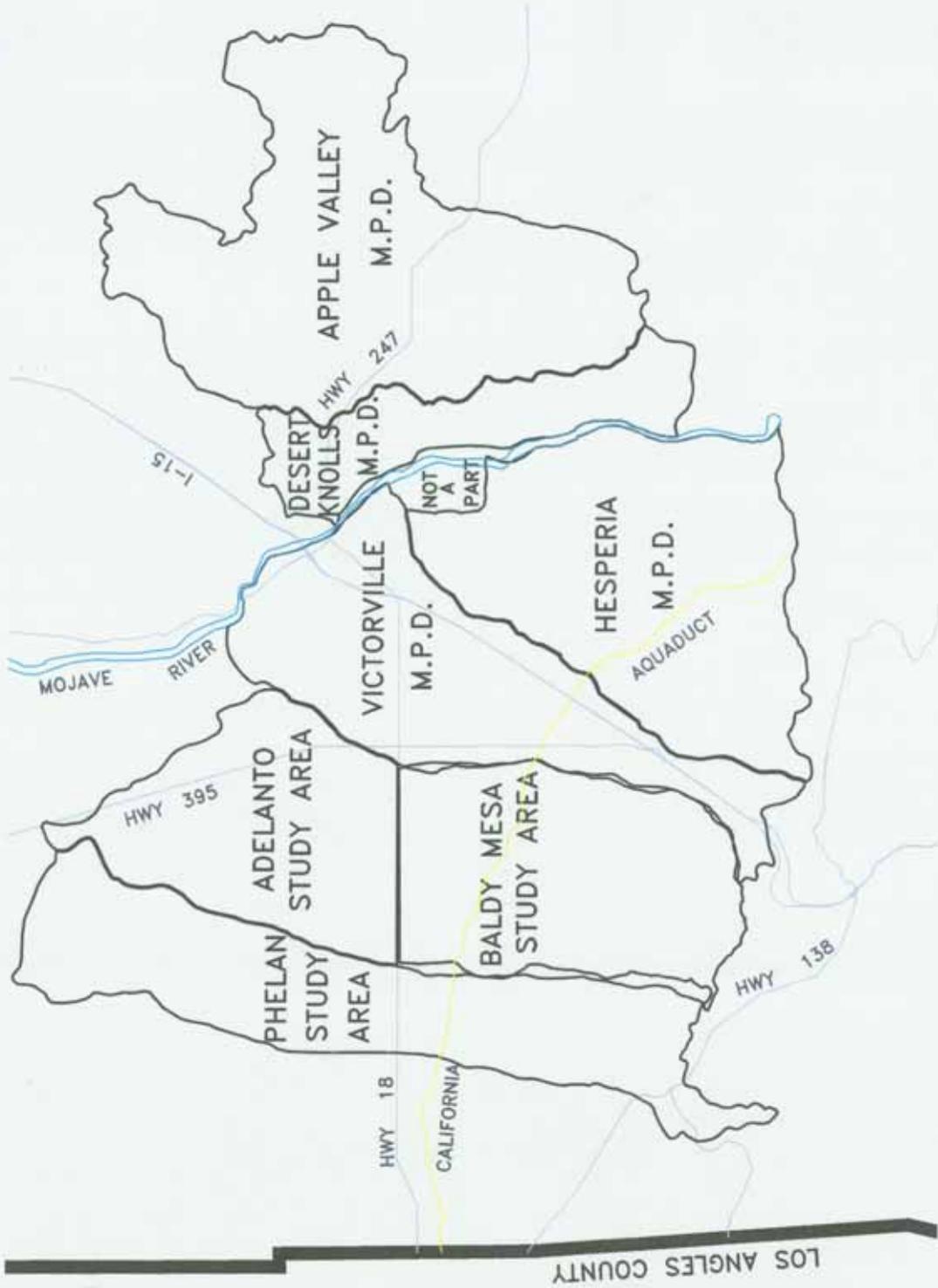
APPENDIX D

SBCFCD Watershed Limits



STATISTICS

Area 20,105 Sq. Mi.
Width 210 MI
Length 135 MI
Max. Elev. 11,502 Ft.
Min. Elev. Sea Level



SAN BERNARDINO COUNTY
FLOOD CONTROL DISTRICT
HIGH DESERT VICTORVILLE AREA

APPENDIX E

SLCA Drainage Plan
Source: RBF Engineers

A ten percent cover of desert brush was assumed for the undeveloped regions, and for developed conditions within the SCLA development area, a commercial condition (90 percent impervious) was assumed. For areas designated as recreational within the SCLA development area, a park condition (15 percent impervious) was assumed. The San Bernardino County Hydrology Manual does not recommend a specific runoff coefficient or SCS Curve Number for airfields. The surface water drainage study for George AFB (USACE, 1988) had tabulated the amount of pavement and open space in order to determine the Rational Method coefficient for the airfield. This analysis revealed that the airfield was 30 percent impervious and 70 percent pervious. This was equivalent to the pervious fraction of two dwelling units per acre for arid regions. Therefore, the airfield was modeled as 2 du/acre. By inspection, the crosswind runway-taxiway area is slightly more impervious and was therefore modeled as 3-4 du/acre (60 percent pervious area). The operational aprons and maintenance areas were considered as commercial use (10 percent pervious area).

4.5 Watershed Model Development

The SCLA drainage study was completed using the Advance Engineering Software (AES) HydroWIN v. 2004 Rational Method Analysis computer program. The computer program uses San Bernardino County methodology to perform the hydrologic analysis of a network of watershed basins. Rational method analysis was used for the initial analysis of the watershed basins. When the total basin area exceeded 640 acres, the program switched to a Unit Hydrograph analysis of the basin.

4.6 Design Hydrology

Three design events (100-year, 25-year and 10-year) were calculated for the watershed. The 100-year and 25-year events are the primary criteria used to determine the classification of necessary drainage facilities as local, secondary or regional, as well as determining flood protection levels and street flow capacity. The 10-year event is useful for sizing wash crossings.

4.6.1 Ultimate Watershed Design Discharges

The results based on the San Bernardino County Hydrology Manual guidelines, the computer models developed using the AES software, and flowrates developed from the Victorville Master Plan of Drainage dated March 1992 are summarized in the tables below. The node points are illustrated on the proposed condition watershed map, Exhibit 1.

Watershed	Node	Location	10-Year Flow (cfs)	25-Year Flow (cfs)	100-Year Flow (cfs)
14000	14004	Phantom East & Railyard	140	171	232
	14003	Railroad	628	769	1050
	14000	Shay Road	628	769	1050
15000	15220	Base	22	15	22
	15218	Base	40	27	40
	15216	Base	56	37	56

Table 4.3 – Peak Flow Rate Summary

Watershed	Node	Location	10-Year Flow (cfs)	25-Year Flow (cfs)	100-Year Flow (cfs)
	15214	Base	65	42	65
	15212	Base	79	53	79
	15210	Base	95	64	95
	15208	Base	108	73	108
	15200	Base	141	95	141
	15340	Base	25	19	25
	15338	Base	46	34	46
	15334	Base	21	16	21
	15332	Base	45	33	45
	15330	Base	104	77	104
	15336	Base	9	11	14
	15328	Base	79	96	129
	15326	Base	83	102	140
	15324	Base	105	130	180
	15322	Base	127	1256	219
	15320	Base	146	181	256
	15318	Base	165	204	291
	15316	Base	183	228	326
	15314	Base	199	248	357
	15312	Base	213	266	385
	15310	Base	224	282	411
	15309	Base	227	287	421
	15308	Base	232	294	434
	15344	Base	19	23	31
	15342	Base	24	29	40
	15306	Base	250	317	472
	15304	Base	252	321	481
	15302	Base	267	342	516
	15300	Base	269	346	526
	15728	Base	9	11	14
	15726	Base	15	18	24
	15724	Base	20	25	33
	15722	Base	25	31	42
	15720	Base	31	37	51
	15718	Base	35	42	58
	15716	Base	38	47	64
	15714	Base	41	51	70
	15712	Base	41	51	70
	15710	Base	81	100	138
	15730	Base	22	27	36
	15708	Base	102	126	175
	15706	Base	109	135	188
	15704	Base	109	135	189
	15702	Base	119	147	206
	15700	Base	132	164	229
	15104	Base	525	666	983
	15003	Phantom East & Railyard	525	666	983

Table 4.3 – Peak Flow Rate Summary

Watershed	Node	Location	10-Year Flow (cfs)	25-Year Flow (cfs)	100-Year Flow (cfs)
	15002	Railroad	653	822	1213
	15000	Shay Road	653	822	1213
16000	16003	Phantom East & Railyard	57	71	111
	16002	Railroad	153	190	277
	16000	Shay Road	159	198	293
16100	16102	Railroad	121	148	200
	16100	Shay Road	125	153	210
17100	17418	Proposed subdivision	65	80	109
	662	Proposed subdivision	72	90	130
	660	Proposed subdivision	77	97	144
	658	Proposed subdivision	82	104	157
	656	Proposed subdivision	21	27	44
	654	Proposed subdivision	31	33	63
	652	Proposed subdivision	43	55	87
	650	Proposed subdivision	134	154	258
	648	Proposed subdivision	145	186	284
	332	Proposed subdivision	228	276	390
	636	Proposed subdivision	228	276	390
	634	Proposed subdivision	228	276	390
	632	Proposed subdivision	237	280	406
	630	Proposed subdivision	242	291	413
	628	Proposed subdivision	285	473	683
	626	Proposed subdivision	285	473	683
	624	Proposed subdivision	283	473	683
	644	Proposed subdivision	11	14	23
	642	Proposed subdivision	16	20	31
	640	Proposed subdivision	36	45	66
	646	Proposed subdivision	14	17	23
	638	Proposed subdivision	70	87	122
	622	Proposed subdivision	446	550	792
	620	Proposed subdivision	116	550	792
	17508	Proposed subdivision	17	22	31
	696	Proposed subdivision	22	28	45
	694	Proposed subdivision	24	31	51
	618	Proposed subdivision	26	35	59
	616	Proposed subdivision	28	38	67
	614	Proposed subdivision	35	48	84
	692	Proposed subdivision	9	10	14
	690	Proposed subdivision	13	15	21
	612	Proposed subdivision	51	65	103
	688	Proposed subdivision	10	12	16
686	Proposed subdivision	18	22	30	
610	Proposed subdivision	76	96	142	
684	Proposed subdivision	19	23	31	

Table 4.3 – Peak Flow Rate Summary

Watershed	Node	Location	10-Year Flow (cfs)	25-Year Flow (cfs)	100-Year Flow (cfs)
	682	Proposed subdivision	26	32	43
	608	Proposed subdivision	109	137	198
	678	Proposed subdivision	7	9	11
	606	Proposed subdivision	119	149	215
	680	Proposed subdivision	7	8	11
	604	Proposed subdivision	132	166	239
	668	Proposed subdivision	12	15	19
	664	Proposed subdivision	20	22	34
	602	Proposed subdivision	580	22	971
	110	Proposed subdivision	580	718	1034
	17106	Perimeter	580	718	1034
	17120	Proposed subdivision	16	19	25
	17118	Proposed subdivision	29	35	48
	17116	Perimeter	64	78	107
	17114	Phantom East	82	101	138
	17112	Rallyard	637	781	1116
	17108	Perimeter	61	73	98
	17104	Rallyard	679	833	1170
	17102	Railroad	831	1020	1415
	17100	Shay Road	831	1020	1415
	17004	Phantom East	78	94	125
	17004	Rallyard	78	94	125
	17003	D/S of Rallyard	78	94	125
	17002	Railroad	137	169	233
	17000	Shay Road	141	175	242
17800	17836	Proposed Subdivision	10	12	16
	17840	Proposed Subdivision	7	9	12
	17834	Proposed Subdivision	24	29	39
	17838	Proposed Subdivision	11	13	17
	17832	Proposed Subdivision	66	44	112
	17830	Proposed Subdivision	11	14	18
	17828	Proposed Subdivision	17	21	29
	17826	Proposed Subdivision	23	28	38
	17842	Proposed Subdivision	12	15	20
	17824	Proposed Subdivision	113	139	191
	17822	Proposed Subdivision	10	12	16
	17820	Proposed Subdivision	17	21	29
	17818	Proposed Subdivision	24	30	41
	17816	Proposed Subdivision	30	37	52
	17814	Proposed Subdivision	35	43	60
	17812	Proposed Subdivision	149	184	255
	17810	Phantom East	149	184	255
	17809	Railroad	227	281	390
	17800	Shay Road	248	308	435

Table 4.3 – Peak Flow Rate Summary					
Watershed	Node	Location	10-Year Flow (cfs)	25-Year Flow (cfs)	100-Year Flow (cfs)
17900	17940	Proposed subdivision	11	13	18
	17938	Proposed subdivision	71	86	115
	17936	Proposed subdivision	112	137	187
	17942	Proposed subdivision	8	10	13
	17934	Proposed subdivision	122	150	206
	17932	Proposed subdivision	140	173	238
	17930	Proposed subdivision	15	18	24
	17928	Proposed subdivision	52	67	91
	17924	Proposed subdivision	8	10	13
	17926	Proposed subdivision	65	80	109
	17920	Proposed subdivision	206	254	349
	17919	Proposed subdivision	206	254	349
	17908	Proposed subdivision	23	28	37
	17906	Proposed subdivision	12	15	20
	17904	Proposed subdivision	259	323	456
	17916	Proposed subdivision	10	12	17
	17914	Proposed subdivision	17	20	27
	17910	Proposed subdivision	31	38	51
	17903	Phantom East & Railyard	295	373	543
	17902	Railroad	328	414	603
17900	Shay Road	329	416	610	
18000	18010	Upstream Golf Course	9	10	14
	18008	Upstream Golf Course	20	25	33
	18012	Golf Course Channel	176	219	321
	18004	Phantom East	176	219	321
	18002	Railroad	222	279	416
	18000	Shay Road	222	279	418
	24000	24048	Base	15	19
24046		Base	24	30	45
24044		Base	67	86	132
24042		Base	92	120	189
24040		Base	110	144	231
24038		Base	126	166	269
24037		Base	139	185	304
24036		Base	151	203	338
24035		Base	162	219	369
24034		Base	171	231	393
24032		Base	176	239	408
24030		Base	4	5	9
24028		Base	16	21	35
24026		Base	19	25	43
24024		Base	26	36	63
24022		Base	32	43	77
24020		Base	36	50	91
24019	Base	40	56	104	

Table 4.3 – Peak Flow Rate Summary

Watershed	Node	Location	10-Year Flow (cfs)	25-Year Flow (cfs)	100-Year Flow (cfs)
	24018	Base	44	62	116
	24017	Base	47	67	128
	24016	Base	49	70	137
	24014	Base	50	312	537
	24013	Base	18	23	34
	24012	Base	71	91	142
	24010	Base	379	476	724
	24008	North side of base	602	779	1230
	249	North side of base	602	779	1230
	247	North side of base	602	779	1230
	245	North side of base	602	779	1230
	243	Downstream end	602	791	1530
25000	25084	West Side of Base	18	23	36
	25082	West Side of Base	32	42	65
	25080	West Side of Base	55	72	115
	25078	West Side of Base	18	22	33
	25076	West Side of Base	88	112	171
	25090	West Side of Base	18	22	34
	25088	West Side of Base	27	34	53
	25086	West Side of Base	38	49	78
	25074	West Side of Base	135	172	257
	25062	West Side of Base	21	27	40
	25060	West Side of Base	28	36	54
	25064	West Side of Base	19	24	35
	25066	West Side of Base	13	16	23
	25058	West Side of Base	77	97	144
	25056	West Side of Base	77	97	144
	25054	West Side of Base	89	114	177
	25052	West Side of Base	98	127	201
	25050	West Side of Base	243	141	225
	25072	West Side of Base	9	11	15
	25070	West Side of Base	19	24	35
	25048	West Side of Base	267	342	534
	25068	West Side of Base	5	6	11
	25046	West Side of Base	9	13	23
	25034	West Side of Base	20	25	38
	25032	West Side of Base	34	43	67
	25030	West Side of Base	45	58	91
	25029	West Side of Base	54	71	114
	25044	West Side of Base	24	30	47
	25042	West Side of Base	37	47	76
	25040	West Side of Base	45	58	92
	25039	West Side of Base	108	142	229
	25028	West Side of Base	16	21	32
	25026	West Side of Base	29	37	59
	25024	West Side of Base	40	51	82

Table 4.3 – Peak Flow Rate Summary

Watershed	Node	Location	10-Year Flow (cfs)	25-Year Flow (cfs)	100-Year Flow (cfs)
	25022	West Side of Base	46	60	98
	25020	West Side of Base	11	14	21
	25018	West Side of Base	20	26	38
	25016	West Side of Base	81	103	155
	25038	West Side of Base	18	23	35
	25036	West Side of Base	32	41	64
	25014	West Side of Base	124	158	241
	25114	West Side of Base	63	76	102
	25112	West Side of Base	103	125	168
	25110	West Side of Base	138	168	228
	25108	West Side of Base	170	208	283
	25106	West Side of Base	203	248	338
	25104	West Side of Base	476	600	891
	25102	West Side of Base	476	600	891
	25012	West Side of Base	476	834	1268
	25010	D/S of watershed 25000	666	834	1269
	25009	D/S of watershed 25000	666	834	1269
	25008	D/S of watershed 25000	696	904	1422
	25007	D/S of watershed 25000	696	904	1422
	25005	D/S of watershed 25000	230	282	385
	25004	D/S of watershed 25000	230	282	385
	25002	D/S of watershed 25000	315	388	537
	25006	D/S of watershed 25000	980	1242	1853
	25001	D/S of watershed 25000	980	1242	1853
27000	27010	West Side of Base	78	95	130
	27008	West Side of Base	78	95	130
	27006	West Side of Base	178	219	301
	27003	West Side of Base	465	579	815
28000	28230	South-West Side of Base	168	207	305
	28236	South-West Side of Base	180	223	318
	28306	South-West Side of Base	215	267	380
	28305	South-West Side of Base	221	275	394
	28308	South-West Side of Base	49	60	80
	28304	South-West Side of Base	294	364	517
	28302	South-West Side of Base	294	364	517
	28418	West Side of Base	294	364	517
	28416	West Side of Base	293.65	363.98	517
	28422	West Side of Base	51	61	82
	28415	West Side of Base	327	404	569
	28412	West Side of Base	327	404	569
	28410	West Side of Base	372	462	650
	28408	West Side of Base	414	527	803
29000	29126	West Side of Base	39	48	65
	29124	West Side of Base	39	48	65

Watershed	Node	Location	10-Year Flow (cfs)	25-Year Flow (cfs)	100-Year Flow (cfs)
	29116	West Side of Base	103	127	173
	29114	West Side of Base	124	153	211
	29112	West Side of Base	142	176	244
	29110	West Side of Base	181	224	328
	29122	West Side of Base	34	42	56
	29120	West Side of Base	62	75	101
	29108	West Side of Base	231	287	398
	29106	West Side of Base	231	287	398
	29104	West Side of Base	231	287	398
	29118	West Side of Base	95	116	160
	29102	West Side of Base	325	401	556

Appendix A contains detailed hydrology calculations for the entire site.

The realignment of Shay Road and the construction of the lead track and siding track will not change existing flowrates. Therefore, the *Victorville Master Plan of Drainage (MPD)* was used to determine the flowrates at Shay Road near Turner, lead track, and siding track crossings. The *Federal Insurance Study (FIS)* for San Bernardino County was used to determine the flow rate in the Mojave to determine the bridge crossing for the connection of the lead track to the existing BNSF Railroad. Table 4.4 summarizes these flowrates.

Location	Approximate Accumulated Watershed (sq miles)	100-Year Flow (cfs)
B-01 (side track)	1.30	916
C-01 (side track)	1.22	2,027
D-01 (lead track) Ossom Wash	9.53	5,090
E-02 (lead track) Unnamed Wash	2.75	2,377
E-01 (lead track) Unnamed Wash	14.98	7,143
E-01 (Shay Road) Unnamed Wash	18.13	8,438
Mojave River North of Existing Railroad Bridge	53	26,000

SECTION 5: IDENTIFICATION OF HYDRAULIC DEFICIENCIES

As noted in the description of existing drainage facilities (Section 3), most of the drainage facilities have already been labeled as deficient or are incompatible with the planned configuration of the SCLA expansion. The cross culverts at Air Expressway are adequate. However, the culverts at Phantom East and Shay Road will need to be upsized at the location of concentrated flows. Table 5.1 contains a summary of existing culverts, east of the site, that will be either upsized or left in place.

Num	Existing		Proposed	
	Size	Approximate Flow (cfs)	Size	Flow (cfs)
1	2 - 8'X6' RCB	7,143	No changes to existing watershed	
2	48" RCP	78		
3	24" CMP	13		
4	2 - 8'X6' RCB	2,377		
5	Unknown	4,876		
6	Unknown	2027	Will be extended under proposed rail line	
6a	Unknown	916	Needs to be sized to pass Master Plan flows	
7	18" RCP	21	No Changes	
8	42" RCP	201	No Changes	
9	36" RCP	133	No Changes	
10	42" RCP	244	66" RCP	543
11	48" RCP	292	48" RCP	255
12	48" RCP	102	51" RCP	138
13	18" RCP	12	No Changes	
14	42" RCP	123	No Changes	
15	42" CMP	39	No Changes	
16	36" CMP	70	No Changes	
17	18" CMP	8	No Changes	
18	42" X 30" CMP	94	No Changes	
19	42" X 30" CMP	67	No Changes	
20	36" CMP	111	No Changes	
21	2 - 30"X42" CMP	70	No Changes	
22	2 - 18" CMP	19	48" RCP	242
23	24" CMP	17	No Changes	
24	3 - 12"X18" CMP	10	No Changes	
25	2 - 30"X42" CMP	70	No Changes	
26	3 - 12"X18" CMP	8	No Changes	
27	30"X42" CMP	91	No Changes	
28	2 - 18"X12" CMP	17	42" RCP	210
29	24" CMP	76	No Changes	
30	2 - 30"X42" CMP	89	No Changes	
31	4 - 30"X42" CMP	140	48" RCP	293
32	30"X42" CMP	35	No Changes	
33	2 - 42" CMP	100	84" RCP	1213

6.3 Plan Facilities

A drainage plan has been developed for the entire SCLA development site in the previous Master Plan. The plan was developed using currently available information on proposed land uses and roadway alignments on the site. This plan is being updated to reflect changes in proposed land use. The backbone of the planned facilities consists of a network of street flow and trapezoidal concrete channels, with limited use of underground conduit. There are major pipe crossings across the multi-modal and the inter-modal rail yards railroad, Shay Road, and Phantom East Road.

6.4 Drainage Swale Geometry

Drainage swale geometry assumed for all alternatives is a trapezoidal channel, with a side slope cotangent of two (i.e., 2H: 1V) and a required freeboard of 2 feet for all unlined swales Concrete Lined swales with a 1.5 cotangent (i.e., 1.5H: 1V) and an assumed 2 feet of freeboard will be used where velocities exceed scour limits of 6 fps.

6.5 Plan Facilities Alignments

The proposed alignments of the drainage swales, trapezoidal channels and cross culverts generally follow existing flow paths, roadways, and/or adjacent property boundaries.

6.6 Preliminary Facility Sizing

Preliminary drainage facility sizes were determined using the methods, objectives, and criteria outlined in Section 6.1. All the proposed facilities have been sized based on normal depth calculations assuming slopes and channel geometry described in Section 6.4. Appendix B contains a detailed printout of the normal depth calculations. Table 6.1 summarizes the facilities within the entire site.

Watershed	Location	Facility Description	Line Channels				Pipe Culverts	
			Base (ft)	Height (ft)	Top Width (ft)	Length (ft)	Diameter (inch)	Length (ft)
14000	Phantom East & Railyard	RCP					48	3378
	Railroad	RCP					72	397
	Trap Chute	Lined Channel	5	5.5	24	1776		
15000	15220-15218	UnLined Swale	2.00	4	16	500		
	15218-15216	UnLined Swale	2.00	4	16	500		
	15216-15214	UnLined Swale	2.00	4.5	18	350		
	15214-15212	UnLined Swale	2.00	5	22	500		
	15212-15210	UnLined Swale	2.00	5.25	20	500		
	15210-15208	UnLined Swale	2.00	5.25	20	500		
	15208-15206	UnLined Swale	2.00	5.25	20	175		

Table 6.1 – Facility Sizing

Watershed	Location	Facility Description	Line Channels				Pipe Culverts	
			Base (ft)	Height (ft)	Top Width (ft)	Length (ft)	Diameter (inch)	Length (ft)
	15206-15200	UnLined Swale	4.00	5.25	22	800		
	15200-15104	UnLined Swale	4.00	5.5	23	1550		
	15340-15338	RCP					36	500
	15338-15330	RCP					39	400
	15334-15332	RCP					33	500
	15332-15330	RCP					39	400
	15330-15328	RCP					48	400
	15336-15328	RCP					27	300
	15328-15326	RCP					54	500
	15326-15324	UnLined Swale	6.00	5.50	25	400		
	15324-15322	UnLined Swale	8.00	5.50	27	500		
	15322-15320	UnLined Swale	10.00	5.50	29	500		
	15320-15318	UnLined Swale	15.00	5.25	33	500		
	15318-15316	UnLined Swale	15.00	5.50	34	500		
	15316-15314	UnLined Swale	15.00	5.75	35	500		
	15314-15312	UnLined Swale	15.00	6.00	36	500		
	15312-15310	UnLined Swale	15.00	6.00	36	500		
	15310-15309	UnLined Swale	15.00	6.00	36	500		
	15309-15308	UnLined Swale	15.00	6.25	37	500		
	15308-15306	UnLined Swale	15.00	6.25	37	900		
	15344-15342	RCP					33	400
	15342-15306	RCP					36	500
	15306-15304	UnLined Swale	15	6.25	37	500		
	15304-15302	Unlined Swale	15	6.25	37	500		
	15302-15300	Unlined Swale	15	6.25	37	1000		
	15300-15104	Unlined Swale	15	6.25	37	1500		
	15728-15726	RCP					18	500
	15726-15724	RCP					30	500
	15724-15722	RCP					33	500
	15722-15720	RCP					36	500
	15720-15718	RCP					39	500
	15718-15716	RCP					39	500
	15716-15714	RCP					42	500
	15714-15712	RCP					42	400
	15712-15710	RCP					48	1000
	15710-15708	RCP					54	750
	15730-15708	RCP					33	750
	15708-15706	RCP					60	1200
	15706-15704	RCP					60	700
	15704-15702	RCP					63	1000
	15702-15700	RCP					63	800
	15700-15104	UnLined Swale	20	4.25	62	1200	Z=5	
	15104-15103	Lined Swale	15	7.75	42	1150		
	Phantom East & Railyard	RCP					84	2406

Watershed	Location	Facility Description	Line Channels				Pipe Culverts	
			Base (ft)	Height (ft)	Top Width (ft)	Length (ft)	Diameter (inch)	Length (ft)
	Railroad	RCP					84	370
	Trap Chute	Lined Channel	5	5.25	23	970		
	Shay Road	RCP					84	100
16000	Phantom East & Railyard	RCP					36	1550
	Railroad	RCP					48	305
	Trap Chute	Lined Channel	5	3.5	17	1080		
	Shay Road	RCP					48	100
16100	Phantom East & Railyard	Lined Channel	5	3.5	17	2591		
	Railroad	RCP					42	500
	Trap Chute	Lined Channel	5	3.5		840		
	Shay Road	RCP					42	100
17000	Phantom East	RCP					24	604
	Railyard	RCP					42	660
	D/S of Railyard	Lined Channel	5	4.5	21	1212		
	Railroad	RCP					48	500
	Trap Chute	Lined Channel	5	3.25	16	660		
	Shay Road	RCP					48	100
17100	17418-17662	UnLined Swale	2	5	19	800		
	662-660	UnLined Swale	2	5.25	20	500		
	660-658	UnLined Swale	2	5.5	21	400		
	658-650	UnLined Swale	2	5.5	21	1100		
	656-654	UnLined Swale	2	4.5	18	400		
	654-652	UnLined Swale	2	4.5	18	500		
	652-650	UnLined Swale	2	5	19	700		
	650-648	UnLined Swale	8	5.25	26	600		
	648-628	UnLined Swale	8	5.5	27	1100		
	332-636	UnLined Swale	4	6.5	27	500		
	636-634	UnLined Swale	4	6.5	27	500		
	634-632	UnLined Swale	4	6.5	27	700		
	632-630	UnLined Swale	4	6.5	27	600		
	630-628	UnLined Swale	4	6.5	27	1700		
	628-626	Lined Swale	4	6.55	19	500		
	626-624	Lined Swale	4	6.55	19	900		
	624-622	Lined Swale	4	6.55	19	400		
	644-642	UnLined Swale	2	3.5	14	500		
	642-640	UnLined Swale	2	4	16	500		
	640-638	Lined Swale	2	4.25	12	700		
	646-638	Lined Swale	2	3.75	10	900		
	638-622	UnLined Swale	2	5.25	20	650		
	622-620	Lined Swale	4	7	20	500		
	620-602	Lined Swale	4	7	20	500		
	17508-696	UnLined Swale	2	4.25	17	750		
	696-694	UnLined Swale	2	4.25	17	500		
	694-618	UnLined Swale	2	4.5	18	300		

Watershed	Location	Facility Description	Line Channels				Pipe Culverts	
			Base (ft)	Height (ft)	Top Width (ft)	Length (ft)	Diameter (inch)	Length (ft)
	618-616	UnLined Swale	2	4.5	18	250		
	616-614	UnLined Swale	2	4.75	18	400		
	614-612	UnLined Swale	2	4.75	18	350		
	692-690	UnLined Swale	2	3.5	14	500		
	690-612	UnLined Swale	2	3.75	15	400		
	612-610	UnLined Swale	2	5	19	450		
	688-686	UnLined Swale	2	3.25	13	700		
	686-610	UnLined Swale	2	3.75	15	500		
	610-608	UnLined Swale	2	5.5	21	600		
	684-682	UnLined Swale	2	4	16	400		
	682-608	UnLined Swale	2	4.25	17	500		
	608-606	UnLined Swale	2	6	23	400		
	678-606	UnLined Swale	2	3.25	13	400		
	606-604	UnLined Swale	2	6.25	24	300		
	680-604	UnLined Swale	2	3.5	14	450		
	604-602	UnLined Swale	2	6.25	24	700		
	668-664	Lined Swale	2	3.5	10	350		
	664-602	Lined Swale	2	3.75	10	300		
	602-17110	Lined Swale	10	6.5	25	1200		
	17110-17106	Lined Swale	10	6.5	25	750		
	106-112	RCP					96	540
	120-118	UnLined Swale	2	4.25	17	300		
	118-116	UnLined Swale	2	4.5	18	700		
	116-114	RCP					54	460
	114-112	RCP					54	1437
	112-104	RCP					96	1105
	108-104	RCP					48	1144
	104-102	RCP					96	1470
	Railroad (102-101)	RCP					96	500
	Trap Chute	Lined Channel	5	5	22	690		
	Shay Road	RCP					96	100
17800	17836-17834	UnLined Swale	2	3.75	15	500		
	17840-17834	UnLined Swale	2	3.25	13	650		
	17834-17832	UnLined Swale	2	4.25	17	750		
	838-832	UnLined Swale	2	3.75	15	800		
	832-824	Lined Swale	2	4.75	13	650		
	830-828	UnLined Swale	2	3.75	15	300		
	828-826	UnLined Swale	2	4	16	300		
	826-824	UnLined Swale	2	4.25	17	400		
	842-824	UnLined Swale	2	3.75	15	400		
	824-812	UnLined Swale	2	5.75	22	600		
	822-820	UnLined Swale	2	3.75	15	300		
	820-818	UnLined Swale	2	4	16	600		
	818-816	UnLined Swale	2	4.25	17	500		

Watershed	Location	Facility Description	Line Channels				Pipe Culverts	
			Base (ft)	Height (ft)	Top Width (ft)	Length (ft)	Diameter (inch)	Length (ft)
	816-814	UnLined Swale	2	4.5	18	400		
	814-812	UnLined Swale	2	4.5	18	500		
	812-810	UnLined Swale	4	6	25	500		
	Phantom East & Railyard	RCP					48	1000
	Railroad	RCP					72	500
	Trap Chute	Lined Channel	5	3.75	18	740		
	Shay Road	RCP					72	100
17900	17940-17938	UnLined Swale	2	4.75	18	300		
	938-936	UnLined Swale	2	5.25	20	600		
	936-934	Lined Swale	2	5.25	14	600		
	942-934	UnLined Swale	2	3.25	13	700		
	934-932	UnLined Swale	6	5.25	24	600		
	932-920	UnLined Swale	6	5.5	25	500		
	930-928	UnLined Swale	2	4.5	18	800		
	928-926	UnLined Swale	2	4.5	18	300		
	924-926	UnLined Swale	2	3.5	14	400		
	926-920	UnLined Swale	2	4.75	18	700		
	920-919	UnLined Swale	10	5	27	100		
	919-904	UnLined Swale	10	5	27	1200		
	908-904	UnLined Swale	2	3.25	13	1400		
	906-904	UnLined Swale	2	3	12	1500		
	904-903	UnLined Swale	15	4	29	1500		
	916-914	UnLined Swale	2	3.25	13	500		
	914-910	UnLined Swale	2	3.5	14	500		
	910-903	UnLined Swale	4	4	18	500		
	Phantom East & Railyard	RCP					72	710
	Railroad	RCP					72	300
Trap Chute	Lined Channel	5	4	19	840			
Shay Road	RCP					72	100	
18100	Golf Course	Lined channel	2	4.5	18	2750		
	Phantom East (18104-18103)	RCP					48	120
	18003-18002	Lined Channel	5	4	19	1150		
	18002-18001	RCP					84	300
	Trap Chute	Lined Channel	5	4.5	21	890		
	Shay Road	RCP					84	100
24000	24048-24046	UnLined Swale	2	3.5	14	300		
	24046-24044	UnLined Swale	2	5	19	1500		
	24044-24042	UnLined Swale	4	5.5	23	1250		
	24042-24040	UnLined Swale	6	5.5	25	1000		
	24040-24038	UnLined Swale	8	5.5	27	1000		
	24038-24037	UnLined Swale	10	5.5	29	1000		
	24037-24036	UnLined Swale	15	5.25	33	1000		
	24036-24035	UnLined Swale	15	5.25	33	1000		
	24035-24034	UnLined Swale	15	5.5	34	750		

Watershed	Location	Facility Description	Line Channels				Pipe Culverts	
			Base (ft)	Height (ft)	Top Width (ft)	Length (ft)	Diameter (inch)	Length (ft)
	24034-24032	UnLined Swale	15	5.5	34	300		
	24032-24014	UnLined Swale	15	5.5	34	850		
	24030-24028	UnLined Swale	2	4.25	17	1000		
	24028-24026	UnLined Swale	2	4.5	18	750		
	24026-24024	UnLined Swale	2	4.75	18	1250		
	24024-24022	UnLined Swale	2	5	19	1000		
	24022-24020	UnLined Swale	2	5.25	20	1000		
	24020-24019	UnLined Swale	2	5.5	21	1000		
	24019-24018	UnLined Swale	4	5.5	23	1000		
	24018-24017	UnLined Swale	4	5.5	23	1000		
	24017-24016	UnLined Swale	6	5.25	24	750		
	24016-24014	UnLined Swale	6	5.5	25	300		
	24014-24008	RCP	6	5.5	25	750	78	750
	24013-24012	UnLined Swale	2	5	19	1500		
	24012-24010	RCP					81	100
	24010-24008	UnLined Swale	34	6	93	7000		
	24008-24005	Lined Channel	5	8	33	3800		
	Pipes(Nodes 247, 245, 244)	RCB					10'x7' RCB	700
	2400-249	Lined Channel	5	10.75	42	3670		
	249-247	Lined Channel	5	7	29	970		
	247-245	Lined Channel	5	7.25	30	1600		
	245-244	Lined Channel	5	7.5	31	1700		
25000	25084-25082	UnLined Swale	2	4.25	17	1000		
	25082-25080	UnLined Swale	2	4.75	18	1000		
	25080-25076	UnLined Swale	2	5	19	250		
	25078-25076	UnLined Swale	2	4.5	18	1000		
	25076-25074	UnLined Swale	4	5.5	23	750		
	25090-25088	UnLined Swale	2	4.25	17	500		
	25088-25086	UnLined Swale	2	4.25	17	1000		
	25086-25084	UnLined Swale	2	5	19	1000		
	25074-25050	UnLined Swale	8	5.5	27	750		
	25062-25060	UnLined Swale	2	4.25	17	500		
	25060-25058	UnLined Swale	2	4.5	18	750		
	25064-25058	UnLined Swale	2	3.25	13	1000		
	25066-25058	UnLined Swale	2	4.25	17	750		
	25058-25056	UnLined Swale	2	5.5	21	500		
	25056-25054	UnLined Swale	4	5.25	22	1250		
	25054-25052	UnLined Swale	4	5.5	23	1000		
	25052-25050	UnLined Swale	4	5.5	23	750		
	25050-25048	UnLined Swale	15	6	36	750		
	25072-25070	UnLined Swale	2	4	16	400		
	25070-25048	UnLined Swale	2	4	16	750		
	25048-25014	UnLined Swale	15	6	36	560		
	25068-25046	UnLined Swale	2	4.25	17	750		

Watershed	Location	Facility Description	Line Channels				Pipe Culverts	
			Base (ft)	Height (ft)	Top Width (ft)	Length (ft)	Diameter (Inch)	Length (ft)
	25046-25104	UnLined Swale	2	4.5	18	500		
	25034-25032	UnLined Swale	2	4.5	18	1000		
	25032-25030	UnLined Swale	2	4.75	18	1000		
	25030-25029	UnLined Swale	2	5	19	1000		
	25029-25039	UnLined Swale	2	5.25	20	750		
	25044-25042	UnLined Swale	2	4.5	18	1000		
	25042-25084	UnLined Swale	2	4.75	18	1000		
	25040-25039	UnLined Swale	2	5	19	1000		
	25039-25096	UnLined Swale	6	5.5	25	500		
	25028-25026	UnLined Swale	2	4.25	17	1000		
	25026-25024	UnLined Swale	2	4.75	18	1000		
	25024-25022	UnLined Swale	2	5	19	1000		
	25022-25016	UnLined Swale	2	5	19	750		
	25020-25018	UnLined Swale	2	4	16	750		
	25018-25084	UnLined Swale	2	4.5	18	500		
	25016-25014	UnLined Swale	4	5.5	23	1000		
	25038-25036	UnLined Swale	2	4.5	18	1000		
	25036-25014	UnLined Swale	2	4.5	18	1000		
	25014-25012	UnLined Swale	8	5.5	27	500		
	25114-25112	RCP					48	1000
	25112-25110	RCP					60	1000
	25110-25108	RCP					72	1000
	25108-25106	RCP					72	500
	25106-25104	RCP					84	500
	25104-25102	Lined Swale	20	5	31	1350		
	25102-25012	Lined Swale	20	5.5	32	5500		
	25012-25010	Lined Swale	20	5.75	33	350		
	25010-25009	Lined Swale	20	5.75	33	557		
	Air Cargo Road crossing	RCB		10'X7'				200
	25009 - Adelanto Road	Lined Swale	12	6.75	27	2780		
	Adelanto Road Crossing-1	RCB		10'X7'				130
	Adelanto Road - 25008	UnLined Swale	12	6.75	35	3132		
	25008-25007	UnLined Swale	12	7.25	37	1560		
	25005-25004	UnLined Swale	5	5	22	2232		
	25004-25003	RCP					72	220
	25003-25002	Lined Swale	5	5.5	17	1530		
	Adelanto Road crossing-2	RCP					96	400
27000	27101-27008	Lined Swale	2	5	13	1000		
	27008-27006	Lined Swale	2	5	13	1500		
	El Mirage Road Crossing	RCP					54	120
	27006-27003	Lined Swale	4	5	15	5650		
	Adelanto Road crossing-2	RCP					96	400
28000	28230-28236	RCP					72	100
	28236-28306	RCP					78	1200

Watershed	Location	Facility Description	Line Channels				Pipe Culverts	
			Base (ft)	Height (ft)	Top Width (ft)	Length (ft)	Diameter (inch)	Length (ft)
	28306-28305 (Z=5)	UnLined Swale	18	5	67	830		
	28305-28304 (Z=5)	UnLined Swale	18	5	67	740		
	28308-28304 (Z=5)	UnLined Swale	5	4.25	47	1500		
	28304-28302 (Z=5)	UnLined Swale	30	4.75	77	1500		
	28302-28416	Lined Swale	6	5.5	18	3795		
	28416-28415	Lined Swale	8	5.25	20	700		
	28422-28415	Lined Swale	2	4	11	1500		1500
	28415-28412	RCP					96	2320
	28412-28410	RCP					96	900
	28410-28408	RCP					96	700
	28408-End	UnLined Swale	16	6.5	39	800		
29000	29126-29124	UnLined Swale	2	4	16	800		
	29124-29110	UnLined Swale	2	4	16	1750		
	29116-29114	UnLined Swale	2	4.75	18	1200		
	29114-29112	UnLined Swale	2	5	19	700		
	29112-29110	UnLined Swale	2	5.25	20	1000		
	29110-29108	Lined Swale	2	6	15	850		
	29122-29120	UnLined Swale	2	3.75	15	300		
	29120-29108	UnLined Swale	2	4.25	17	800		
	29108-29106	Lined Swale	2	6.25	16	800		
	29106-29104	Lined Swale	2	6.25	16	600		
	29104-29102	Lined Swale	4	5.75	17	900		
	29118-29102	UnLined Swale	2	4.75	13	2100		
29102-29100	UnLined Swale	8	5.5	27	700			

6.7 Water Quality

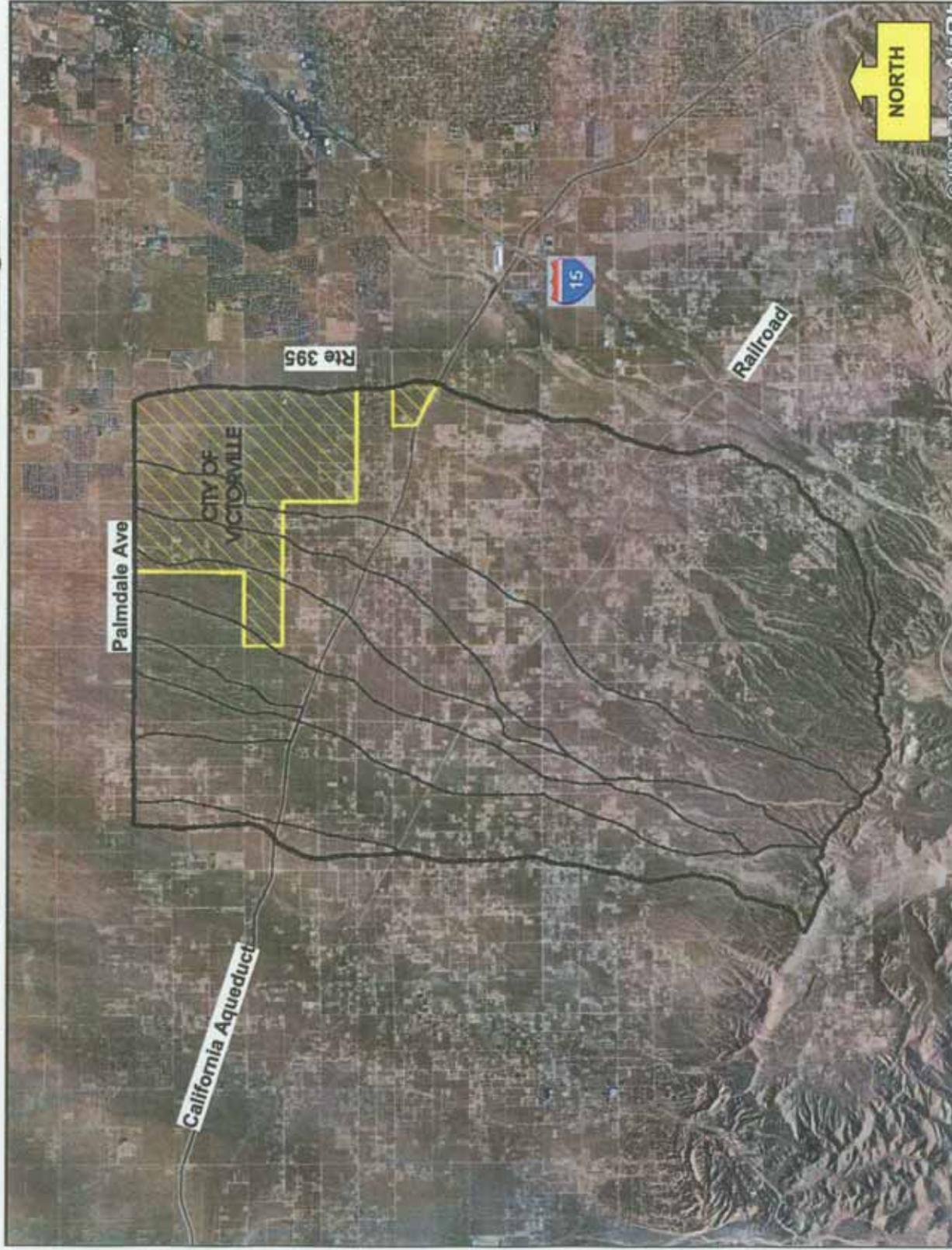
The Southern California Logistics Airport (SCLA) is a 5000-acre development project located within the south Lahontan region in the City of Victorville, San Bernardino County, California. The development area is formerly operated as George Air Force Base. Land uses within the SCLA site consist generally of airport/aviation facilities and commercial development. Specific land uses anticipated within the SCLA property include: (1) manufacturing/warehouse, (2) general aviation, (3) school, (4) fixed base operations, (5) medical office, (6) e-commerce, (7) biomedical facilities, and (8) general office.

This document provides guidance for the project/watershed development addressing storm water quality issues as individual projects evolve during the development period of the site. It is intended to provide a framework of guidelines to assist in long-term runoff quality objectives. Where applicable, the document includes water quality objectives based on the Lahontan Region Basin Plan prepared by the Regional Water Quality Control Board, guidelines according to the Federal Aviation Administration (FAA), the

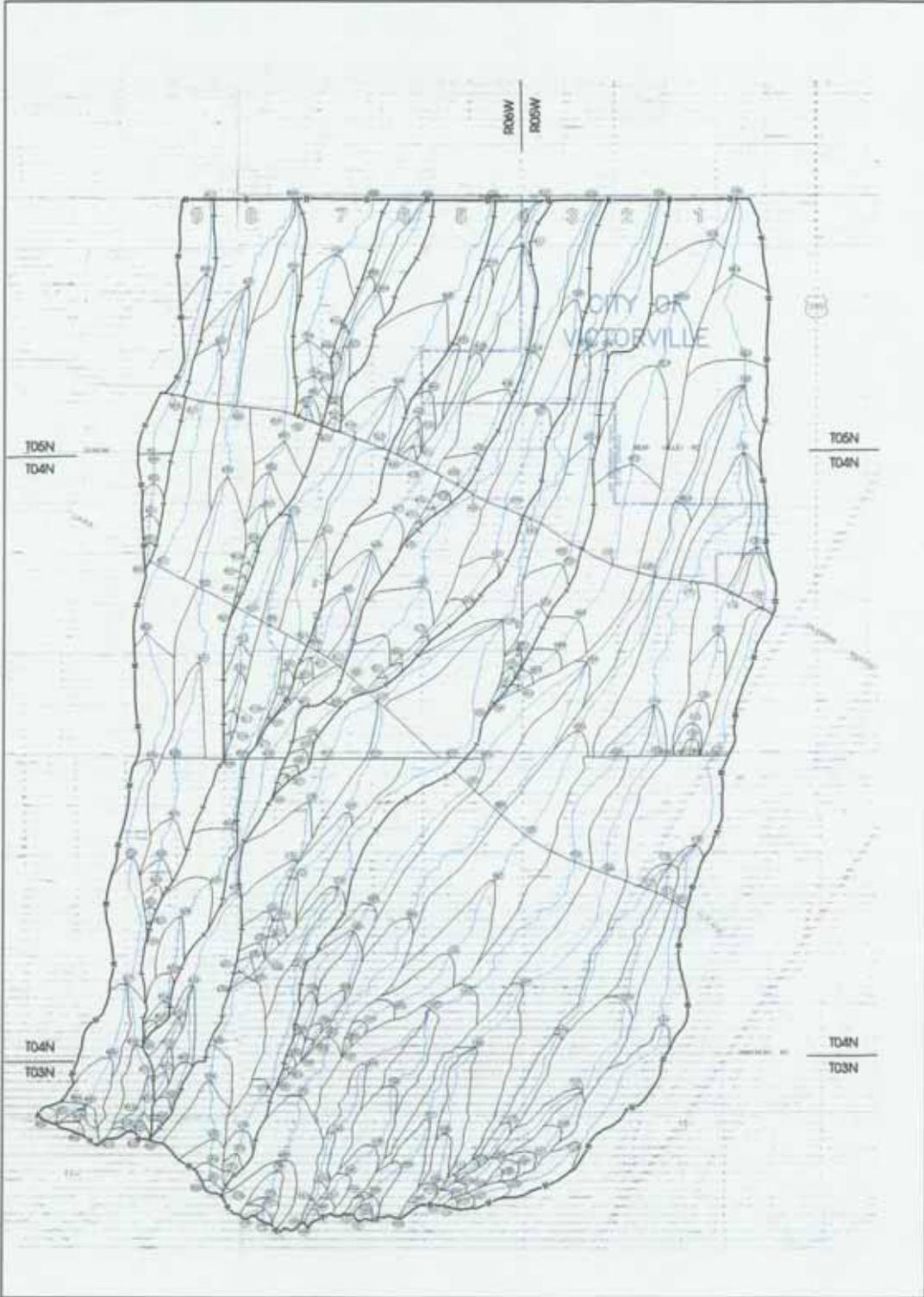
APPENDIX F

Blady Mesa Drainage Plan

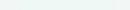
Baldy Mesa Master Plan of Drainage



This MPD covers approximately 59 sq. mi. of drainage area, within the unincorporated area of the County and a portion of the City of Victorville. It was updated primarily to reflect the changes in hydrology manual and land use and proposes new drainage facilities to convey the 100-year peak storm event flows. This MPD has been completed.



BASE MAP LEGEND

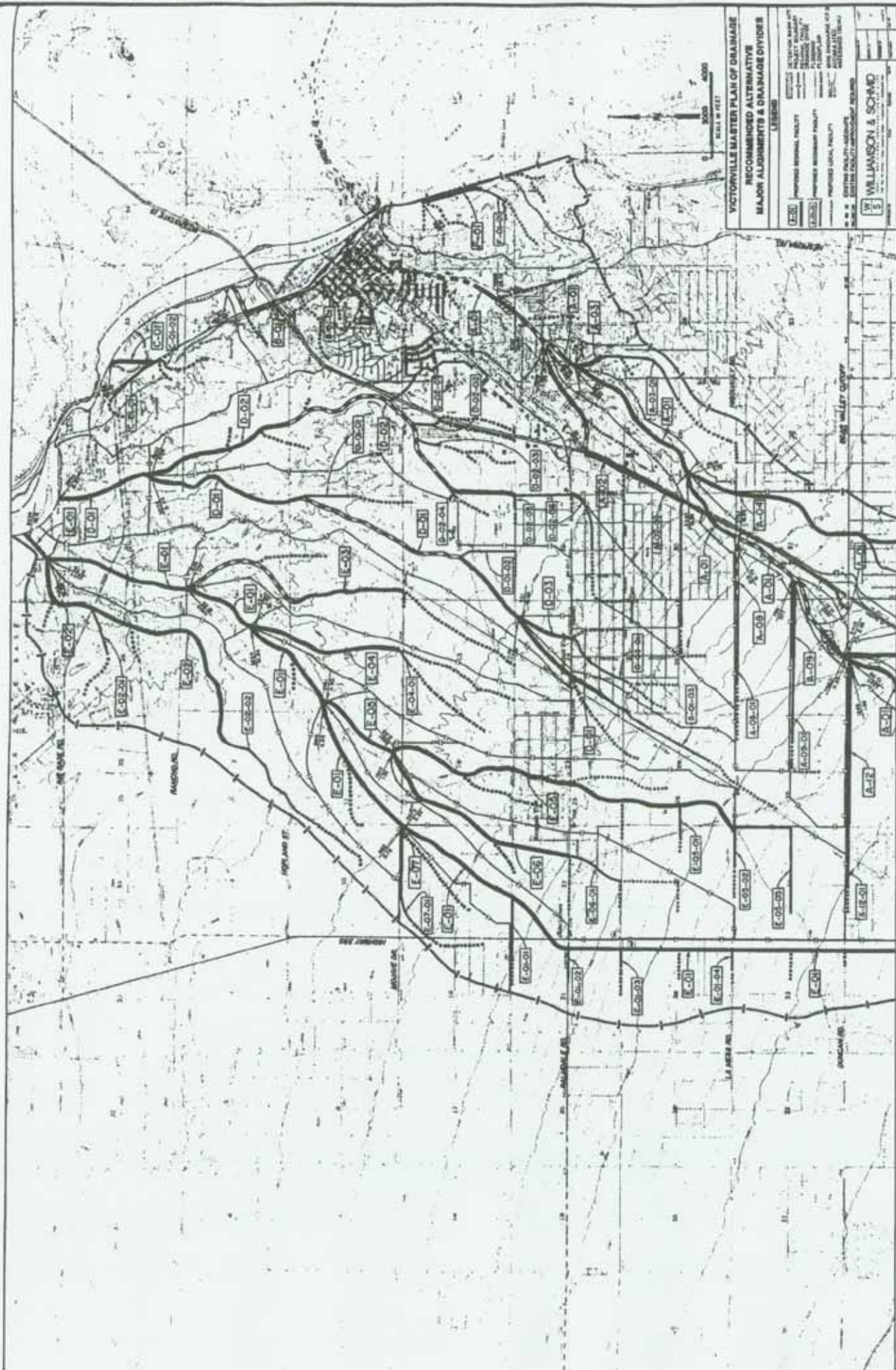
-  WATERSHED BOUNDARY
-  DRAINAGE DIVIDE
-  SUBAREA BOUNDARY
-  FLOW LINE
-  NODE NUMBER
-  CITY BOUNDARY



SCALE 1" = 2000'

APPENDIX G

1992 Drainage MPU Figures



**VICTORVILLE MASTER PLAN OF DRAINAGE
RECOMMENDED ALTERNATIVE
MAJOR ALIGNMENTS & DRAINAGE DIVIDES**

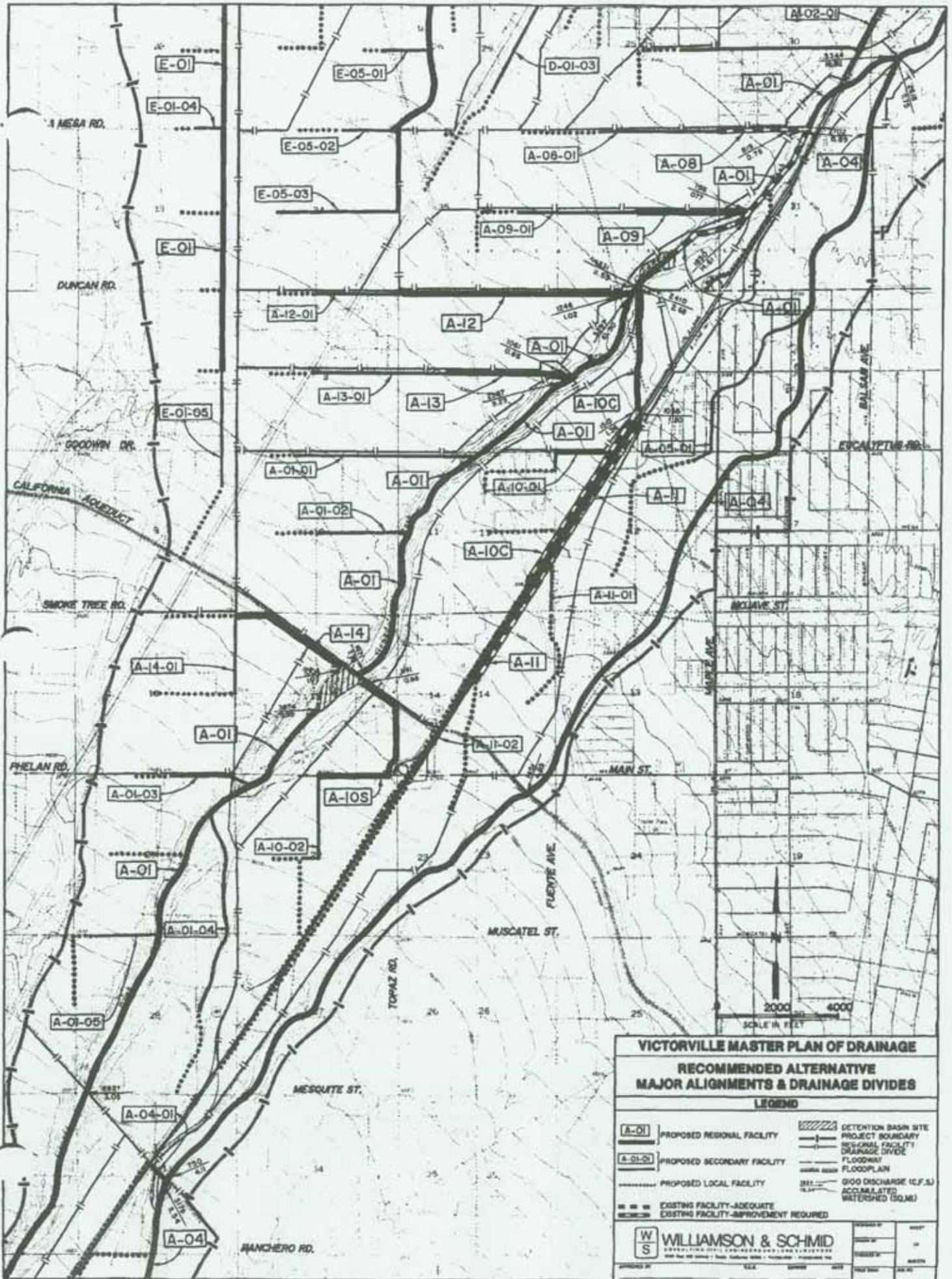
SCALE IN FEET
0 2000 4000

LEGEND

- (E-01) EXISTING DRAINAGE FACILITY
- (E-02) PROPOSED DRAINAGE FACILITY
- (E-03) PROPOSED DRAINAGE FACILITY
- (E-04) PROPOSED LOCAL FACILITY
- (E-05) EXISTING FACILITY - ADJUSTED
- (E-06) EXISTING FACILITY - ADJUSTED

WILLIAMSON & SCHMIDT

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 WWW.WILLIAMSON-SCHMIDT.COM

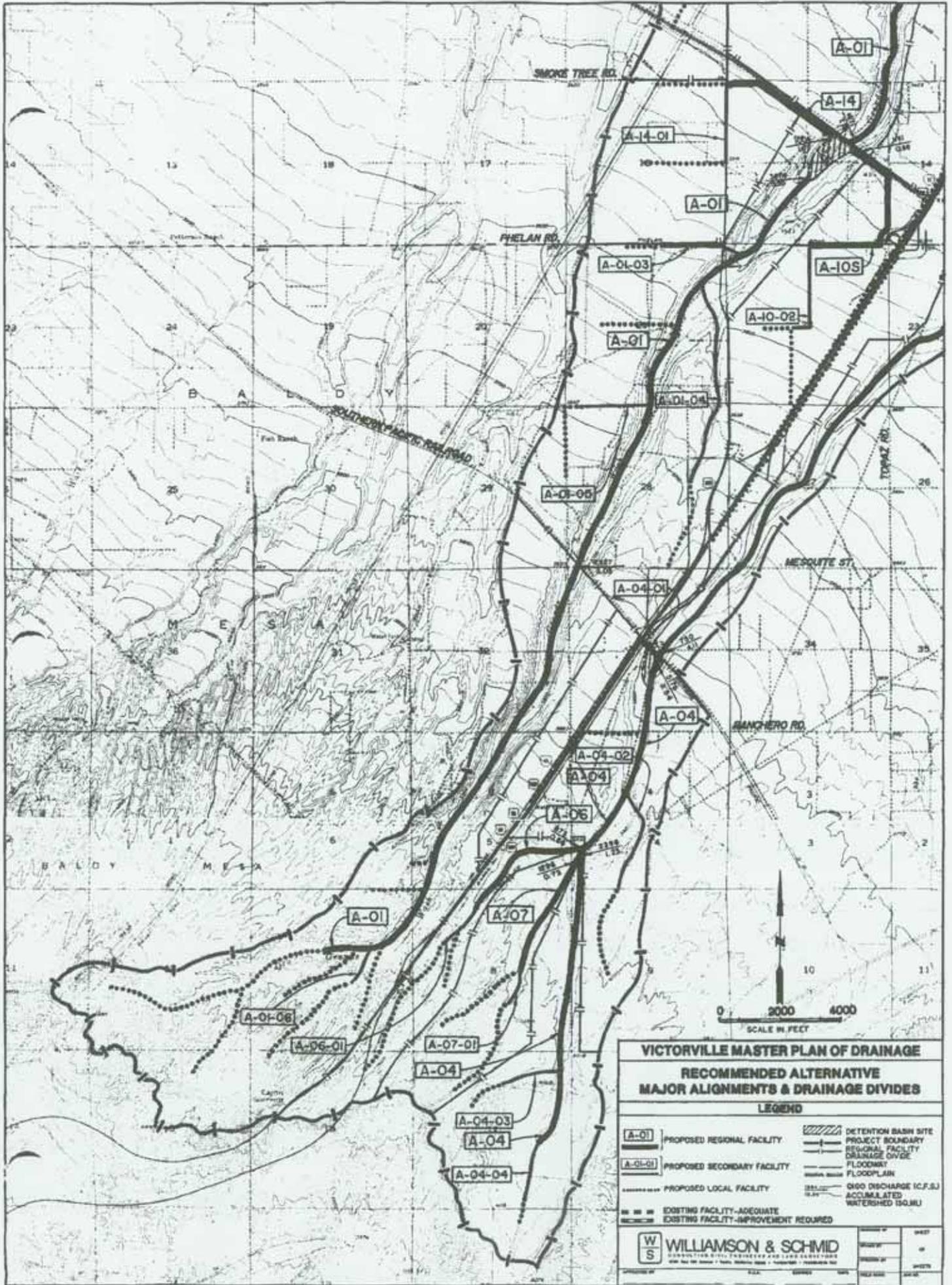


VICTORVILLE MASTER PLAN OF DRAINAGE
RECOMMENDED ALTERNATIVE
MAJOR ALIGNMENTS & DRAINAGE DIVIDES

LEGEND

A-01	PROPOSED REGIONAL FACILITY		DETECTION BASIN SITE
A-01-01	PROPOSED SECONDARY FACILITY		PROJECT BOUNDARY
	PROPOSED LOCAL FACILITY		REGIONAL FACILITY
	EXISTING FACILITY-ADEQUATE		DRAINAGE DIVIDE
	EXISTING FACILITY-IMPROVEMENT REQUIRED		FLOODPLAIN
			WATERWAY
			Q10 DISCHARGE (C.F.S.)
			ACCUMULATED WATERSHED (SQ.M)

W S WILLIAMSON & SCHMID
 CONSULTING CIVIL ENGINEERS AND ARCHITECTS
 4000 East 10th Street • Suite 200 • Victorville, California 92580
 PHONE: (951) 251-1111 FAX: (951) 251-1112



VICTORVILLE MASTER PLAN OF DRAINAGE
RECOMMENDED ALTERNATIVE
MAJOR ALIGNMENTS & DRAINAGE DIVIDES

LEGEND

- A-01 PROPOSED REGIONAL FACILITY
- A-01-01 PROPOSED SECONDARY FACILITY
- PROPOSED LOCAL FACILITY
- EXISTING FACILITY-ADEQUATE
- EXISTING FACILITY-IMPROVEMENT REQUIRED
- DETENTION BASIN SITE
- PROJECT BOUNDARY
- REGIONAL FACILITY
- DRAINAGE DIVIDE
- FLOODPLAIN
- FLOODPLAIN
- Q100 DISCHARGE (C.F.S.)
- ACCUMULATED WATERSHED (SQ.MI)

W S WILLIAMSON & SCHMID
 CONSULTING CIVIL ENGINEERS AND LAND SURVEYORS
 4000 N. 10th Street, Suite 100, Victorville, California 92401

PROJECT NO. _____ SHEET NO. _____ OF _____ DATE _____	DRAWN BY _____ CHECKED BY _____ DATE _____
---	--

APPENDIX H

Drainage Photographs



Figure 2



Figure 3





Figure 4



Figure 5





Figure 6



Figure 7





Figure 8



Figure 9





Figure 10

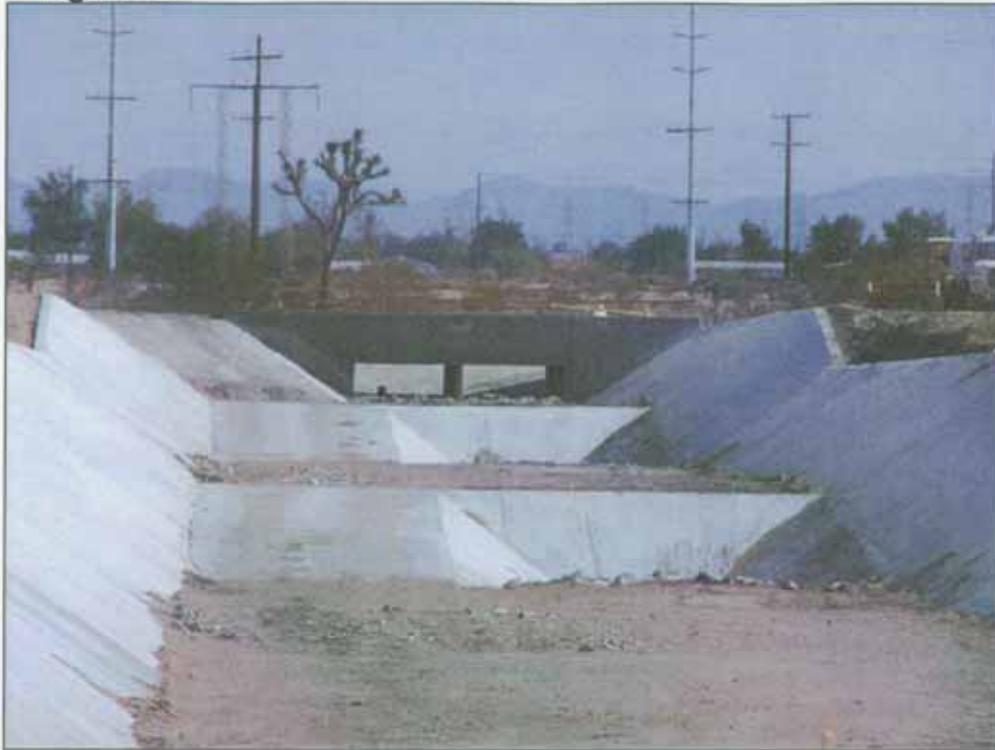


Figure 11





Figure 12



Figure 13

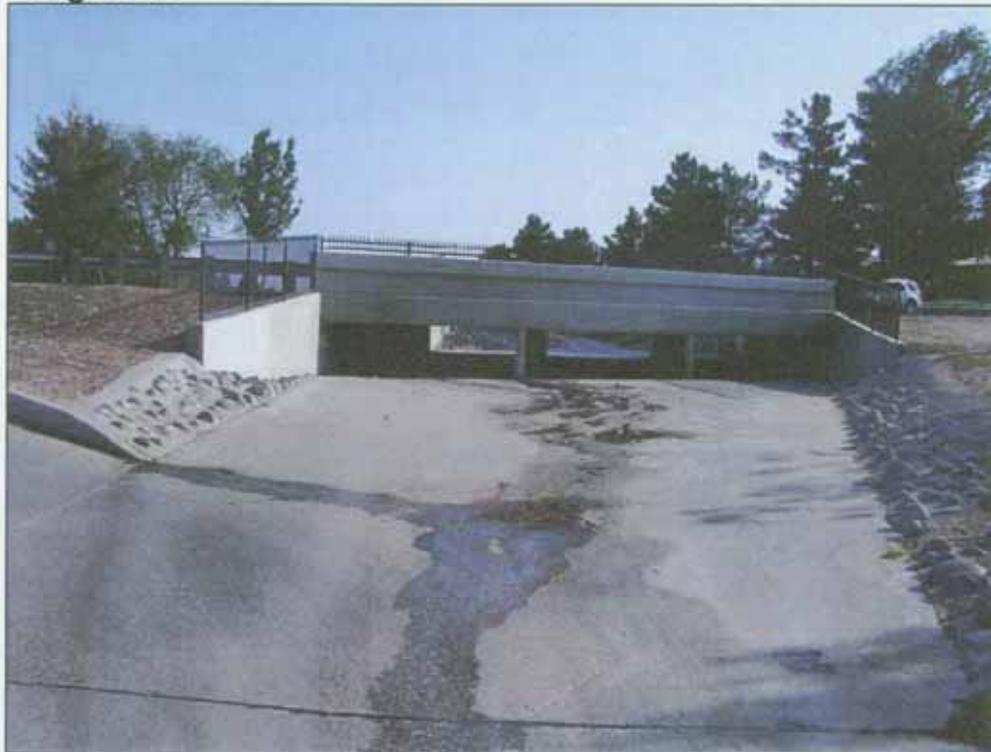




Figure 14



Figure 15

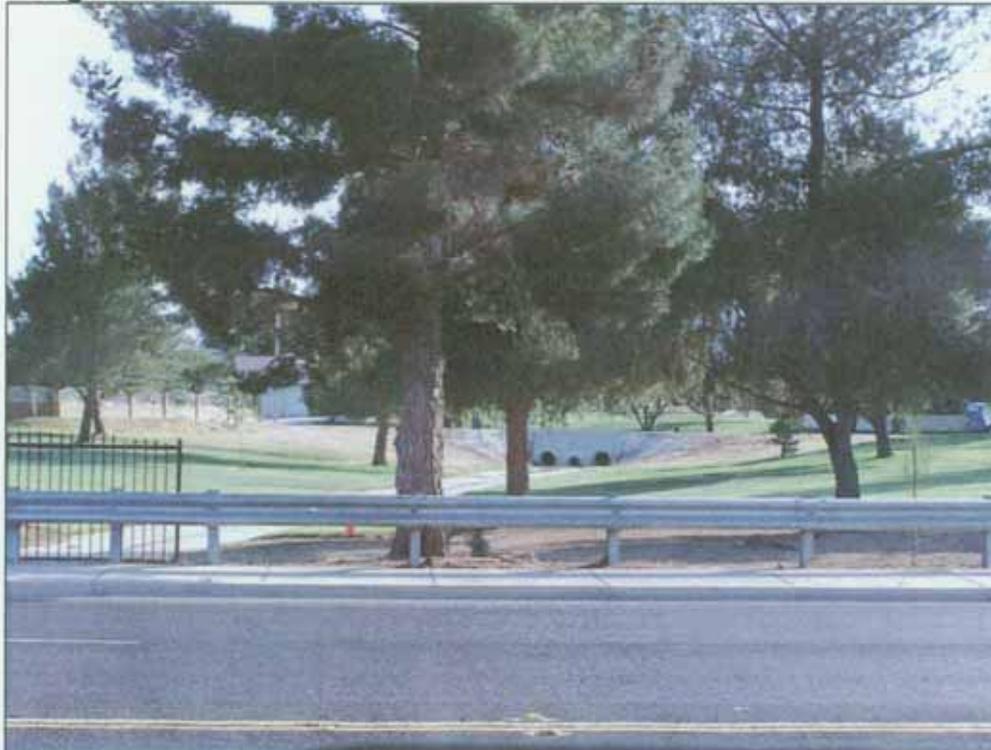




Figure 16

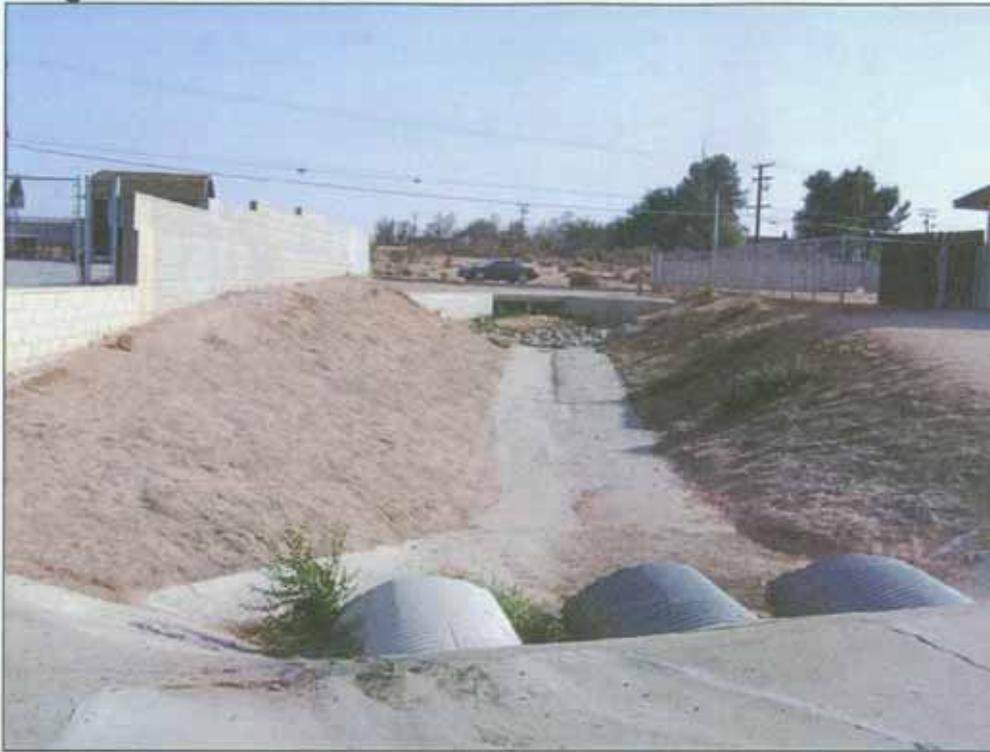
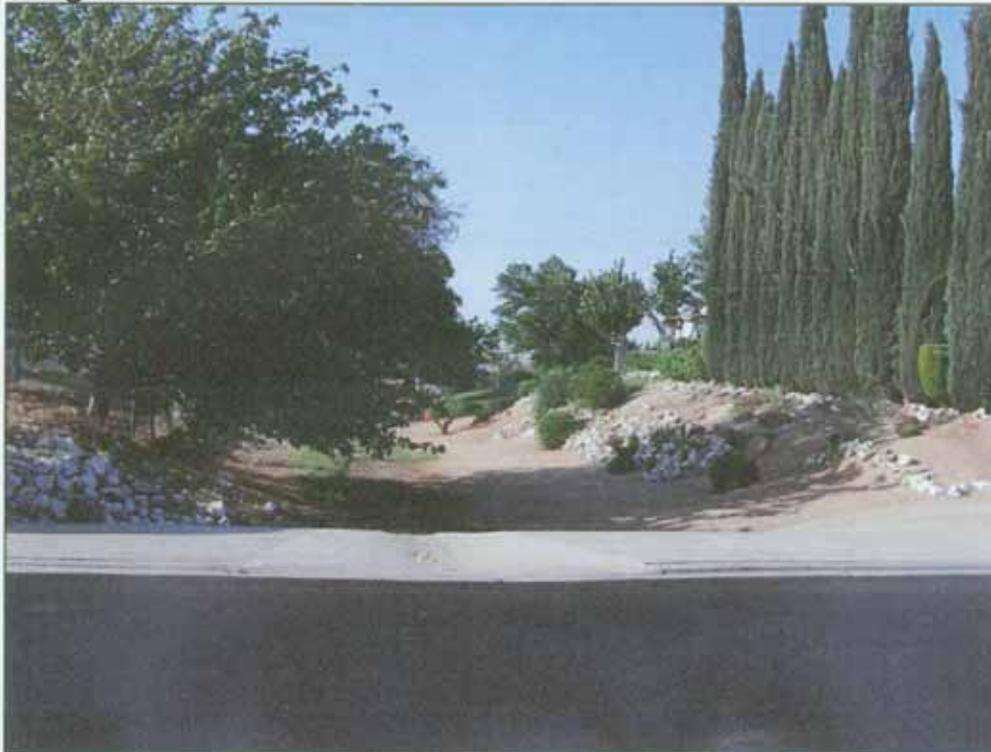


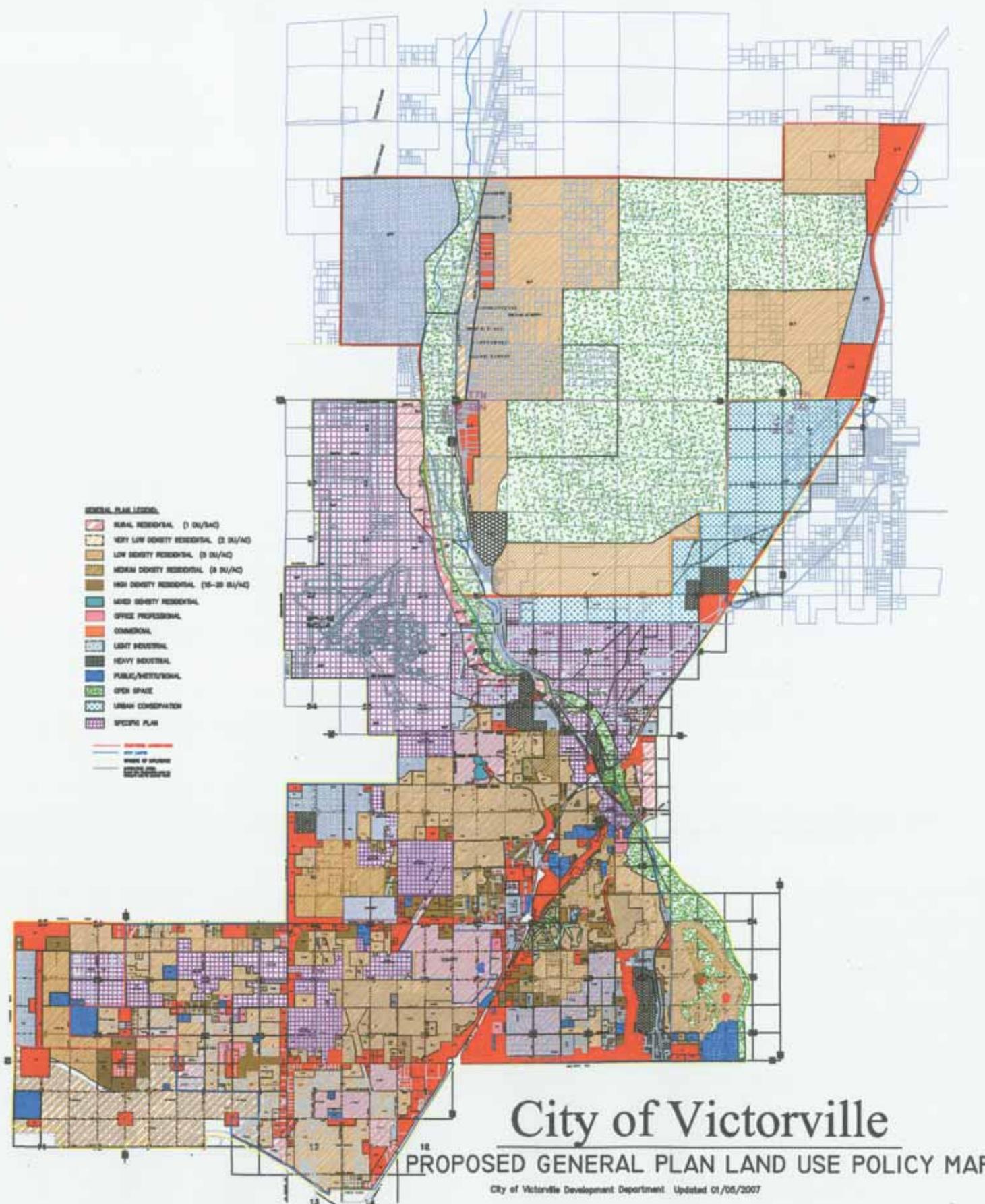
Figure 17



APPENDIX A

Existing and Proposed Maps





- GENERAL PLAN LEGEND**
- RURAL RESIDENTIAL (1 DU/AC)
 - VERY LOW DENSITY RESIDENTIAL (2 DU/AC)
 - LOW DENSITY RESIDENTIAL (5 DU/AC)
 - MEDIUM DENSITY RESIDENTIAL (8 DU/AC)
 - HIGH DENSITY RESIDENTIAL (15-25 DU/AC)
 - MEDIUM DENSITY RESIDENTIAL
 - OFFICE PROFESSIONAL
 - COMMERCIAL
 - LIGHT INDUSTRIAL
 - HEAVY INDUSTRIAL
 - PUBLIC/INSTITUTIONAL
 - OPEN SPACE
 - URBAN CONSERVATION
 - SPECIFIC PLAN
- BOUNDARY LINE
 CITY LIMIT
 STATE OF CALIFORNIA
 COUNTY OF RIVERSIDE

City of Victorville

PROPOSED GENERAL PLAN LAND USE POLICY MAP

City of Victorville Development Department Updated 01/05/2007

APPENDIX B

Sewer Information
Source: EarthTech



Legend

Wastewater Collection System

- Temporary Flow Meter Locations
- Victorville Sewer Discharge to VVWRA Meter Locations

VVWRA Interceptor System

- Trunk
- VVWRA Interceptor
- Sewer Network

Flow Meter Locations

- VVWRA Reclamation Plant
- Parcels
- Spheres of Influence



	CITY OF VICTORVILLE Department of Engineering
Figure 2-3 Connections to the VVWRA Interceptor System and Nearby Temporary Flow Meter Sites	
Sewer System Master Plan City of Victorville, CA	
DATE: March 07, 2008	SHEET NO.
SHEET TITLE: VVWRA Interceptor	OF 10

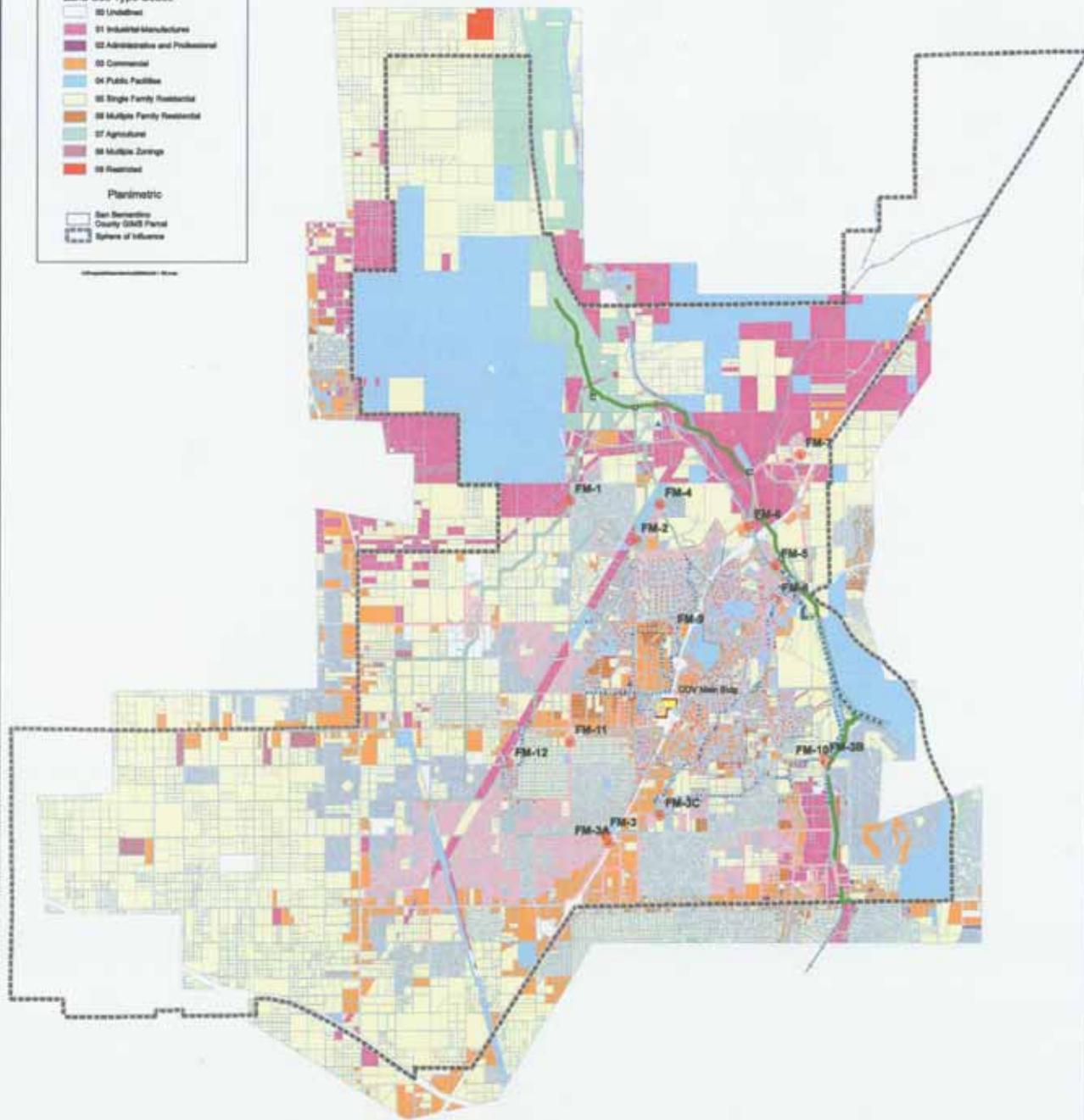
Legend

Land Use Type Codes

- 00 Unlabeled
- 01 Industrial/Manufacture
- 02 Administrative and Professional
- 03 Commercial
- 04 Public Facilities
- 05 Single Family Residential
- 06 Multiple Family Residential
- 07 Agriculture
- 08 Multiple Zoning
- 09 Restricted

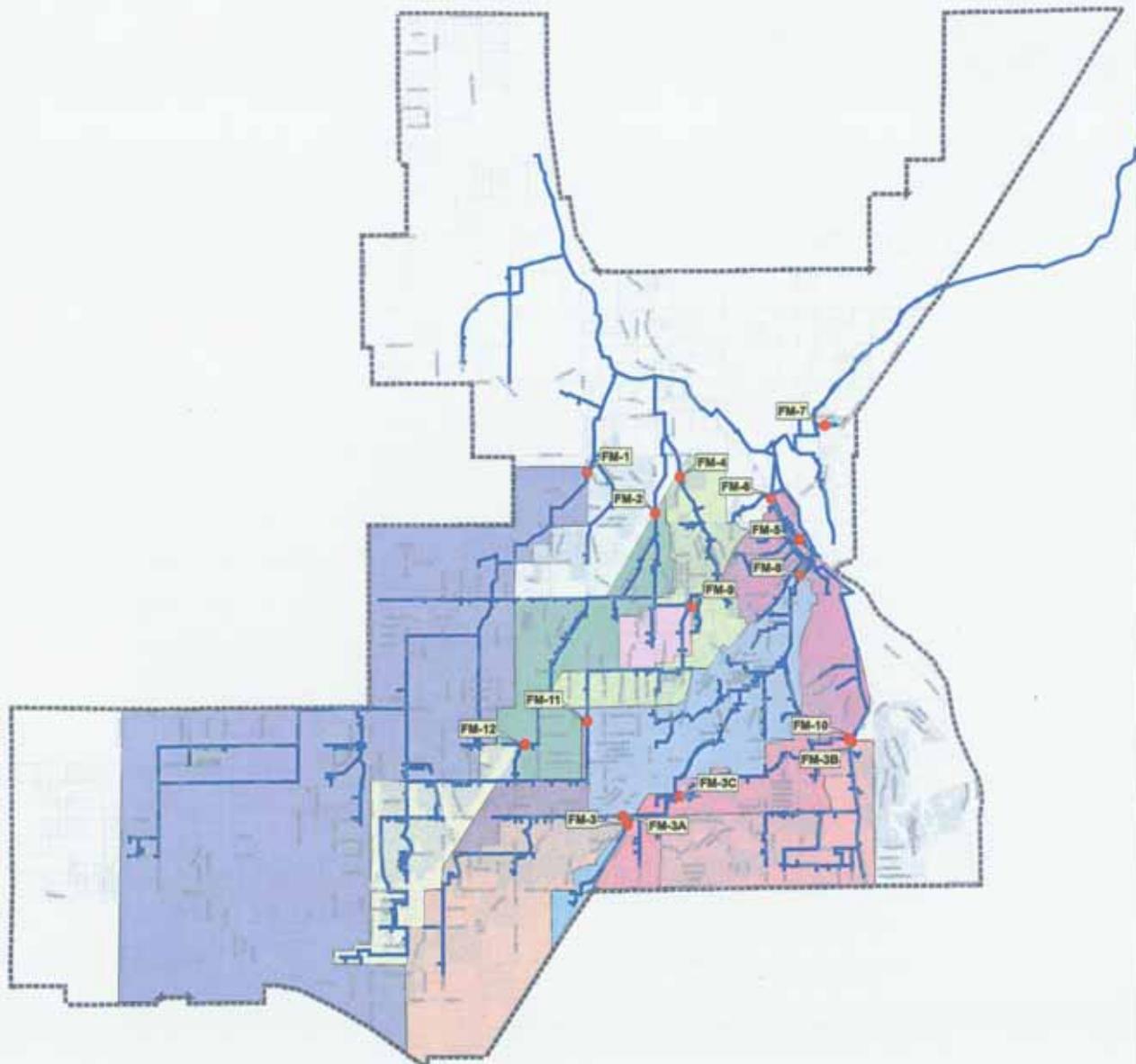
Planimetric

- San Bernardino County GIS Parcel
- City of Victorville Sphere of Influence



DRAFT FINAL

	CITY OF VICTORVILLE DEPARTMENT OF DEVELOPMENT
Figure 3-1 Land Use and Flow Monitoring Tributary Areas	
Sewer System Master Plan City of Victorville, CA	
DATE: March 27, 2018	SHEET NO.
001711-1000-0001-0001-0001	OF 00



Legend

Wastewater Collection System

- Flow Monitoring Locations
- Modelled Sewer Network
- Tributary Areas
 - FM-1
 - FM-2
 - FM-3
 - FM-3A
 - FM-3B
 - FM-4
 - FM-4A
 - FM-5
 - FM-6
 - FM-7
 - FM-8
 - FM-9
 - FM-10
 - FM-11
 - FM-12
- Planimetric
- Parcels
- Sphere of Influence



0 100 200
 DRAFT FINAL

	CITY OF VICTORVILLE DEPARTMENT OF UTILITIES
Figure 3-2 Flow Monitoring Locations and Tributary Areas	
Sewer System Master Plan City of Victorville, CA	
DATE: March 27, 2009	SHEET NO.
EARTH TECH INC., 10800 BEVELL, CA	100 00

Legend

Wastewater Collection System

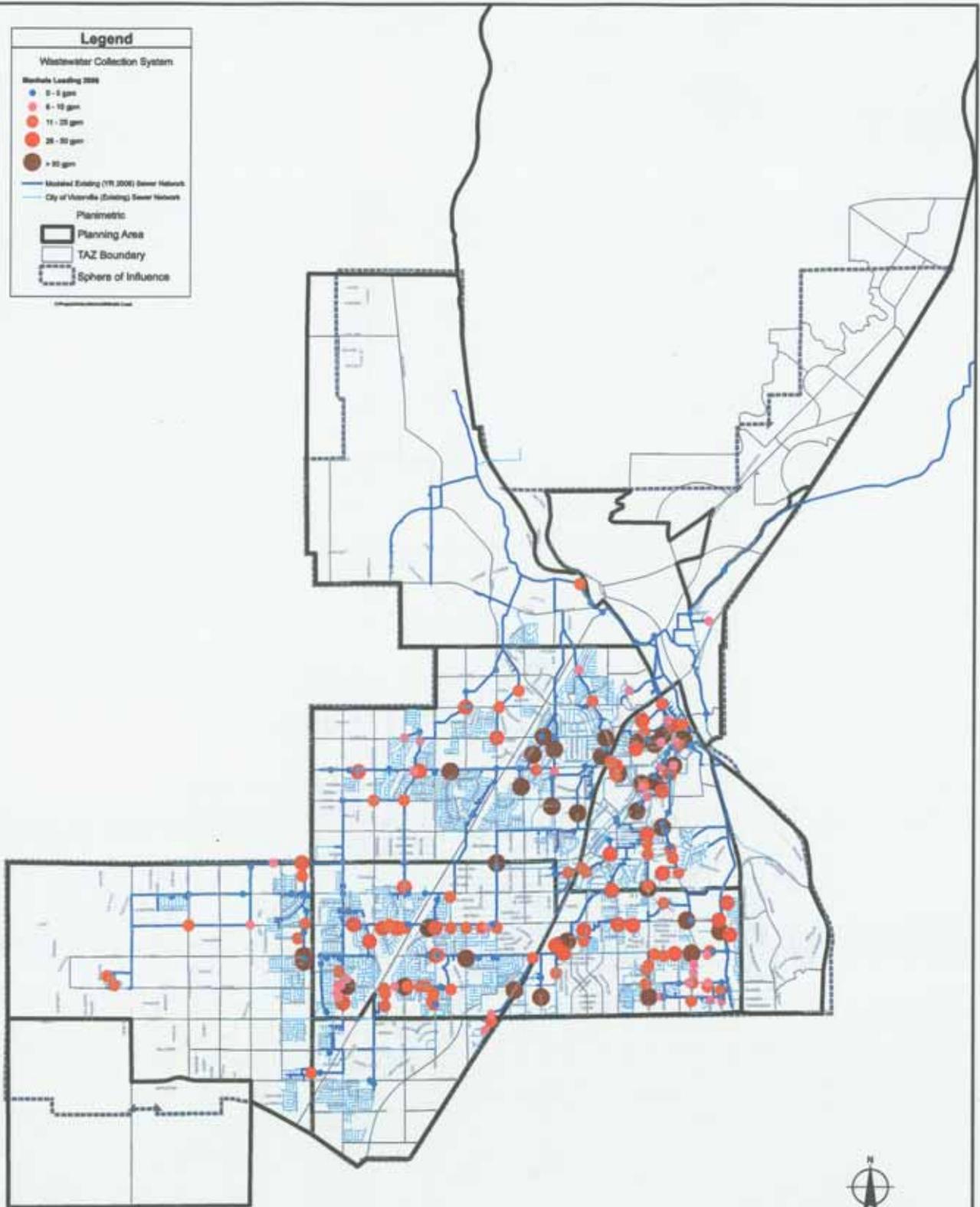
Manhole Loading 2046

- 0 - 5 gpm
- 6 - 10 gpm
- 11 - 20 gpm
- 21 - 30 gpm
- > 30 gpm

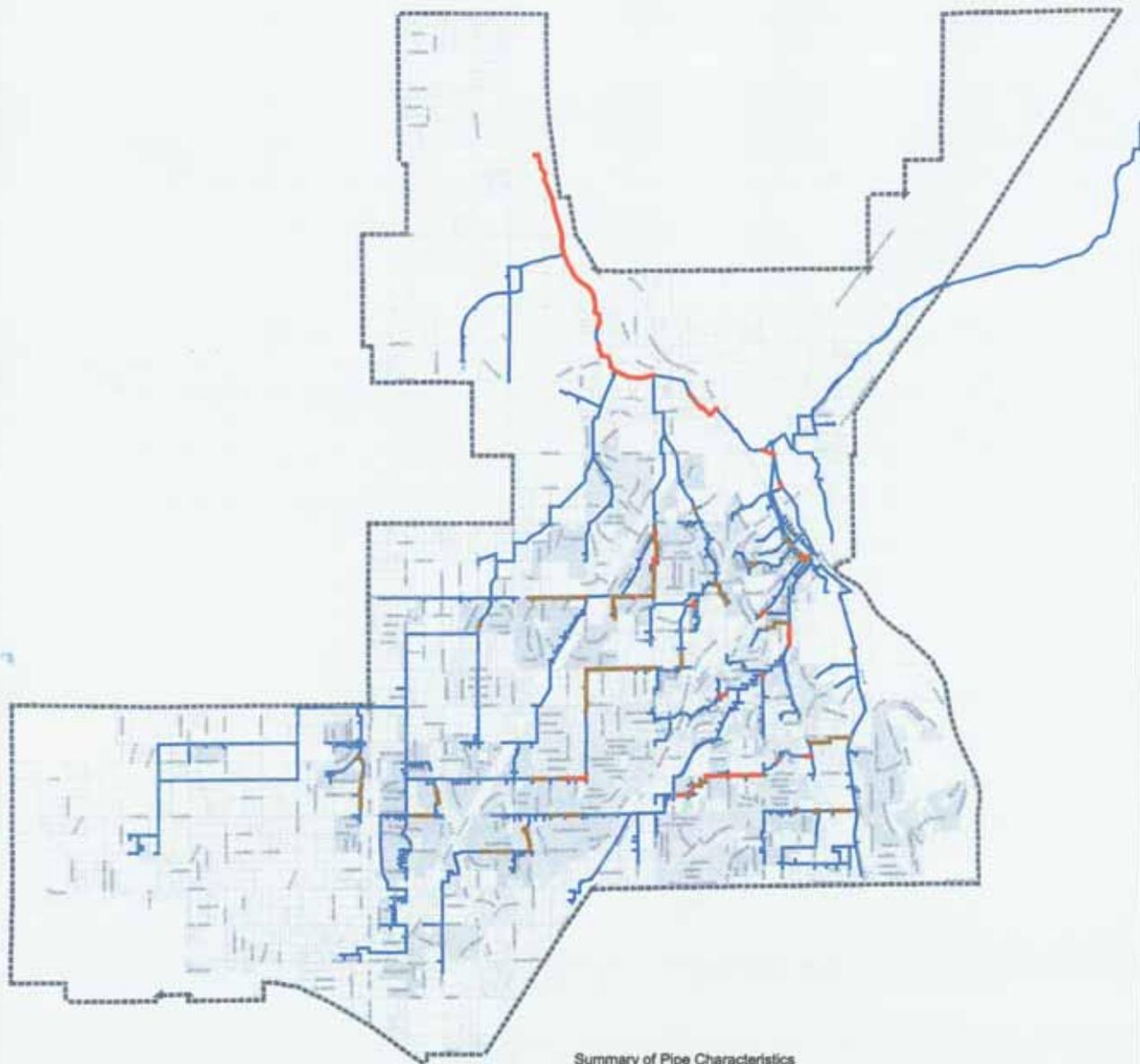
- Modified Existing (19, 2006) Sewer Network
- City of Victorville (Existing) Sewer Network

Planimetric

- ▭ Planning Area
- ▭ TAZ Boundary
- ▭ Sphere of Influence



 Earth Tech Engineering & Construction	CITY OF VICTORVILLE DEPARTMENT OF DEVELOPMENT
Figure 5-3 Manhole Loading for Modeling Current (Year 2046) Conditions	
Sewer System Master Plan City of Victorville, CA	
DATE: March 27, 2009	
PROJECT: 19204-001, 19204-002, 19204-003	
NS	



Summary of Pipe Characteristics Meeting or Exceeding d/D Criteria

	Pipes Meeting d/D Criteria	Pipes Exceeding d/D Criteria ¹	Surcharged Pipes ²	Total Pipe Length ³
Pipe Diameter	Linear Feet	Linear Feet	Linear Feet	Linear Feet
8-inch	191,945	19,048	5,389	216,382
10-inch	87,779	12,782	302	100,863
12-inch	66,981	12,884	4,239	84,104
14-inch	3,537	--	--	3,537
15-inch	98,258	--	424	98,682
18-inch	94,572	--	--	94,572
21-inch	41,899	--	--	41,899
24-inch	22,513	--	--	22,513
27-inch	33,477	--	1,087 ²	34,564
30-inch	31	--	--	31
33-inch	927	--	--	927
36-inch	11,685	--	18,886 ²	30,551
Total	653,584	44,956	30,327	728,625

¹Excluding Surcharged Pipes
²Excluding Force Mains
³VWRA Lines

Legend

Wastewater Collection System

- Surcharged Pipe
- Pipes Exceeding d/D Criteria
- Pipes Meeting d/D Criteria

Planimetric

Force Mains
 Force of Influence

d/D Criteria for Existing and Future Pipe

Pipe Diameter	Max. d/D
8" to 12"	0.5
> 12"	0.75



DRAFT FINAL

Earth Tech CITY OF VICTORVILLE
 DEPARTMENT OF ENGINEERING

Figure 5-4
 Hydraulic Evaluation Results for Year 2006 Conditions
 Sewer System Master Plan
 City of Victorville, CA

DATE: March 07, 2006
 SHEET NO. 104 OF 104

Legend

Wastewater Collection System

Manhole Loading 2014

- 0 - 25 gpm
- 25 - 50 gpm
- 50 - 100 gpm
- 100 - 500 gpm
- > 500 gpm

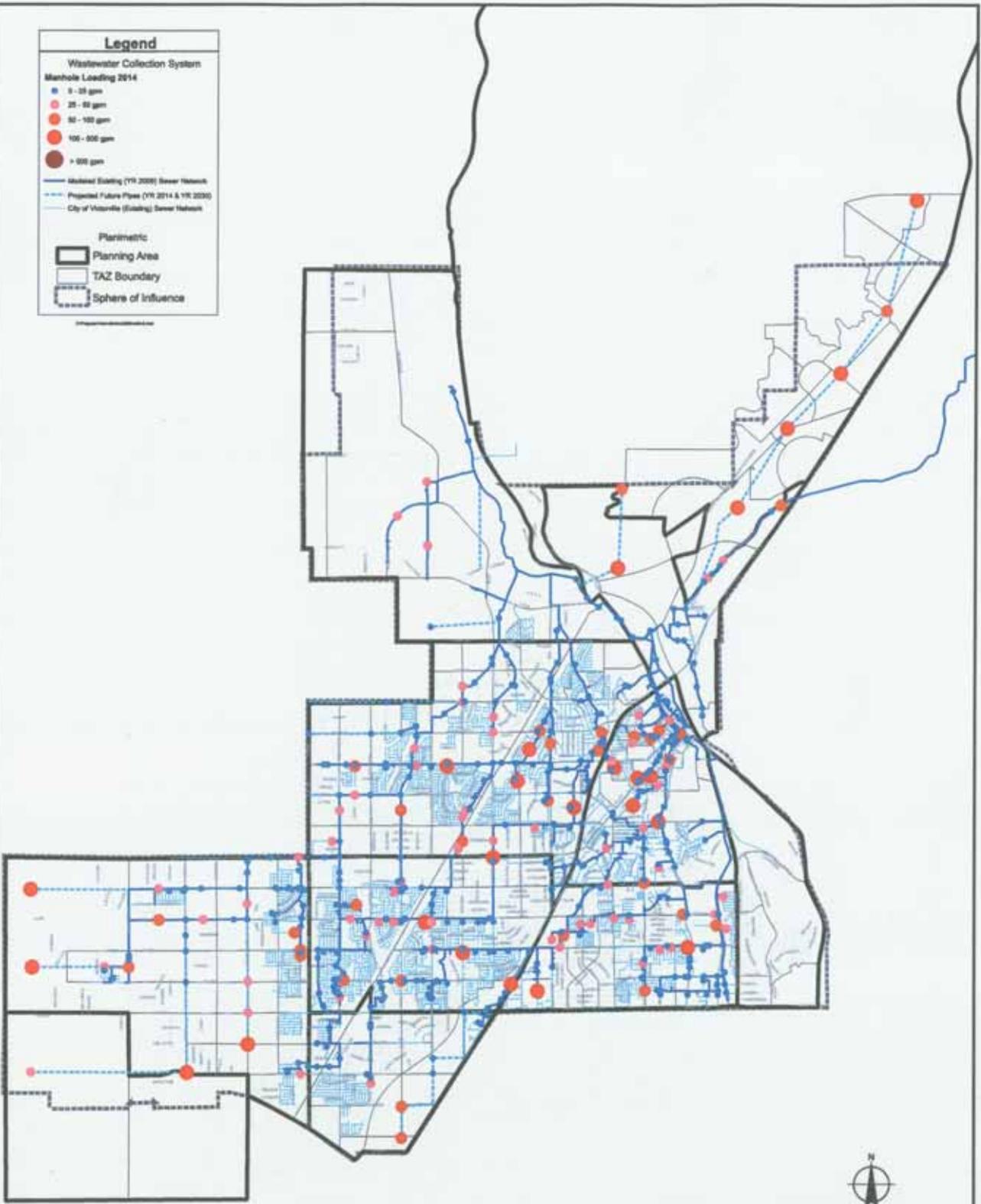
— Modelled Existing (YR 2030) Sewer Network

— Proposed Future Pipes (YR 2014 & YR 2030)

— City of Victorville (Existing) Sewer Network

Planimetric

- ▭ Planning Area
- ▭ TAZ Boundary
- ▭ Sphere of Influence



Earth Tech CITY OF VICTORVILLE
DEPARTMENT OF ENGINEERING

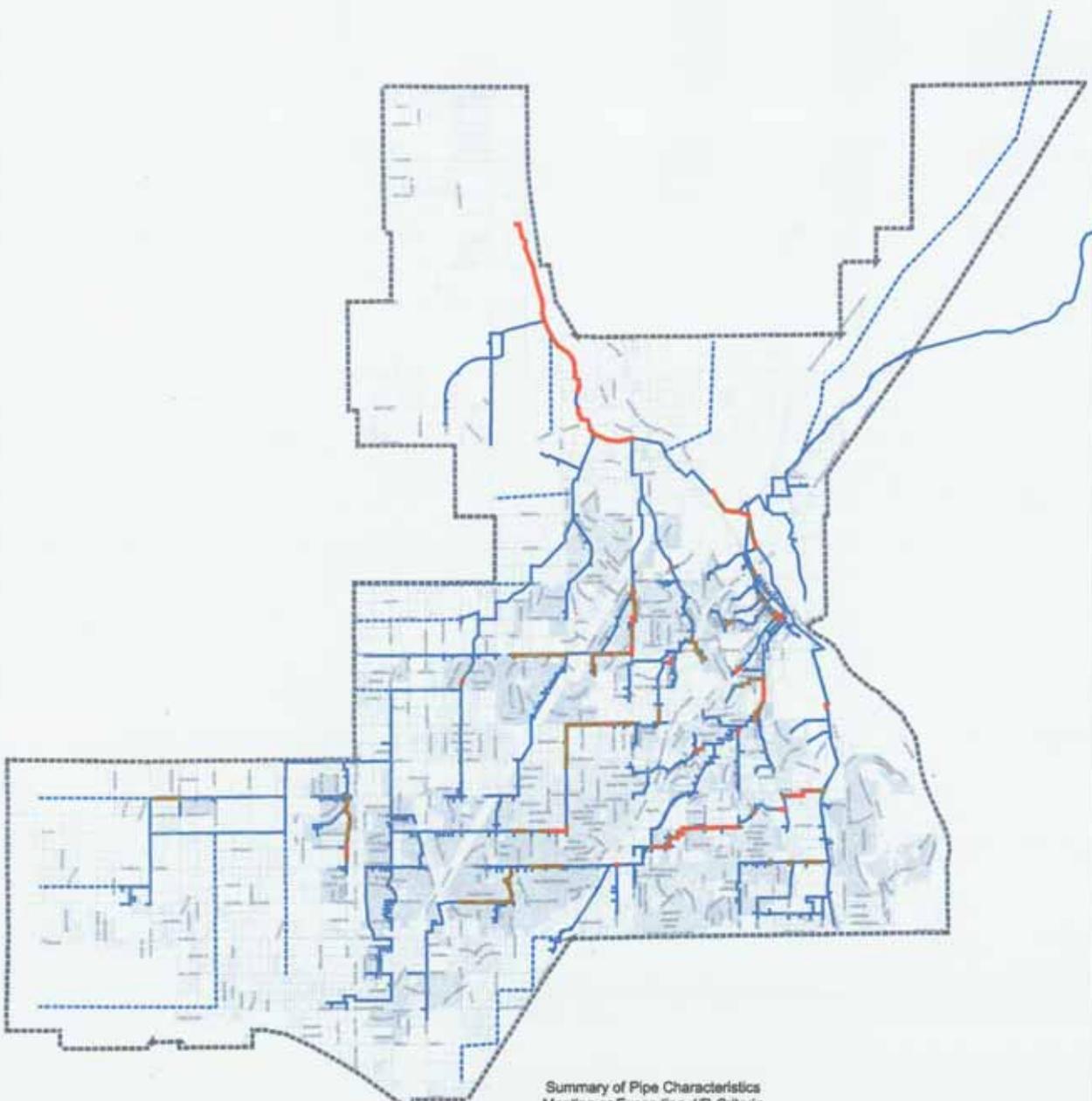
Figure 5-5
Expansion for Year 2014
Planning Horizon and
Manhole Loading for Modeling

Sewer System Master Plan
City of Victorville, CA

DATE: March 27, 2009

DRYDEN ROAD, CARLE PLACE, CA

THE
NO



Summary of Pipe Characteristics Meeting or Exceeding d/D Criteria

	Pipes Meeting d/D Criteria ¹	Pipes Exceeding d/D Criteria ²	Surcharged Pipes ³	Total Pipe Length ³
Pipe Diameter	Linear Feet	Linear Feet	Linear Feet	Linear Feet
8-inch	188,627	22,357	5,389	216,383
10-inch	149,570	14,016	603	164,189
12-inch	103,207	13,979	6,866	124,052
14-inch	3,537			3,537
15-inch	134,953	150	694	135,797
18-inch	110,872			110,872
21-inch	41,899			41,899
24-inch	22,513			22,513
27-inch	28,810	3,896 ⁴	1,859 ⁴	34,565
30-inch	31			31
33-inch	927			927
36-inch	11,665		18,885 ⁴	30,551
Total	796,611	54,406	34,297	885,316

¹Includes Projected Future Pipes
²Excluding Surcharged Pipes
³Excluding Force Mains
⁴VWRIA Lines

Legend

Wastewater Collection System

- Surcharged Pipes
- Pipes Meeting d/D Criteria
- Pipes Exceeding d/D Criteria
- Projected Future Pipes

Parimetric

Parcels

Sphere of Influence

d/D Criteria for Existing and Future Pipe

Pipe Diameter	Max. d/D
8" to 12"	0.5
> 12"	0.75



© Earth Tech

CITY OF VICTORVILLE
DEPARTMENT OF ENGINEERING

Figure 5-6
Hydraulic Evaluation Results
for
Year 2014 Conditions

Sewer System Master Plan
City of Victorville, CA

DATE: March 07, 2008

SCALE: 1"=100' (AS SHOWN)

FIG. NO.

Legend

Wastewater Collection System

Manhole Loading 2030

- 0 - 25 gpm
- 25 - 50 gpm
- 50 - 100 gpm
- 100 - 500 gpm
- > 500 gpm

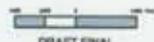
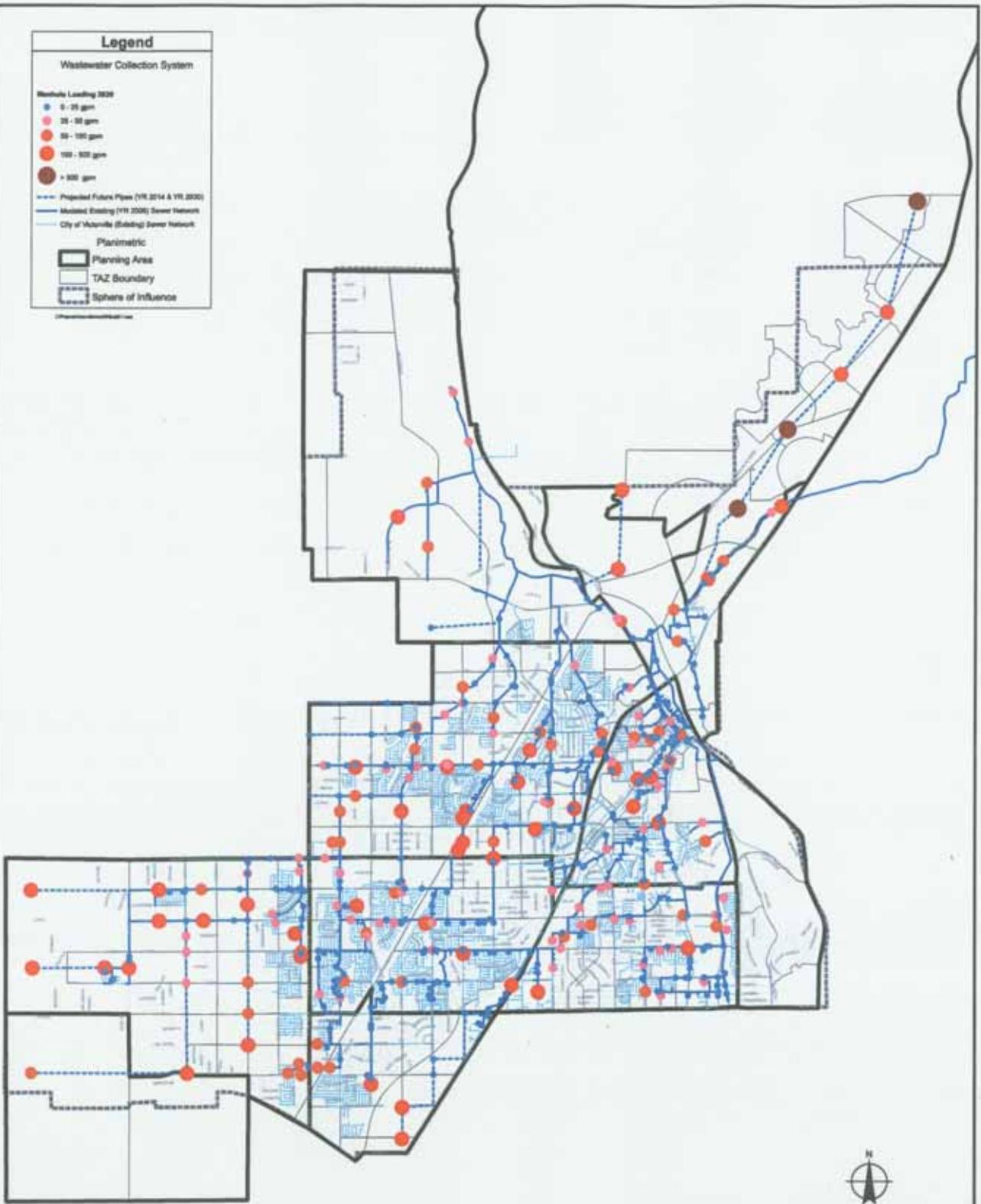
Projected Future Pipes (YR 2014 & YR 2030)

Modelled Existing (YR 2000) Sewer Network

City of Victorville (Existing) Sewer Network

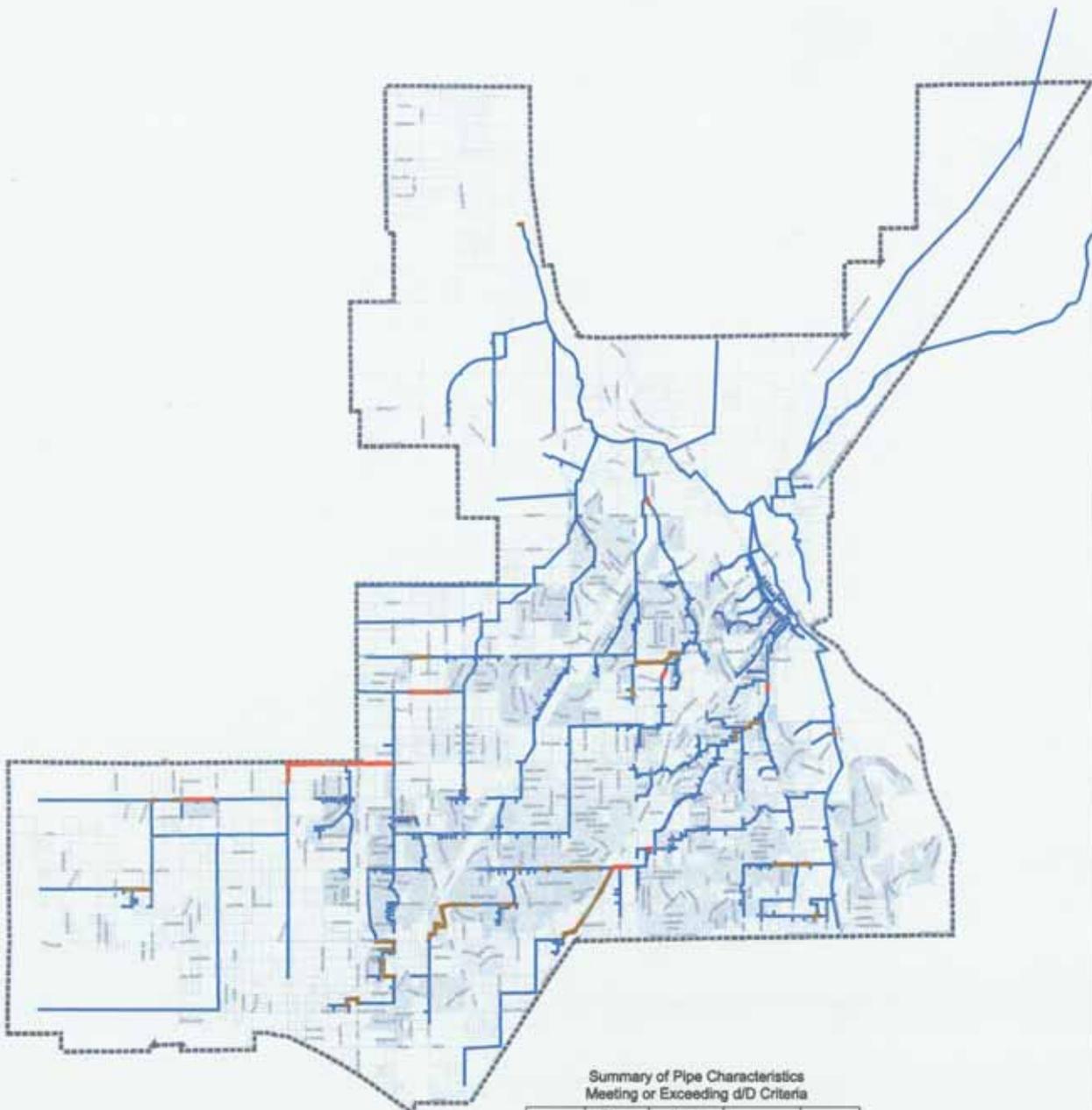
Planimetric

- Planning Area
- TAZ Boundary
- Sphere of Influence



DRAFT FINAL

	CITY OF VICTORVILLE DEPARTMENT OF ENGINEERING
<p>Figure 5-7 Expansion for Year 2030 Planning Horizon and Manhole Loading for Modeling</p>	
<p>Sewer System Master Plan City of Victorville, CA</p>	
DATE: March 27, 2009	TITLE:
DRAWN: [Name]	SCALE:
CHECKED: [Name]	DATE:



Summary of Pipe Characteristics Meeting or Exceeding d/D Criteria

Pipe Diameter	Pipes Meeting d/D Criteria ¹	Pipes Exceeding d/D Criteria ²	Surcharged Pipes ³	Total Pipe Length ⁴
	Linear Feet	Linear Feet	Linear Feet	Linear Feet
8-inch	170,118	12,208	—	188,326
10-inch	146,837	10,309	—	157,146
12-inch	114,338	10,432	—	124,770
14-inch	3,522	—	15	3,522
15-inch	158,664	332	3,545	162,541
18-inch	107,450	459	8,863	107,450
21-inch	42,666	231	—	42,666
24-inch	20,149	—	2,353	20,149
27-inch	29,213	—	—	35,210
30-inch	31	—	—	31
33-inch	926	—	—	926
36-inch	11,664	—	—	30,550
UPSIZED VVWRA PIPE (TBO) ⁴	24,883	—	—	—
Total	836,461	33,871	14,878	885,307

¹Includes Projected Future Pipes.
²Excluding Surcharged Pipes.
³Excluding Force mains.
⁴Future pipe sizes for VVWRA trunk lines were not determined because future inflows to VVWRA trunk lines from outside the City of Victorville were not known. It is assumed that all VVWRA inflowances were updated in year 2014.

Legend

Wastewater Collection System

- Surcharged Pipe
- Pipes Exceeding d/D Criteria
- Pipes Meeting d/D Criteria

Planimetric

- Parcel
- Sphere of Influence

d/D Criteria for Existing and Future Pipe

Pipe Diameter	Max d/D
8" to 12"	0.5
> 12"	0.75



EarthTech
 CITY OF VICTORVILLE
 DEPARTMENT OF ENGINEERING

Figure 5-6
 Hydraulic Evaluation Results for Year 2030 Conditions

Sewer System Master Plan
 City of Victorville, CA

DATE: March 27, 2018
 SHEET NO. 1300-BRAND-04

APPENDIX C

**Water Supply Backup
Source: Carollo Engineers**

May 8, 2008

Reginald Lamson
Director of Water District
17184 Yuma Street
Victorville, CA 92395

Subject: Water Supply Availability in the City of Victorville

Dear Mr. Lamson:

The purpose of this letter is to describe the City of Victorville's (City) supply availability to meet water demands associated with planned land uses reflecting the City's Draft General Plan Update (December 2007). However, available information to support this analysis is limited to documents that projected water demands and supplies through year 2030, a reasonable duration for water system planning. Full buildout of the General Plan land uses is anticipated to occur much later than 2030..

Based on documents prepared previously, demand projections are presented for the following four areas within the City's Sphere of Influence (as designated by the Local Agency Formation Commission):

- Improvement District 1 (ID1), the former Victor Valley Water District (VWWD or District);
- Improvement District 2 (ID2), the former Baldy Mesa Water District (BMWD);
- Southern California Logistics Airport (SCLA); and
- Desert Gateway Specific Plan.

Water demand projections for each of these four service areas are presented in Table 1. The projections for ID1 and ID2 were taken from the most recent Urban Water Management Plans (UWMP) prepared in 2005 for VWWD and BMWD. The demand projections of the VWWD UWMP were based on General Plan land uses current at that time, while the demands presented in the BMWD UWMP were based on the estimated number of service connections. Water demand projections for the SCLA service area and the Desert Gateway development were projected using information provided by District staff based on General Plan land uses.

Table 1 shows that the demands within the District are projected to increase from 24,005 acre-feet per year (afy) in 2005 to 69,740 afy in 2030. As previously noted, there are lands designated for urban development in the General Plan Update that are not likely to be developed by 2030 and this analysis does not include an assessment of those demands.

Since the completion of the 2005 UWMPs additional information regarding population forecasting has become available. Based on this information, the projected water demand is approximately 55,000 afy, which is more than 20 percent less than the projections used in the attached tables. The projected demand of 69,740 afy is used in all analyses presented in this letter to provide conservative estimates.

Table 2 presents projected recycled water supplies along with anticipated demand of recycled water customers. Data were obtained from the 2007 Capacity Study prepared by the Victor Valley Water Reclamation Agency (VWRA), which evaluated available recycled water supply and a few specific large water users, but did not specifically look at demand potential of possible recycled water customers. As shown in Table 2, sufficient supply of recycled water is projected to be available after 2010 to meet the projected recycled water demands of the customers known at this time. The recycled water supply availability and potential demands presented in Table 2 will likely increase in the future from these projections once detailed recycled water demand and supply projections are developed for the City's sphere of influence. In addition, there are plans for localized wastewater treatment plants within VWRA's tributary area, which may reduce the recycled water supply availability in the future. The offset of potable water demands with recycled water is therefore not taken into consideration in the potable water supply availability discussed herein.

Tables 3 through 8 present planned potable water supplies for each of the four service areas of the District by planning year. Within each table, the anticipated supply availability of each supply source is provided for the following conditions.

- Normal Year
- Single Dry Year
- Multiple Dry Year (years 1 through 3)

It is assumed that State Water Project (SWP) water would be reduced during drought conditions (both single and multiple dry years), while groundwater would not be affected in the short term. The reductions of imported water are based on historical drought conditions that occurred in the period 1986 to 1992. However, more severe drought conditions may occur in the future due to climate change, resulting in greater reductions in imported supplies than assumed based on empirical data. In addition, a recent court decision that has yet to be finalized regarding water

supplies pumped from the Sacramento-San Joaquin River Delta have greatly reduced the reliability of SWP imported water supplies since the completion of the last UWMPs in 2005.

The City is currently pumping beyond the safe yield of the aquifer to meet its water demand, requiring replenishment fees or purchase of water rights from other agencies in the sub-basin. The District is planning projects to mitigate the additional pumping, however, pumping beyond the safe yield will be necessary until the acquisition of additional water entitlements occurs along with storage (e.g., groundwater storage) to increase the reliability of this new supply. It should also be noted that the additional groundwater pumping as listed in tables 3 through 5 is expected to increase the basin overdraft and could reduce groundwater levels such that the basin capacity is reduced.

Tables 9 through 11 presents a comparison of projected demands to supplies for each supply condition (normal, single dry year, multiple dry years). The demands for each dry year are reduced according to the water shortage contingency plans presented in the 2005 UWMPs of VVWD and BMWD. This includes a demand reduction up to 50 percent during a supply shortage of 36 to 50 percent, which is also referred to as a Stage 3 water shortage.

Tables 9 through 11 indicate that the City has planned sufficient water supply projects to meet demands through 2030 under each condition. It should be noted that this conclusion is based on the following assumptions:

1. Demand estimates for year 2030 as presented herein are accurate.
2. Target demand reductions during single and multiple dry years can be met;
3. Supply sources will reliably provide the amount of water presented in the attached tables;
4. The Regional Recharge and Recovery Project (R³) will be online by 2015 and provide 12,098 afy; and
5. Sufficient imported entitlements for SWP water can be secured to construct a new Water Treatment Plant (WTP) by 2020 that would deliver up to 44,806 afy (or 40 mgd) of treated water during normal years, 33,156 afy during single dry years, and 17,519 afy during multiple dry years.

Mr. Lamson
May 8, 2008
Page 4

Should you need additional information, or have questions regarding this request, please do not hesitate to contact me at 626-535-0180 or iwiersema@carollo.com.

Sincerely,

A handwritten signature in black ink, appearing to read 'Inge Wiersema', with a stylized flourish at the end.

Inge Wiersema, P.E.

Enclosures: Tables 1 through 11

Demand for Area	2005 (afy)	2010 (afy)	2015 (afy)	2020 (afy)	2025 (afy)	2030 (afy)
VWD ID1 ⁽¹⁾	19,603	26,996	28,452	30,132	31,700	33,380
VWD ID2 ⁽²⁾	4,402	7,315	9,476	11,650	13,811	15,973
SCLA ⁽³⁾	0	2,800	3,640	4,481	5,041	5,601
Desert Gateway ⁽⁴⁾	0	0	3,696	7,393	11,089	14,786
Total Demand	24,005	37,110	45,265	53,655	61,642	69,740

Notes:
 1. Source: 2005 VVWD UWMP.
 2. Source: 2005 BMWD UWMP.
 3. Source: 1/15/08 correspondence with VWD staff.
 4. Source: Desert Gateway Specific Plan. Projections based on 26,100 dwelling units and an average demand of 0.7 afy per connection.

Category	2005 (afy)	2010 ⁽¹⁾ (afy)	2015 (afy)	2020 (afy)	2025 (afy)	2030 (afy)
Recycled Water Supplies						
VWRA Treatment Plant	-	16,298	21,759	27,220	32,680	38,141
Total RW Supply	-	16,298	21,759	27,220	32,680	38,141
Recycled Water Demands						
Desert Gateway ⁽²⁾	-	-	2,240	2,240	2,240	2,240
Anticipated Large Users ⁽³⁾	-	3,542	4,227	4,530	4,651	4,651
Recycled Water Obligations ⁽⁴⁾	-	13,349	14,514	15,679	16,843	18,008
Total RW Demand	-	16,891	20,981	22,448	23,734	24,899
RW Supply Balance	-	-592	778	4,771	8,946	13,242

Notes:
 1. According to the 2007 VVWRA Capacity Study, the original treatment plant came online in 2005, but current obligations are anticipated to exceed recycled water supply until 2011, when an additional regional treatment plant is anticipated to come online.
 2. It is assumed that all parks, golf courses, and schools within the Desert Gateway development will be irrigated using recycled water (580 acres).
 3. Demands from the Victorville Power plant, SCLA golf course irrigation and other irrigation users (data provided by the District)
 4. Other obligations include High Desert Power Plant and the discharge into the Mojave River per the requirements of the California Department of Fish and Game.

Table 3 2005 Supply Summary					
Supply Source	Normal Year (afy)	Single Dry Year (afy)	Multiple Dry Years		
			Year 1 (afy)	Year 2 (afy)	Year 3 (afy)
VWD ID1 Groundwater ^(1,2)	11,501	11,501	11,501	11,501	11,501
VWD ID2 Groundwater ^(2,3)	4,013	4,013	4,013	4,013	4,013
SCLA ⁽⁴⁾	0	0	0	0	0
Regional Recharge and Recovery Project ⁽⁵⁾	0	0	0	0	0
New SWP WTP ⁽⁶⁾	0	0	0	0	0
Additional Groundwater Pumping ^(2,7)	10,406	10,406	10,406	10,406	10,406
Total Supply	25,920	25,920	25,920	25,920	25,920

Notes:

1. Safe yield from ID1 groundwater wells.
2. Groundwater production is not anticipated to be reduced under dry weather conditions.
3. Safe yield from ID1 groundwater wells.
4. SCLA does not provide any groundwater.
5. The Regional Recharge and Recovery (R³) project is anticipated to be operational in 2015.
6. A water treatment plant is planned to treat state water project water is anticipated to come online in 2020. Source: Victorville Water District 2005 Water Master Plan.
7. Historical production from ID1 and ID2 groundwater wells in excess of safe yield. This additional water required in-basin transfers or replenishment fees.

Table 4 2010 Supply Summary					
Supply Source	Normal Year (afy)	Single Dry Year (afy)	Multiple Dry Years		
			Year 1 (afy)	Year 2 (afy)	Year 3 (afy)
VWD ID1 Groundwater ^(1,2)	11,501	11,501	11,501	11,501	11,501
VWD ID2 Groundwater ^(2,3)	4,013	4,013	4,013	4,013	4,013
SCLA ⁽⁴⁾	0	0	0	0	0
Regional Recharge and Recovery Project ⁽⁵⁾	0	0	0	0	0
New SWP WTP ⁽⁶⁾	0	0	0	0	0
Additional Groundwater Pumping ^(2,7)	21,596	21,596	21,596	21,596	21,596
Total Supply	37,110	37,110	37,110	37,110	37,110

Table 4 2010 Supply Summary					
	Normal Year	Single Dry Year	Multiple Dry Years		
			Year 1	Year 2	Year 3
Notes:					
1. Safe yield from ID1 groundwater wells.					
2. Groundwater production is not anticipated to be reduced under dry weather conditions.					
3. Safe yield from ID1 groundwater wells.					
4. SCLA does not provide any groundwater.					
5. The Regional Recharge and Recovery (R3) project is anticipated to be operational in 2015.					
6. A water treatment plant is planned to treat state water project water is anticipated to come online in 2020. Source: Victorville Water District 2005 Water Master Plan.					
7. Anticipated production from ID1 and ID2 groundwater wells in excess of safe yield. This additional water will require in-basin transfers or replenishment fees.					

Table 5 2015 Supply Summary					
Supply Source	Normal Year (afy)	Single Dry Year (afy)	Multiple Dry Years		
			Year 1 (afy)	Year 2 (afy)	Year 3 (afy)
WWD ID1 Groundwater ^(1,2)	11,501	11,501	11,501	11,501	11,501
WWD ID2 Groundwater ^(2,3)	4,013	4,013	4,013	4,013	4,013
SCLA ⁽⁴⁾	0	0	0	0	0
Regional Recharge and Recovery Project ⁽⁵⁾	12,098	12,098	12,098	12,098	12,098
New SWP WTP ⁽⁶⁾	0	0	0	0	0
Additional Groundwater Pumping ^(2,7)	17,654	17,654	17,654	17,654	17,654
Total Supply	45,265	45,265	45,265	45,265	45,265
Notes:					
1. Safe yield from ID1 groundwater wells.					
2. Groundwater production is not anticipated to be reduced under dry weather conditions.					
3. Safe yield from ID1 groundwater wells.					
4. SCLA does not provide any groundwater.					
5. The Regional Recharge and Recovery (R3) project is anticipated to be operational in 2015.					
6. A water treatment plant is planned to treat state water project water is anticipated to come online in 2020. Source: Victorville Water District 2005 Water Master Plan.					
7. Anticipated production from ID1 and ID2 groundwater wells in excess of safe yield. This additional water will require in-basin transfers or replenishment fees.					

Supply Source	Normal Year (afy)	Single Dry Year (afy)	Multiple Dry Years		
			Year 1 (afy)	Year 2 (afy)	Year 3 (afy)
VWD ID1 Groundwater ^(1,2)	4,013	4,013	4,013	4,013	4,013
VWD ID2 Groundwater ^(2,3)					
SCLA ⁽⁴⁾	0	0	0	0	0
Regional Recharge and Recovery Project ^(5,6)	12,098	12,098	12,098	12,098	12,098
New SWP WTP ^(6,8)	44,806	33,156	17,519	17,519	17,519
Additional Groundwater Pumping ^(2,7)	0	0	0	0	0
Total Supply	72,417	60,768	45,131	45,131	45,131

Notes:

1. Safe yield from ID1 groundwater wells.
2. Groundwater production is not anticipated to be reduced under dry weather conditions.
3. Safe yield from ID2 groundwater wells.
4. SCLA does not provide any groundwater.
5. The Regional Recharge and Recovery (R³) project is anticipated to be operational in 2015.
6. A water treatment plant is planned to treat state water project water is anticipated to come online in 2020. Source: Victorville Water District 2005 Water Master Plan.
7. Anticipated production from ID1 and ID2 groundwater wells in excess of safe yield. This additional water will require in-basin transfers or replenishment fees.
8. State water project sources are anticipated to be reduced by approximately 26 percent for single dry years and by approximately 61 percent for multiple dry years. Reduction factors were calculated based on information in the Mojave Water Agency 2004 Regional Water Management Plan. It is assumed that the Regional Recharge and Recovery project will not be affected due to buffering in the aquifer.

Table 7 2025 Supply Summary					
Supply Source	Normal Year (afy)	Single Dry Year (afy)	Multiple Dry Years		
			Year 1 (afy)	Year 2 (afy)	Year 3 (afy)
VWD ID1 Groundwater ^(1,2)	11,501	11,501	11,501	11,501	11,501
VWD ID2 Groundwater ^(2,3)	4,013	4,013	4,013	4,013	4,013
SCLA ⁽⁴⁾	0	0	0	0	0
Regional Recharge and Recovery Project ^(5,8)	12,098	12,098	12,098	12,098	12,098
BMWD/VWD SWP WTP ^(6,8)	44,806	33,156	17,519	17,519	17,519
Additional Groundwater Pumping ^(2,7)	0	0	0	0	0
Total Supply	72,417	60,768	45,131	45,131	45,131

Notes:

1. Safe yield from ID1 groundwater wells.
2. Groundwater production is not anticipated to be reduced under dry weather conditions.
3. Safe yield from ID2 groundwater wells.
4. SCLA does not provide any groundwater.
5. The Regional Recharge and Recovery (R³) project is anticipated to be operational in 2015.
6. A water treatment plant is planned to treat state water project water is anticipated to come online in 2020. Source: Victorville Water District 2005 Water Master Plan.
7. Anticipated production from ID1 and ID2 groundwater wells in excess of safe yield. This additional water will require in-basin transfers or replenishment fees.
8. State water project sources are anticipated to be reduced by approximately 26 percent for single dry years and by approximately 61 percent for multiple dry years. Reduction factors were calculated based on information in the Mojave Water Agency 2004 Regional Water Management Plan. It is assumed that the Regional Recharge and Recovery project will not be affected due to buffering in the aquifer.

Supply Source	Normal Year (afy)	Single Dry Year (afy)	Multiple Dry Years		
			Year 1 (afy)	Year 2 (afy)	Year 3 (afy)
VWD ID1 Groundwater ^(1,2)	11,501	11,501	11,501	11,501	11,501
VWD ID2 Groundwater ^(2,3)	4,013	4,013	4,013	4,013	4,013
SCLA ⁽⁴⁾	0	0	0	0	0
Regional Recharge and Recovery Project ^(5,8)	12,098	12,098	12,098	12,098	12,098
BMW/VWWD SWP WTP ^(6,8)	44,806	33,156	17,519	17,519	17,519
Additional Groundwater Pumping ^(2,7)	0	0	0	0	0
Total Supply	72,417	60,768	45,131	45,131	45,131

Notes:

1. Safe yield from ID1 groundwater wells.
2. Groundwater production is not anticipated to be reduced under dry weather conditions.
3. Safe yield from ID2 groundwater wells.
4. SCLA does not provide any groundwater.
5. The Regional Recharge and Recovery (R³) project is anticipated to be operational in 2015.
6. A water treatment plant is planned to treat state water project water is anticipated to come online in 2020. Source: Victorville Water District 2005 Water Master Plan.
7. Anticipated production from ID1 and ID2 groundwater wells in excess of safe yield. This additional water will require in-basin transfers or replenishment fees.
8. State water project sources are anticipated to be reduced by approximately 26 percent for single dry years and by approximately 61 percent for multiple dry years. Reduction factors were calculated based on information in the Mojave Water Agency 2004 Regional Water Management Plan. It is assumed that the Regional Recharge and Recovery project will not be affected due to buffering in the aquifer.

Category	2005 (afy)	2010 (afy)	2015 (afy)	2020 (afy)	2025 (afy)	2030 (afy)
Supply Sources	25,920	37,110	45,265	72,417	72,417	72,417
Demand	24,005	37,110	45,265	53,655	61,642	69,740
Supply Balance	1,915⁽¹⁾	0⁽²⁾	0⁽²⁾	18,762	10,776	2,677

Notes:

1. Since 2005 demand and supply information is from historical data, this balance is unaccounted for water.
2. Groundwater pumping beyond the safe yield of the aquifer is necessary to meet projected demands in 2010 and 2015. It was assumed that such pumping would occur as-needed, so no excess supply is planned.

Table 10 Projected Supply Balance – Single Dry Year						
Category	2005 (afy)	2010 (afy)	2015 (afy)	2020 (afy)	2025 (afy)	2030 (afy)
Supply Sources	25,920	37,110	45,265	60,768	60,768	60,768
Demand ⁽¹⁾	24,005	37,110	45,265	42,054	48,313	54,661
Supply Balance	1,915⁽²⁾	0⁽³⁾	0⁽³⁾	18,714	12,455	6,107
Notes:						
1. For years with supply shortages, demands were reduced according to the water shortage contingency plan within the 2005 VVWD UWMP and the 2004 BMWD UWMP. Demand reduction is based on thresholds of percent supply shortage.						
2. Since 2005 demand and supply information is from historical data, this balance is unaccounted for water.						
3. Groundwater pumping beyond the safe yield of the aquifer is necessary to meet projected demands in 2010 and 2015. It was assumed that such pumping would occur as-needed, so no excess supply is planned.						

Table 11 Projected Supply Balance – Multiple Dry Years						
Category	2005 (afy)	2010 (afy)	2015 (afy)	2020 (afy)	2025 (afy)	2030 (afy)
Supply Sources	25,920	37,110	45,265	45,131	45,131	45,131
Demand ⁽¹⁾	24,005	37,110	45,265	26,274	30,185	34,150
Supply Balance	1,915⁽²⁾	0⁽³⁾	0⁽³⁾	18,857	14,946	10,980
Notes:						
1. For years with supply shortages, demands were reduced according to the water shortage contingency plan within the 2005 VVWD UWMP and the 2004 BMWD UWMP. Demand reduction is based on thresholds of percent supply shortage.						
2. Since 2005 demand and supply information is from historical data, this balance is unaccounted for water.						
3. Groundwater pumping beyond the safe yield of the aquifer is necessary to meet projected demands in 2010 and 2015. It was assumed that such pumping would occur as-needed, so no excess supply is planned.						

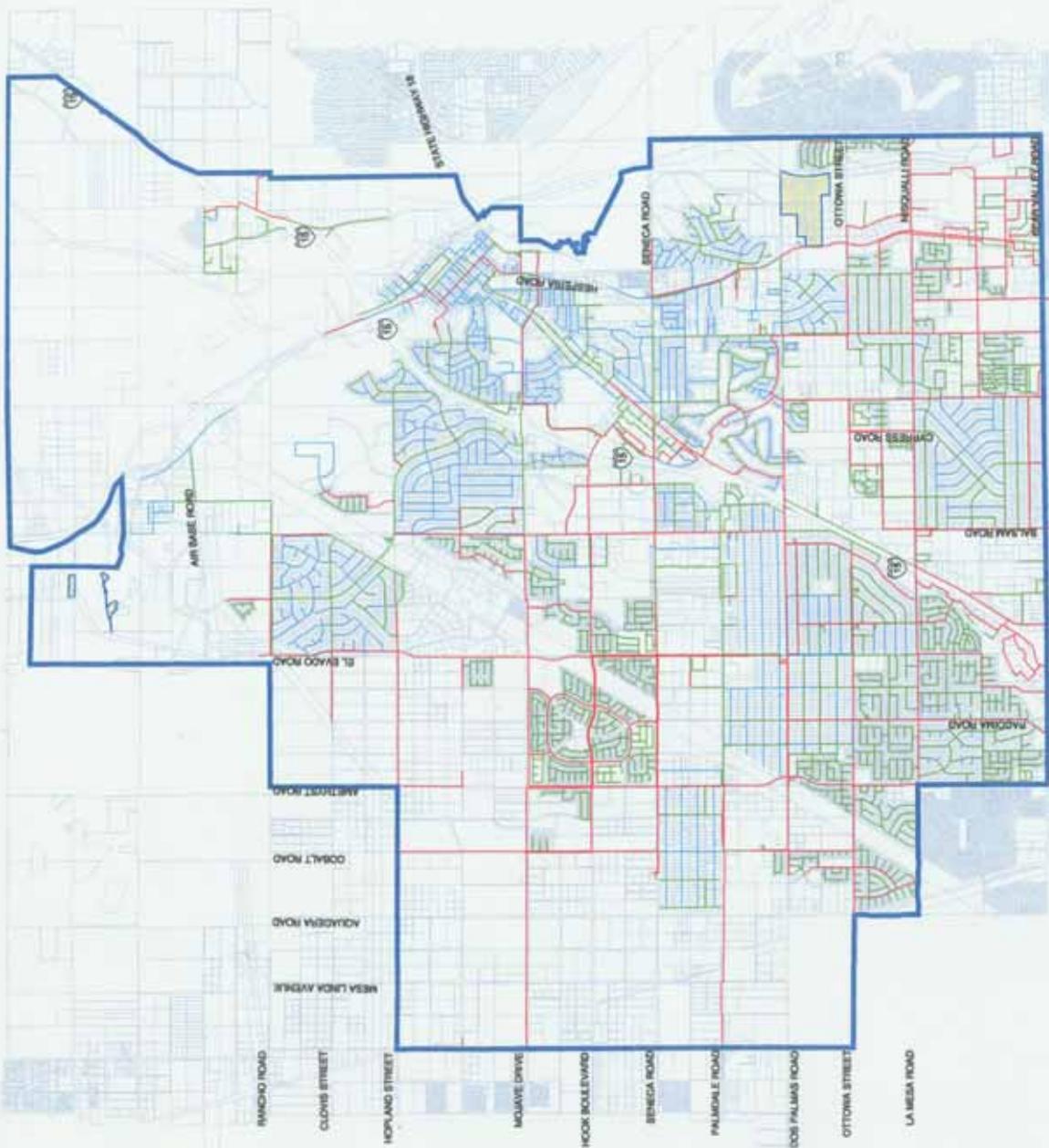
Legend

- Pipes with a diameter of 6" and smaller
- Pipes with a diameter between 8" and 10"
- Pipes with a diameter of 12" and larger
- Study Area Boundary
- Not in Service Area



Figure 2.2
Existing System
Pipelines by Size

20-Year Comprehensive Water Master Plan
Victor Valley Water District



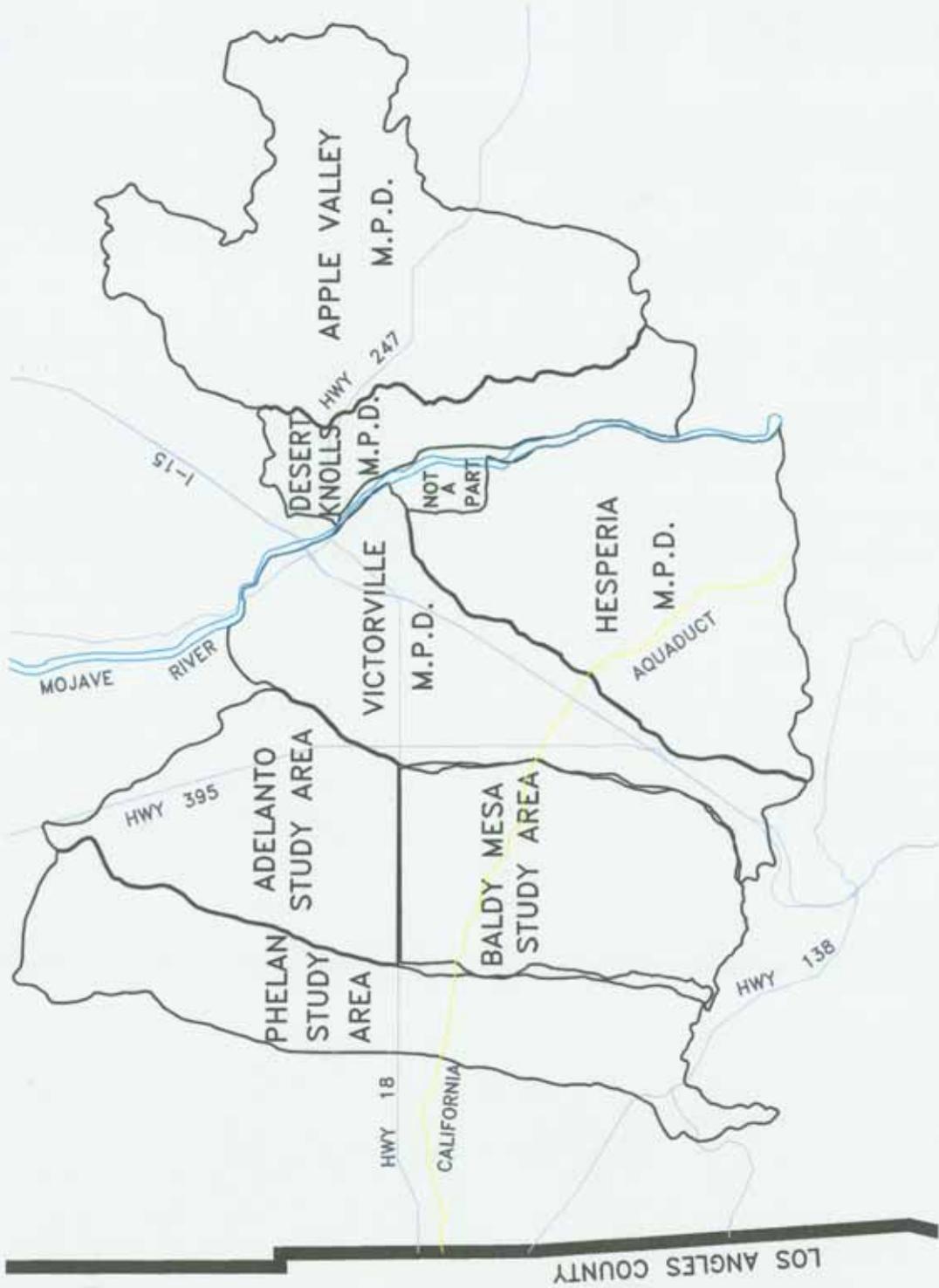
APPENDIX D

SBCFCD Watershed Limits



STATISTICS

Area 20,105 Sq. Mi.
 Width 210 MI
 Length 135 MI
 Max. Elev. 11,502 Ft.
 Min. Elev. Sea Level



SAN BERNARDINO COUNTY
 FLOOD CONTROL DISTRICT
 HIGH DESERT VICTORVILLE AREA

APPENDIX E

SLCA Drainage Plan
Source: RBF Engineers

A ten percent cover of desert brush was assumed for the undeveloped regions, and for developed conditions within the SCLA development area, a commercial condition (90 percent impervious) was assumed. For areas designated as recreational within the SCLA development area, a park condition (15 percent impervious) was assumed. The San Bernardino County Hydrology Manual does not recommend a specific runoff coefficient or SCS Curve Number for airfields. The surface water drainage study for George AFB (USACE, 1988) had tabulated the amount of pavement and open space in order to determine the Rational Method coefficient for the airfield. This analysis revealed that the airfield was 30 percent impervious and 70 percent pervious. This was equivalent to the pervious fraction of two dwelling units per acre for arid regions. Therefore, the airfield was modeled as 2 du/acre. By inspection, the crosswind runway-taxiway area is slightly more impervious and was therefore modeled as 3-4 du/acre (60 percent pervious area). The operational aprons and maintenance areas were considered as commercial use (10 percent pervious area).

4.5 Watershed Model Development

The SCLA drainage study was completed using the Advance Engineering Software (AES) HydroWIN v. 2004 Rational Method Analysis computer program. The computer program uses San Bernardino County methodology to perform the hydrologic analysis of a network of watershed basins. Rational method analysis was used for the initial analysis of the watershed basins. When the total basin area exceeded 640 acres, the program switched to a Unit Hydrograph analysis of the basin.

4.6 Design Hydrology

Three design events (100-year, 25-year and 10-year) were calculated for the watershed. The 100-year and 25-year events are the primary criteria used to determine the classification of necessary drainage facilities as local, secondary or regional, as well as determining flood protection levels and street flow capacity. The 10-year event is useful for sizing wash crossings.

4.6.1 Ultimate Watershed Design Discharges

The results based on the San Bernardino County Hydrology Manual guidelines, the computer models developed using the AES software, and flowrates developed from the Victorville Master Plan of Drainage dated March 1992 are summarized in the tables below. The node points are illustrated on the proposed condition watershed map, Exhibit 1.

Watershed	Node	Location	10-Year Flow (cfs)	25-Year Flow (cfs)	100-Year Flow (cfs)
14000	14004	Phantom East & Railyard	140	171	232
	14003	Railroad	628	769	1050
	14000	Shay Road	628	769	1050
15000	15220	Base	22	15	22
	15218	Base	40	27	40
	15216	Base	56	37	56

Table 4.3 – Peak Flow Rate Summary

Watershed	Node	Location	10-Year Flow (cfs)	25-Year Flow (cfs)	100-Year Flow (cfs)
	15214	Base	65	42	65
	15212	Base	79	53	79
	15210	Base	95	64	95
	15208	Base	108	73	108
	15200	Base	141	95	141
	15340	Base	25	19	25
	15338	Base	46	34	46
	15334	Base	21	16	21
	15332	Base	45	33	45
	15330	Base	104	77	104
	15336	Base	9	11	14
	15328	Base	79	96	129
	15326	Base	83	102	140
	15324	Base	105	130	180
	15322	Base	127	1256	219
	15320	Base	146	181	256
	15318	Base	165	204	291
	15316	Base	183	228	326
	15314	Base	199	248	357
	15312	Base	213	266	385
	15310	Base	224	282	411
	15309	Base	227	287	421
	15308	Base	232	294	434
	15344	Base	19	23	31
	15342	Base	24	29	40
	15306	Base	250	317	472
	15304	Base	252	321	481
	15302	Base	267	342	516
	15300	Base	269	346	526
	15728	Base	9	11	14
	15726	Base	15	18	24
	15724	Base	20	25	33
	15722	Base	25	31	42
	15720	Base	31	37	51
	15718	Base	35	42	58
	15716	Base	38	47	64
	15714	Base	41	51	70
	15712	Base	41	51	70
	15710	Base	81	100	138
	15730	Base	22	27	36
	15708	Base	102	126	175
	15706	Base	109	135	188
	15704	Base	109	135	189
	15702	Base	119	147	206
	15700	Base	132	164	229
	15104	Base	525	666	983
	15003	Phantom East & Railyard	525	666	983

Table 4.3 – Peak Flow Rate Summary

Watershed	Node	Location	10-Year Flow (cfs)	25-Year Flow (cfs)	100-Year Flow (cfs)
	15002	Railroad	653	822	1213
	15000	Shay Road	653	822	1213
16000	16003	Phantom East & Railyard	57	71	111
	16002	Railroad	153	190	277
	16000	Shay Road	159	198	293
16100	16102	Railroad	121	148	200
	16100	Shay Road	125	153	210
17100	17418	Proposed subdivision	65	80	109
	662	Proposed subdivision	72	90	130
	660	Proposed subdivision	77	97	144
	658	Proposed subdivision	82	104	157
	656	Proposed subdivision	21	27	44
	654	Proposed subdivision	31	33	63
	652	Proposed subdivision	43	55	87
	650	Proposed subdivision	134	154	258
	648	Proposed subdivision	145	186	284
	332	Proposed subdivision	228	276	390
	636	Proposed subdivision	228	276	390
	634	Proposed subdivision	228	276	390
	632	Proposed subdivision	237	280	406
	630	Proposed subdivision	242	291	413
	628	Proposed subdivision	285	473	683
	626	Proposed subdivision	285	473	683
	624	Proposed subdivision	283	473	683
	644	Proposed subdivision	11	14	23
	642	Proposed subdivision	16	20	31
	640	Proposed subdivision	36	45	66
	646	Proposed subdivision	14	17	23
	638	Proposed subdivision	70	87	122
	622	Proposed subdivision	446	550	792
	620	Proposed subdivision	116	550	792
	17508	Proposed subdivision	17	22	31
	696	Proposed subdivision	22	28	45
	694	Proposed subdivision	24	31	51
	618	Proposed subdivision	26	35	59
	616	Proposed subdivision	28	38	67
	614	Proposed subdivision	35	48	84
	692	Proposed subdivision	9	10	14
	690	Proposed subdivision	13	15	21
	612	Proposed subdivision	51	65	103
688	Proposed subdivision	10	12	16	
686	Proposed subdivision	18	22	30	
610	Proposed subdivision	76	96	142	
684	Proposed subdivision	19	23	31	

Table 4.3 – Peak Flow Rate Summary

Watershed	Node	Location	10-Year Flow (cfs)	25-Year Flow (cfs)	100-Year Flow (cfs)
	682	Proposed subdivision	26	32	43
	608	Proposed subdivision	109	137	198
	678	Proposed subdivision	7	9	11
	606	Proposed subdivision	119	149	215
	680	Proposed subdivision	7	8	11
	604	Proposed subdivision	132	166	239
	668	Proposed subdivision	12	15	19
	664	Proposed subdivision	20	22	34
	602	Proposed subdivision	580	22	971
	110	Proposed subdivision	580	718	1034
	17106	Perimeter	580	718	1034
	17120	Proposed subdivision	16	19	25
	17118	Proposed subdivision	29	35	48
	17116	Perimeter	64	78	107
	17114	Phantom East	82	101	138
	17112	Rallyard	637	781	1116
	17108	Perimeter	61	73	98
	17104	Rallyard	679	833	1170
	17102	Railroad	831	1020	1415
	17100	Shay Road	831	1020	1415
	17004	Phantom East	78	94	125
	17004	Rallyard	78	94	125
	17003	D/S of Rallyard	78	94	125
	17002	Railroad	137	169	233
	17000	Shay Road	141	175	242
17800	17836	Proposed Subdivision	10	12	16
	17840	Proposed Subdivision	7	9	12
	17834	Proposed Subdivision	24	29	39
	17838	Proposed Subdivision	11	13	17
	17832	Proposed Subdivision	66	44	112
	17830	Proposed Subdivision	11	14	18
	17828	Proposed Subdivision	17	21	29
	17826	Proposed Subdivision	23	28	38
	17842	Proposed Subdivision	12	15	20
	17824	Proposed Subdivision	113	139	191
	17822	Proposed Subdivision	10	12	16
	17820	Proposed Subdivision	17	21	29
	17818	Proposed Subdivision	24	30	41
	17816	Proposed Subdivision	30	37	52
	17814	Proposed Subdivision	35	43	60
	17812	Proposed Subdivision	149	184	255
	17810	Phantom East	149	184	255
	17809	Railroad	227	281	390
	17800	Shay Road	248	308	435

Table 4.3 – Peak Flow Rate Summary					
Watershed	Node	Location	10-Year Flow (cfs)	25-Year Flow (cfs)	100-Year Flow (cfs)
17900	17940	Proposed subdivision	11	13	18
	17938	Proposed subdivision	71	86	115
	17936	Proposed subdivision	112	137	187
	17942	Proposed subdivision	8	10	13
	17934	Proposed subdivision	122	150	206
	17932	Proposed subdivision	140	173	238
	17930	Proposed subdivision	15	18	24
	17928	Proposed subdivision	52	67	91
	17924	Proposed subdivision	8	10	13
	17926	Proposed subdivision	65	80	109
	17920	Proposed subdivision	206	254	349
	17919	Proposed subdivision	206	254	349
	17908	Proposed subdivision	23	28	37
	17906	Proposed subdivision	12	15	20
	17904	Proposed subdivision	259	323	456
	17916	Proposed subdivision	10	12	17
	17914	Proposed subdivision	17	20	27
	17910	Proposed subdivision	31	38	51
	17903	Phantom East & Railyard	295	373	543
	17902	Railroad	328	414	603
17900	Shay Road	329	416	610	
18000	18010	Upstream Golf Course	9	10	14
	18008	Upstream Golf Course	20	25	33
	18012	Golf Course Channel	176	219	321
	18004	Phantom East	176	219	321
	18002	Railroad	222	279	416
	18000	Shay Road	222	279	418
	24000	24048	Base	15	19
24046		Base	24	30	45
24044		Base	67	86	132
24042		Base	92	120	189
24040		Base	110	144	231
24038		Base	126	166	269
24037		Base	139	185	304
24036		Base	151	203	338
24035		Base	162	219	369
24034		Base	171	231	393
24032		Base	176	239	408
24030		Base	4	5	9
24028		Base	16	21	35
24026		Base	19	25	43
24024		Base	26	36	63
24022		Base	32	43	77
24020		Base	36	50	91
24019	Base	40	56	104	

Table 4.3 – Peak Flow Rate Summary

Watershed	Node	Location	10-Year Flow (cfs)	25-Year Flow (cfs)	100-Year Flow (cfs)
	24018	Base	44	62	116
	24017	Base	47	67	128
	24016	Base	49	70	137
	24014	Base	50	312	537
	24013	Base	18	23	34
	24012	Base	71	91	142
	24010	Base	379	476	724
	24008	North side of base	602	779	1230
	249	North side of base	602	779	1230
	247	North side of base	602	779	1230
	245	North side of base	602	779	1230
	243	Downstream end	602	791	1530
25000	25084	West Side of Base	18	23	36
	25082	West Side of Base	32	42	65
	25080	West Side of Base	55	72	115
	25078	West Side of Base	18	22	33
	25076	West Side of Base	88	112	171
	25090	West Side of Base	18	22	34
	25088	West Side of Base	27	34	53
	25086	West Side of Base	38	49	78
	25074	West Side of Base	135	172	257
	25062	West Side of Base	21	27	40
	25060	West Side of Base	28	36	54
	25064	West Side of Base	19	24	35
	25066	West Side of Base	13	16	23
	25058	West Side of Base	77	97	144
	25056	West Side of Base	77	97	144
	25054	West Side of Base	89	114	177
	25052	West Side of Base	98	127	201
	25050	West Side of Base	243	141	225
	25072	West Side of Base	9	11	15
	25070	West Side of Base	19	24	35
	25048	West Side of Base	267	342	534
	25068	West Side of Base	5	6	11
	25046	West Side of Base	9	13	23
	25034	West Side of Base	20	25	38
	25032	West Side of Base	34	43	67
	25030	West Side of Base	45	58	91
	25029	West Side of Base	54	71	114
	25044	West Side of Base	24	30	47
	25042	West Side of Base	37	47	76
	25040	West Side of Base	45	58	92
	25039	West Side of Base	108	142	229
	25028	West Side of Base	16	21	32
	25026	West Side of Base	29	37	59
	25024	West Side of Base	40	51	82

Table 4.3 – Peak Flow Rate Summary

Watershed	Node	Location	10-Year Flow (cfs)	25-Year Flow (cfs)	100-Year Flow (cfs)
	25022	West Side of Base	46	60	98
	25020	West Side of Base	11	14	21
	25018	West Side of Base	20	26	38
	25016	West Side of Base	81	103	155
	25038	West Side of Base	18	23	35
	25036	West Side of Base	32	41	64
	25014	West Side of Base	124	158	241
	25114	West Side of Base	63	76	102
	25112	West Side of Base	103	125	168
	25110	West Side of Base	138	168	228
	25108	West Side of Base	170	208	283
	25106	West Side of Base	203	248	338
	25104	West Side of Base	476	600	891
	25102	West Side of Base	476	600	891
	25012	West Side of Base	476	834	1268
	25010	D/S of watershed 25000	666	834	1269
	25009	D/S of watershed 25000	666	834	1269
	25008	D/S of watershed 25000	696	904	1422
	25007	D/S of watershed 25000	696	904	1422
	25005	D/S of watershed 25000	230	282	385
	25004	D/S of watershed 25000	230	282	385
	25002	D/S of watershed 25000	315	388	537
	25006	D/S of watershed 25000	980	1242	1853
	25001	D/S of watershed 25000	980	1242	1853
27000	27010	West Side of Base	78	95	130
	27008	West Side of Base	78	95	130
	27006	West Side of Base	178	219	301
	27003	West Side of Base	465	579	815
28000	28230	South-West Side of Base	168	207	305
	28236	South-West Side of Base	180	223	318
	28306	South-West Side of Base	215	267	380
	28305	South-West Side of Base	221	275	394
	28308	South-West Side of Base	49	60	80
	28304	South-West Side of Base	294	364	517
	28302	South-West Side of Base	294	364	517
	28418	West Side of Base	294	364	517
	28416	West Side of Base	293.65	363.98	517
	28422	West Side of Base	51	61	82
	28415	West Side of Base	327	404	569
	28412	West Side of Base	327	404	569
	28410	West Side of Base	372	462	650
	28408	West Side of Base	414	527	803
29000	29126	West Side of Base	39	48	65
	29124	West Side of Base	39	48	65

Watershed	Node	Location	10-Year Flow (cfs)	25-Year Flow (cfs)	100-Year Flow (cfs)
	29116	West Side of Base	103	127	173
	29114	West Side of Base	124	153	211
	29112	West Side of Base	142	176	244
	29110	West Side of Base	181	224	328
	29122	West Side of Base	34	42	56
	29120	West Side of Base	62	75	101
	29108	West Side of Base	231	287	398
	29106	West Side of Base	231	287	398
	29104	West Side of Base	231	287	398
	29118	West Side of Base	95	116	160
	29102	West Side of Base	325	401	556

Appendix A contains detailed hydrology calculations for the entire site.

The realignment of Shay Road and the construction of the lead track and siding track will not change existing flowrates. Therefore, the *Victorville Master Plan of Drainage (MPD)* was used to determine the flowrates at Shay Road near Turner, lead track, and siding track crossings. The *Federal Insurance Study (FIS)* for San Bernardino County was used to determine the flow rate in the Mojave to determine the bridge crossing for the connection of the lead track to the existing BNSF Railroad. Table 4.4 summarizes these flowrates.

Location	Approximate Accumulated Watershed (sq miles)	100-Year Flow (cfs)
B-01 (side track)	1.30	916
C-01 (side track)	1.22	2,027
D-01 (lead track) Ossom Wash	9.53	5,090
E-02 (lead track) Unnamed Wash	2.75	2,377
E-01 (lead track) Unnamed Wash	14.98	7,143
E-01 (Shay Road) Unnamed Wash	18.13	8,438
Mojave River North of Existing Railroad Bridge	53	26,000

SECTION 5: IDENTIFICATION OF HYDRAULIC DEFICIENCIES

As noted in the description of existing drainage facilities (Section 3), most of the drainage facilities have already been labeled as deficient or are incompatible with the planned configuration of the SCLA expansion. The cross culverts at Air Expressway are adequate. However, the culverts at Phantom East and Shay Road will need to be upsized at the location of concentrated flows. Table 5.1 contains a summary of existing culverts, east of the site, that will be either upsized or left in place.

Num	Existing		Proposed	
	Size	Approximate Flow (cfs)	Size	Flow (cfs)
1	2 - 8'X6' RCB	7,143	No changes to existing watershed	
2	48" RCP	78		
3	24" CMP	13		
4	2 - 8'X6' RCB	2,377		
5	Unknown	4,876		
6	Unknown	2027	Will be extended under proposed rail line	
6a	Unknown	916	Needs to be sized to pass Master Plan flows	
7	18" RCP	21	No Changes	
8	42" RCP	201	No Changes	
9	36" RCP	133	No Changes	
10	42" RCP	244	66" RCP	543
11	48" RCP	292	48" RCP	255
12	48" RCP	102	51" RCP	138
13	18" RCP	12	No Changes	
14	42" RCP	123	No Changes	
15	42" CMP	39	No Changes	
16	36" CMP	70	No Changes	
17	18" CMP	8	No Changes	
18	42" X 30" CMP	94	No Changes	
19	42" X 30" CMP	67	No Changes	
20	36" CMP	111	No Changes	
21	2 - 30"X42" CMP	70	No Changes	
22	2 - 18" CMP	19	48" RCP	242
23	24" CMP	17	No Changes	
24	3 - 12"X18" CMP	10	No Changes	
25	2 - 30"X42" CMP	70	No Changes	
26	3 - 12"X18" CMP	8	No Changes	
27	30"X42" CMP	91	No Changes	
28	2 - 18"X12" CMP	17	42" RCP	210
29	24" CMP	76	No Changes	
30	2 - 30"X42" CMP	89	No Changes	
31	4 - 30"X42" CMP	140	48" RCP	293
32	30"X42" CMP	35	No Changes	
33	2 - 42" CMP	100	84" RCP	1213

6.3 Plan Facilities

A drainage plan has been developed for the entire SCLA development site in the previous Master Plan. The plan was developed using currently available information on proposed land uses and roadway alignments on the site. This plan is being updated to reflect changes in proposed land use. The backbone of the planned facilities consists of a network of street flow and trapezoidal concrete channels, with limited use of underground conduit. There are major pipe crossings across the multi-modal and the inter-modal rail yards railroad, Shay Road, and Phantom East Road.

6.4 Drainage Swale Geometry

Drainage swale geometry assumed for all alternatives is a trapezoidal channel, with a side slope cotangent of two (i.e., 2H: 1V) and a required freeboard of 2 feet for all unlined swales Concrete Lined swales with a 1.5 cotangent (i.e., 1.5H: 1V) and an assumed 2 feet of freeboard will be used where velocities exceed scour limits of 6 fps.

6.5 Plan Facilities Alignments

The proposed alignments of the drainage swales, trapezoidal channels and cross culverts generally follow existing flow paths, roadways, and/or adjacent property boundaries.

6.6 Preliminary Facility Sizing

Preliminary drainage facility sizes were determined using the methods, objectives, and criteria outlined in Section 6.1. All the proposed facilities have been sized based on normal depth calculations assuming slopes and channel geometry described in Section 6.4. Appendix B contains a detailed printout of the normal depth calculations. Table 6.1 summarizes the facilities within the entire site.

Watershed	Location	Facility Description	Line Channels				Pipe Culverts	
			Base (ft)	Height (ft)	Top Width (ft)	Length (ft)	Diameter (inch)	Length (ft)
14000	Phantom East & Railyard	RCP					48	3378
	Railroad	RCP					72	397
	Trap Chute	Lined Channel	5	5.5	24	1776		
15000	15220-15218	UnLined Swale	2.00	4	16	500		
	15218-15216	UnLined Swale	2.00	4	16	500		
	15216-15214	UnLined Swale	2.00	4.5	18	350		
	15214-15212	UnLined Swale	2.00	5	22	500		
	15212-15210	UnLined Swale	2.00	5.25	20	500		
	15210-15208	UnLined Swale	2.00	5.25	20	500		
	15208-15206	UnLined Swale	2.00	5.25	20	175		

Table 6.1 – Facility Sizing

Watershed	Location	Facility Description	Line Channels				Pipe Culverts	
			Base (ft)	Height (ft)	Top Width (ft)	Length (ft)	Diameter (inch)	Length (ft)
	15206-15200	UnLined Swale	4.00	5.25	22	800		
	15200-15104	UnLined Swale	4.00	5.5	23	1550		
	15340-15338	RCP					36	500
	15338-15330	RCP					39	400
	15334-15332	RCP					33	500
	15332-15330	RCP					39	400
	15330-15328	RCP					48	400
	15336-15328	RCP					27	300
	15328-15326	RCP					54	500
	15326-15324	UnLined Swale	6.00	5.50	25	400		
	15324-15322	UnLined Swale	8.00	5.50	27	500		
	15322-15320	UnLined Swale	10.00	5.50	29	500		
	15320-15318	UnLined Swale	15.00	5.25	33	500		
	15318-15316	UnLined Swale	15.00	5.50	34	500		
	15316-15314	UnLined Swale	15.00	5.75	35	500		
	15314-15312	UnLined Swale	15.00	6.00	36	500		
	15312-15310	UnLined Swale	15.00	6.00	36	500		
	15310-15309	UnLined Swale	15.00	6.00	36	500		
	15309-15308	UnLined Swale	15.00	6.25	37	500		
	15308-15306	UnLined Swale	15.00	6.25	37	900		
	15344-15342	RCP					33	400
	15342-15306	RCP					36	500
	15306-15304	UnLined Swale	15	6.25	37	500		
	15304-15302	Unlined Swale	15	6.25	37	500		
	15302-15300	Unlined Swale	15	6.25	37	1000		
	15300-15104	Unlined Swale	15	6.25	37	1500		
	15728-15726	RCP					18	500
	15726-15724	RCP					30	500
	15724-15722	RCP					33	500
	15722-15720	RCP					36	500
	15720-15718	RCP					39	500
	15718-15716	RCP					39	500
	15716-15714	RCP					42	500
	15714-15712	RCP					42	400
	15712-15710	RCP					48	1000
	15710-15708	RCP					54	750
	15730-15708	RCP					33	750
	15708-15706	RCP					60	1200
	15706-15704	RCP					60	700
	15704-15702	RCP					63	1000
	15702-15700	RCP					63	800
	15700-15104	UnLined Swale	20	4.25	62	1200	Z=5	
	15104-15103	Lined Swale	15	7.75	42	1150		
	Phantom East & Railyard	RCP					84	2406

Watershed	Location	Facility Description	Line Channels				Pipe Culverts	
			Base (ft)	Height (ft)	Top Width (ft)	Length (ft)	Diameter (inch)	Length (ft)
	Railroad	RCP					84	370
	Trap Chute	Lined Channel	5	5.25	23	970		
	Shay Road	RCP					84	100
16000	Phantom East & Railyard	RCP					36	1550
	Railroad	RCP					48	305
	Trap Chute	Lined Channel	5	3.5	17	1080		
	Shay Road	RCP					48	100
16100	Phantom East & Railyard	Lined Channel	5	3.5	17	2591		
	Railroad	RCP					42	500
	Trap Chute	Lined Channel	5	3.5		840		
	Shay Road	RCP					42	100
17000	Phantom East	RCP					24	604
	Railyard	RCP					42	660
	D/S of Railyard	Lined Channel	5	4.5	21	1212		
	Railroad	RCP					48	500
	Trap Chute	Lined Channel	5	3.25	16	660		
	Shay Road	RCP					48	100
17100	17418-17662	UnLined Swale	2	5	19	800		
	662-660	UnLined Swale	2	5.25	20	500		
	660-658	UnLined Swale	2	5.5	21	400		
	658-650	UnLined Swale	2	5.5	21	1100		
	656-654	UnLined Swale	2	4.5	18	400		
	654-652	UnLined Swale	2	4.5	18	500		
	652-650	UnLined Swale	2	5	19	700		
	650-648	UnLined Swale	8	5.25	26	600		
	648-628	UnLined Swale	8	5.5	27	1100		
	332-636	UnLined Swale	4	6.5	27	500		
	636-634	UnLined Swale	4	6.5	27	500		
	634-632	UnLined Swale	4	6.5	27	700		
	632-630	UnLined Swale	4	6.5	27	600		
	630-628	UnLined Swale	4	6.5	27	1700		
	628-626	Lined Swale	4	6.55	19	500		
	626-624	Lined Swale	4	6.55	19	900		
	624-622	Lined Swale	4	6.55	19	400		
	644-642	UnLined Swale	2	3.5	14	500		
	642-640	UnLined Swale	2	4	16	500		
	640-638	Lined Swale	2	4.25	12	700		
	646-638	Lined Swale	2	3.75	10	900		
	638-622	UnLined Swale	2	5.25	20	650		
	622-620	Lined Swale	4	7	20	500		
	620-602	Lined Swale	4	7	20	500		
	17508-696	UnLined Swale	2	4.25	17	750		
	696-694	UnLined Swale	2	4.25	17	500		
	694-618	UnLined Swale	2	4.5	18	300		

Watershed	Location	Facility Description	Line Channels				Pipe Culverts	
			Base (ft)	Height (ft)	Top Width (ft)	Length (ft)	Diameter (inch)	Length (ft)
	618-616	UnLined Swale	2	4.5	18	250		
	616-614	UnLined Swale	2	4.75	18	400		
	614-612	UnLined Swale	2	4.75	18	350		
	692-690	UnLined Swale	2	3.5	14	500		
	690-612	UnLined Swale	2	3.75	15	400		
	612-610	UnLined Swale	2	5	19	450		
	688-686	UnLined Swale	2	3.25	13	700		
	686-610	UnLined Swale	2	3.75	15	500		
	610-608	UnLined Swale	2	5.5	21	600		
	684-682	UnLined Swale	2	4	16	400		
	682-608	UnLined Swale	2	4.25	17	500		
	608-606	UnLined Swale	2	6	23	400		
	678-606	UnLined Swale	2	3.25	13	400		
	606-604	UnLined Swale	2	6.25	24	300		
	680-604	UnLined Swale	2	3.5	14	450		
	604-602	UnLined Swale	2	6.25	24	700		
	668-664	Lined Swale	2	3.5	10	350		
	664-602	Lined Swale	2	3.75	10	300		
	602-17110	Lined Swale	10	6.5	25	1200		
	17110-17106	Lined Swale	10	6.5	25	750		
	106-112	RCP					96	540
	120-118	UnLined Swale	2	4.25	17	300		
	118-116	UnLined Swale	2	4.5	18	700		
	116-114	RCP					54	460
	114-112	RCP					54	1437
	112-104	RCP					96	1105
	108-104	RCP					48	1144
	104-102	RCP					96	1470
	Railroad (102-101)	RCP					96	500
	Trap Chute	Lined Channel	5	5	22	690		
	Shay Road	RCP					96	100
17800	17836-17834	UnLined Swale	2	3.75	15	500		
	17840-17834	UnLined Swale	2	3.25	13	650		
	17834-17832	UnLined Swale	2	4.25	17	750		
	838-832	UnLined Swale	2	3.75	15	800		
	832-824	Lined Swale	2	4.75	13	650		
	830-828	UnLined Swale	2	3.75	15	300		
	828-826	UnLined Swale	2	4	16	300		
	826-824	UnLined Swale	2	4.25	17	400		
	842-824	UnLined Swale	2	3.75	15	400		
	824-812	UnLined Swale	2	5.75	22	600		
	822-820	UnLined Swale	2	3.75	15	300		
	820-818	UnLined Swale	2	4	16	600		
	818-816	UnLined Swale	2	4.25	17	500		

Watershed	Location	Facility Description	Line Channels				Pipe Culverts	
			Base (ft)	Height (ft)	Top Width (ft)	Length (ft)	Diameter (inch)	Length (ft)
	816-814	UnLined Swale	2	4.5	18	400		
	814-812	UnLined Swale	2	4.5	18	500		
	812-810	UnLined Swale	4	6	25	500		
	Phantom East & Railyard	RCP					48	1000
	Railroad	RCP					72	500
	Trap Chute	Lined Channel	5	3.75	18	740		
	Shay Road	RCP					72	100
17900	17940-17938	UnLined Swale	2	4.75	18	300		
	938-936	UnLined Swale	2	5.25	20	600		
	936-934	Lined Swale	2	5.25	14	600		
	942-934	UnLined Swale	2	3.25	13	700		
	934-932	UnLined Swale	6	5.25	24	600		
	932-920	UnLined Swale	6	5.5	25	500		
	930-928	UnLined Swale	2	4.5	18	800		
	928-926	UnLined Swale	2	4.5	18	300		
	924-926	UnLined Swale	2	3.5	14	400		
	926-920	UnLined Swale	2	4.75	18	700		
	920-919	UnLined Swale	10	5	27	100		
	919-904	UnLined Swale	10	5	27	1200		
	908-904	UnLined Swale	2	3.25	13	1400		
	906-904	UnLined Swale	2	3	12	1500		
	904-903	UnLined Swale	15	4	29	1500		
	916-914	UnLined Swale	2	3.25	13	500		
	914-910	UnLined Swale	2	3.5	14	500		
	910-903	UnLined Swale	4	4	18	500		
	Phantom East & Railyard	RCP					72	710
	Railroad	RCP					72	300
Trap Chute	Lined Channel	5	4	19	840			
Shay Road	RCP					72	100	
18100	Golf Course	Lined channel	2	4.5	18	2750		
	Phantom East (18104-18103)	RCP					48	120
	18003-18002	Lined Channel	5	4	19	1150		
	18002-18001	RCP					84	300
	Trap Chute	Lined Channel	5	4.5	21	890		
	Shay Road	RCP					84	100
24000	24048-24046	UnLined Swale	2	3.5	14	300		
	24046-24044	UnLined Swale	2	5	19	1500		
	24044-24042	UnLined Swale	4	5.5	23	1250		
	24042-24040	UnLined Swale	6	5.5	25	1000		
	24040-24038	UnLined Swale	8	5.5	27	1000		
	24038-24037	UnLined Swale	10	5.5	29	1000		
	24037-24036	UnLined Swale	15	5.25	33	1000		
	24036-24035	UnLined Swale	15	5.25	33	1000		
	24035-24034	UnLined Swale	15	5.5	34	750		

Watershed	Location	Facility Description	Line Channels				Pipe Culverts	
			Base (ft)	Height (ft)	Top Width (ft)	Length (ft)	Diameter (inch)	Length (ft)
	24034-24032	UnLined Swale	15	5.5	34	300		
	24032-24014	UnLined Swale	15	5.5	34	850		
	24030-24028	UnLined Swale	2	4.25	17	1000		
	24028-24026	UnLined Swale	2	4.5	18	750		
	24026-24024	UnLined Swale	2	4.75	18	1250		
	24024-24022	UnLined Swale	2	5	19	1000		
	24022-24020	UnLined Swale	2	5.25	20	1000		
	24020-24019	UnLined Swale	2	5.5	21	1000		
	24019-24018	UnLined Swale	4	5.5	23	1000		
	24018-24017	UnLined Swale	4	5.5	23	1000		
	24017-24016	UnLined Swale	6	5.25	24	750		
	24016-24014	UnLined Swale	6	5.5	25	300		
	24014-24008	RCP	6	5.5	25	750	78	750
	24013-24012	UnLined Swale	2	5	19	1500		
	24012-24010	RCP					81	100
	24010-24008	UnLined Swale	34	6	93	7000		
	24008-24005	Lined Channel	5	8	33	3800		
	Pipes(Nodes 247, 245, 244)	RCB					10'x7' RCB	700
	2400-249	Lined Channel	5	10.75	42	3670		
	249-247	Lined Channel	5	7	29	970		
	247-245	Lined Channel	5	7.25	30	1600		
	245-244	Lined Channel	5	7.5	31	1700		
25000	25084-25082	UnLined Swale	2	4.25	17	1000		
	25082-25080	UnLined Swale	2	4.75	18	1000		
	25080-25076	UnLined Swale	2	5	19	250		
	25078-25076	UnLined Swale	2	4.5	18	1000		
	25076-25074	UnLined Swale	4	5.5	23	750		
	25090-25088	UnLined Swale	2	4.25	17	500		
	25088-25086	UnLined Swale	2	4.25	17	1000		
	25086-25084	UnLined Swale	2	5	19	1000		
	25074-25050	UnLined Swale	8	5.5	27	750		
	25062-25060	UnLined Swale	2	4.25	17	500		
	25060-25058	UnLined Swale	2	4.5	18	750		
	25064-25058	UnLined Swale	2	3.25	13	1000		
	25066-25058	UnLined Swale	2	4.25	17	750		
	25058-25056	UnLined Swale	2	5.5	21	500		
	25056-25054	UnLined Swale	4	5.25	22	1250		
	25054-25052	UnLined Swale	4	5.5	23	1000		
	25052-25050	UnLined Swale	4	5.5	23	750		
	25050-25048	UnLined Swale	15	6	36	750		
	25072-25070	UnLined Swale	2	4	16	400		
	25070-25048	UnLined Swale	2	4	16	750		
	25048-25014	UnLined Swale	15	6	36	560		
	25068-25046	UnLined Swale	2	4.25	17	750		

Watershed	Location	Facility Description	Line Channels				Pipe Culverts	
			Base (ft)	Height (ft)	Top Width (ft)	Length (ft)	Diameter (Inch)	Length (ft)
	25046-25104	UnLined Swale	2	4.5	18	500		
	25034-25032	UnLined Swale	2	4.5	18	1000		
	25032-25030	UnLined Swale	2	4.75	18	1000		
	25030-25029	UnLined Swale	2	5	19	1000		
	25029-25039	UnLined Swale	2	5.25	20	750		
	25044-25042	UnLined Swale	2	4.5	18	1000		
	25042-25084	UnLined Swale	2	4.75	18	1000		
	25040-25039	UnLined Swale	2	5	19	1000		
	25039-25096	UnLined Swale	6	5.5	25	500		
	25028-25026	UnLined Swale	2	4.25	17	1000		
	25026-25024	UnLined Swale	2	4.75	18	1000		
	25024-25022	UnLined Swale	2	5	19	1000		
	25022-25016	UnLined Swale	2	5	19	750		
	25020-25018	UnLined Swale	2	4	16	750		
	25018-25084	UnLined Swale	2	4.5	18	500		
	25016-25014	UnLined Swale	4	5.5	23	1000		
	25038-25036	UnLined Swale	2	4.5	18	1000		
	25036-25014	UnLined Swale	2	4.5	18	1000		
	25014-25012	UnLined Swale	8	5.5	27	500		
	25114-25112	RCP					48	1000
	25112-25110	RCP					60	1000
	25110-25108	RCP					72	1000
	25108-25106	RCP					72	500
	25106-25104	RCP					84	500
	25104-25102	Lined Swale	20	5	31	1350		
	25102-25012	Lined Swale	20	5.5	32	5500		
	25012-25010	Lined Swale	20	5.75	33	350		
	25010-25009	Lined Swale	20	5.75	33	557		
	Air Cargo Road crossing	RCB		10'X7'				200
	25009 - Adelanto Road	Lined Swale	12	6.75	27	2780		
	Adelanto Road Crossing-1	RCB		10'X7'				130
	Adelanto Road - 25008	UnLined Swale	12	6.75	35	3132		
	25008-25007	UnLined Swale	12	7.25	37	1560		
	25005-25004	UnLined Swale	5	5	22	2232		
	25004-25003	RCP					72	220
	25003-25002	Lined Swale	5	5.5	17	1530		
	Adelanto Road crossing-2	RCP					96	400
27000	27101-27008	Lined Swale	2	5	13	1000		
	27008-27006	Lined Swale	2	5	13	1500		
	El Mirage Road Crossing	RCP					54	120
	27006-27003	Lined Swale	4	5	15	5650		
	Adelanto Road crossing-2	RCP					96	400
28000	28230-28236	RCP					72	100
	28236-28306	RCP					78	1200

Watershed	Location	Facility Description	Line Channels				Pipe Culverts	
			Base (ft)	Height (ft)	Top Width (ft)	Length (ft)	Diameter (inch)	Length (ft)
	28306-28305 (Z=5)	UnLined Swale	18	5	67	830		
	28305-28304 (Z=5)	UnLined Swale	18	5	67	740		
	28308-28304 (Z=5)	UnLined Swale	5	4.25	47	1500		
	28304-28302 (Z=5)	UnLined Swale	30	4.75	77	1500		
	28302-28416	Lined Swale	6	5.5	18	3795		
	28416-28415	Lined Swale	8	5.25	20	700		
	28422-28415	Lined Swale	2	4	11	1500		1500
	28415-28412	RCP					96	2320
	28412-28410	RCP					96	900
	28410-28408	RCP					96	700
	28408-End	UnLined Swale	16	6.5	39	800		
29000	29126-29124	UnLined Swale	2	4	16	800		
	29124-29110	UnLined Swale	2	4	16	1750		
	29116-29114	UnLined Swale	2	4.75	18	1200		
	29114-29112	UnLined Swale	2	5	19	700		
	29112-29110	UnLined Swale	2	5.25	20	1000		
	29110-29108	Lined Swale	2	6	15	850		
	29122-29120	UnLined Swale	2	3.75	15	300		
	29120-29108	UnLined Swale	2	4.25	17	800		
	29108-29106	Lined Swale	2	6.25	16	800		
	29106-29104	Lined Swale	2	6.25	16	600		
	29104-29102	Lined Swale	4	5.75	17	900		
	29118-29102	UnLined Swale	2	4.75	13	2100		
29102-29100	UnLined Swale	8	5.5	27	700			

6.7 Water Quality

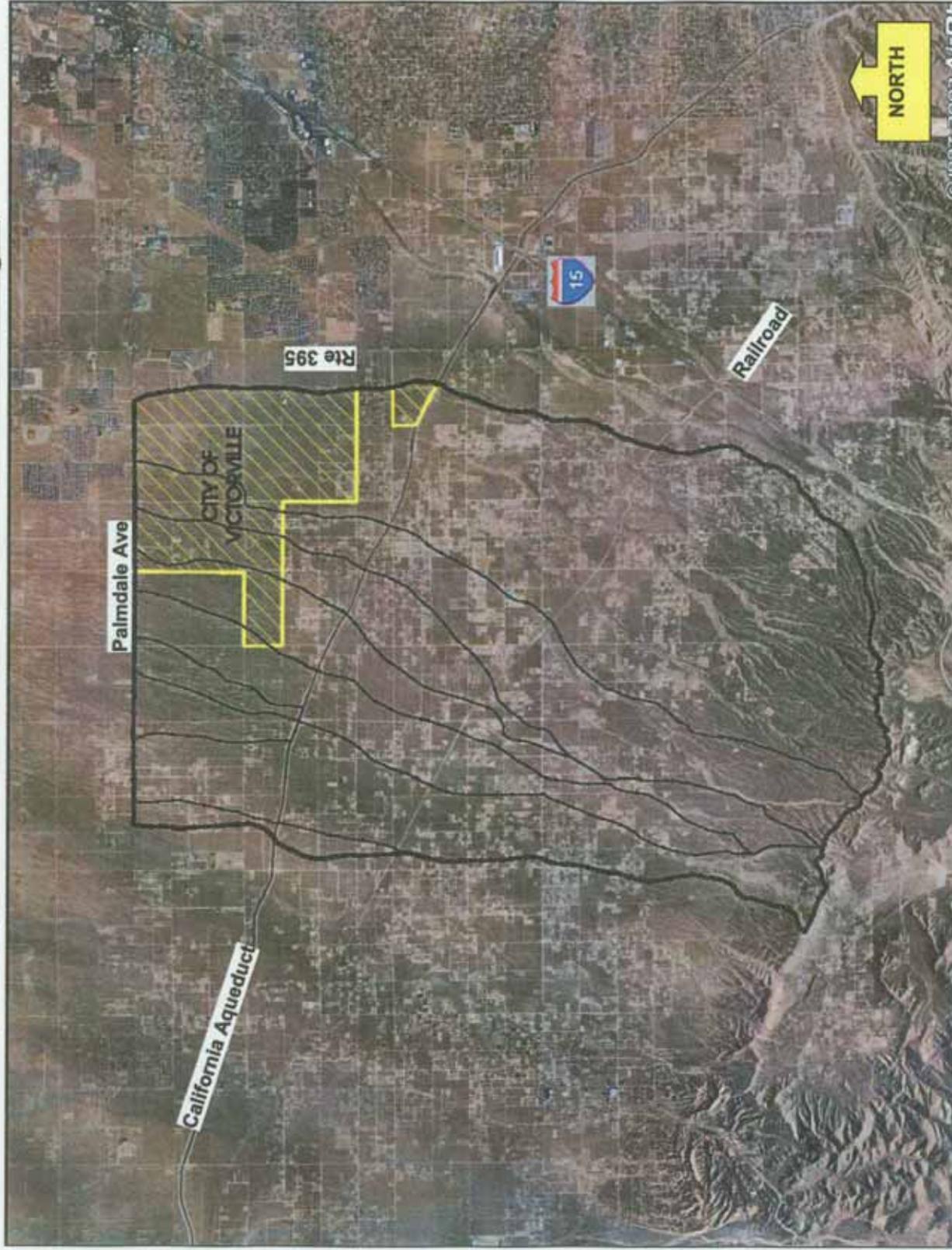
The Southern California Logistics Airport (SCLA) is a 5000-acre development project located within the south Lahontan region in the City of Victorville, San Bernardino County, California. The development area is formerly operated as George Air Force Base. Land uses within the SCLA site consist generally of airport/aviation facilities and commercial development. Specific land uses anticipated within the SCLA property include: (1) manufacturing/warehouse, (2) general aviation, (3) school, (4) fixed base operations, (5) medical office, (6) e-commerce, (7) biomedical facilities, and (8) general office.

This document provides guidance for the project/watershed development addressing storm water quality issues as individual projects evolve during the development period of the site. It is intended to provide a framework of guidelines to assist in long-term runoff quality objectives. Where applicable, the document includes water quality objectives based on the Lahontan Region Basin Plan prepared by the Regional Water Quality Control Board, guidelines according to the Federal Aviation Administration (FAA), the

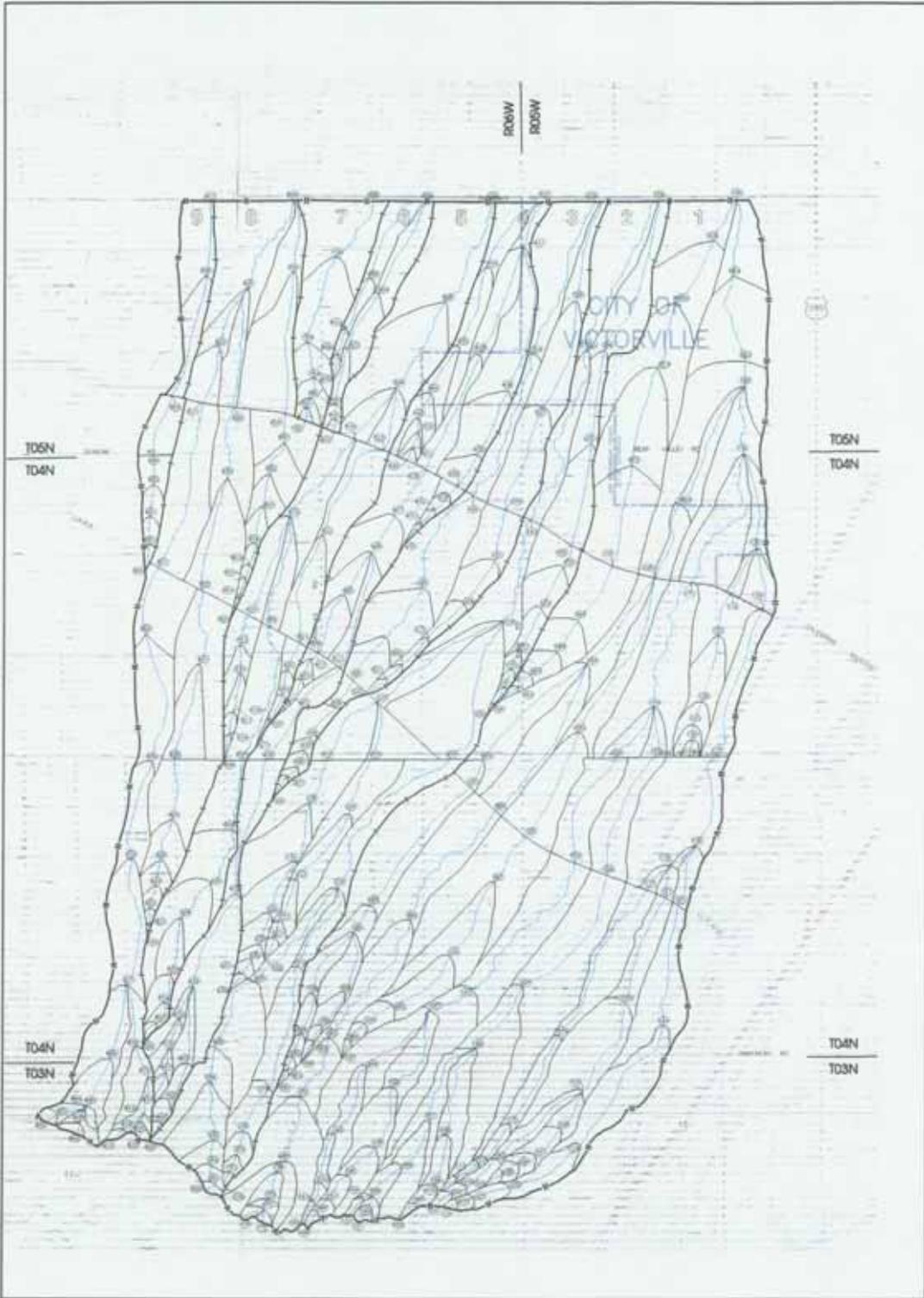
APPENDIX F

Blady Mesa Drainage Plan

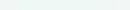
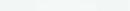
Baldy Mesa Master Plan of Drainage



This MPD covers approximately 59 sq. mi. of drainage area, within the unincorporated area of the County and a portion of the City of Victorville. It was updated primarily to reflect the changes in hydrology manual and land use and proposes new drainage facilities to convey the 100-year peak storm event flows. This MPD has been completed.



BASE MAP LEGEND

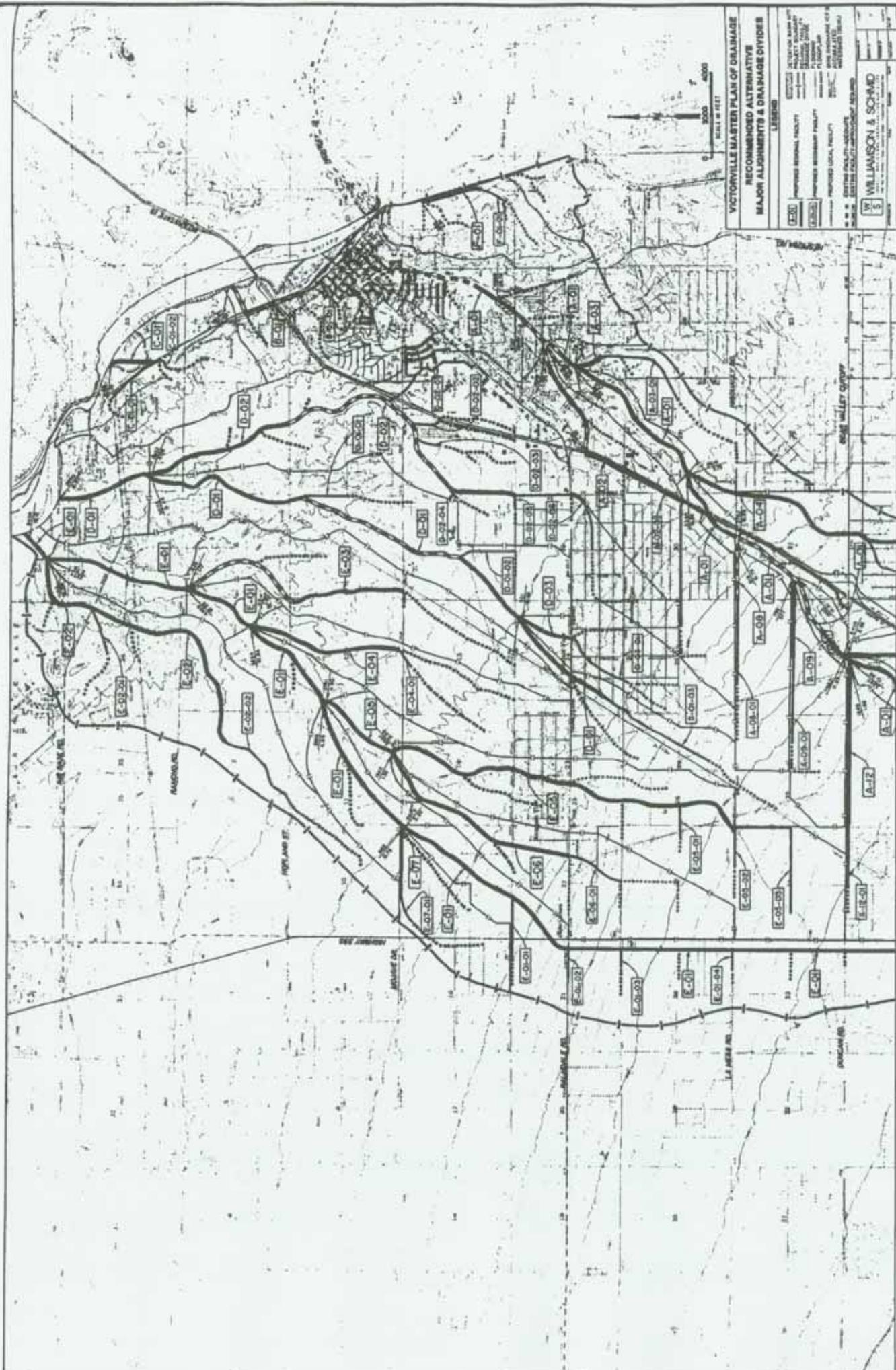
-  WATERSHED BOUNDARY
-  DRAINAGE DIVIDE
-  SUBAREA BOUNDARY
-  FLOW LINE
-  NODE NUMBER
-  CITY BOUNDARY



SCALE 1" = 2000'

APPENDIX G

1992 Drainage MPU Figures



**VICTORVILLE MASTER PLAN OF DRAINAGE
RECOMMENDED ALTERNATIVE
MAJOR ALIGNMENTS & DRAINAGE DIVIDES**

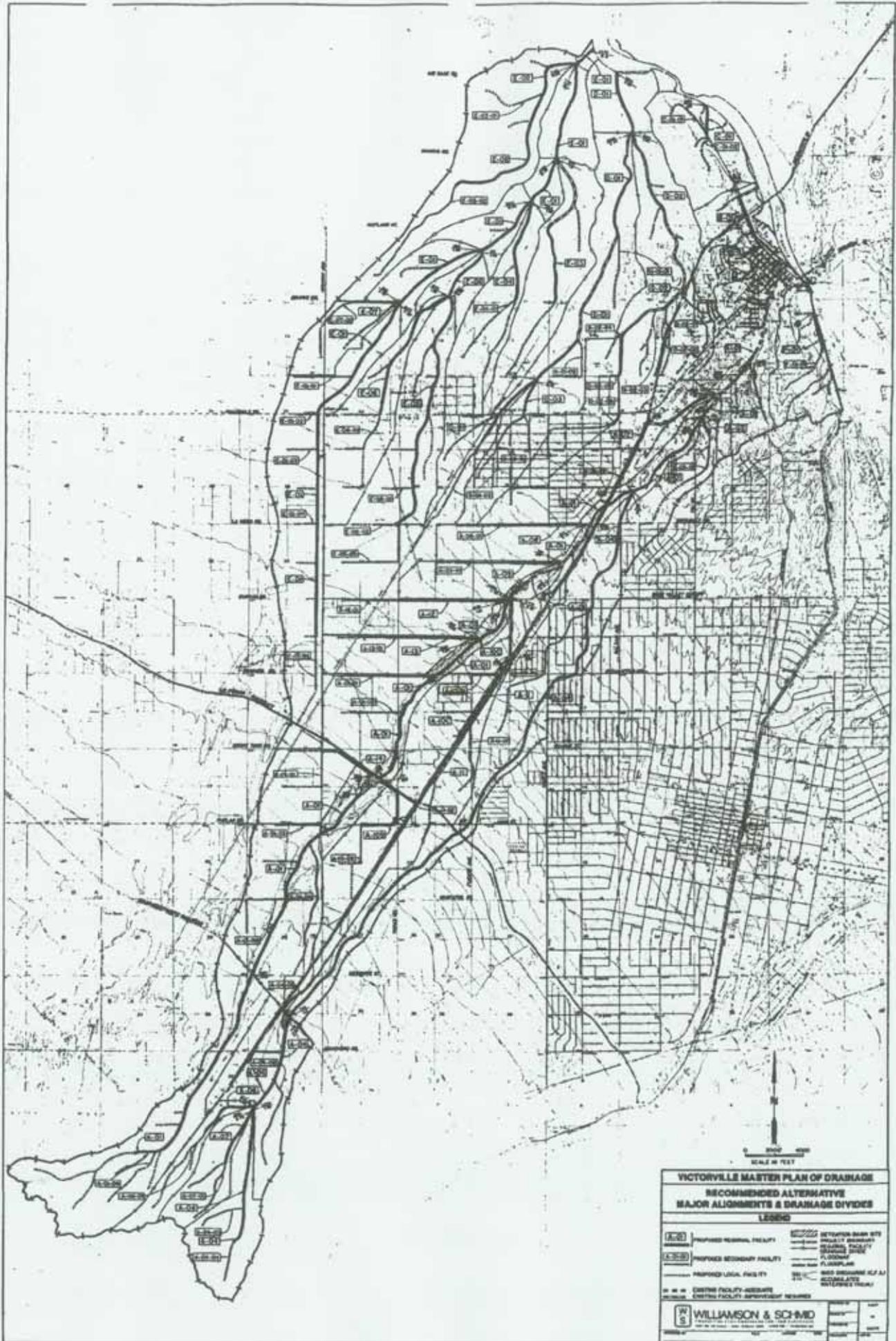
SCALE IN FEET
0 2000 4000

LEGEND

- (E-01) EXISTING DRAINAGE FACILITY
- (E-02) PROPOSED DRAINAGE FACILITY
- (E-03) PROPOSED DRAINAGE FACILITY
- (E-04) PROPOSED LOCAL FACILITY
- (E-05) EXISTING FACILITY - ADJUSTED
- (E-06) EXISTING FACILITY - ADJUSTED

WILLIAMSON & SCHMIDT

15

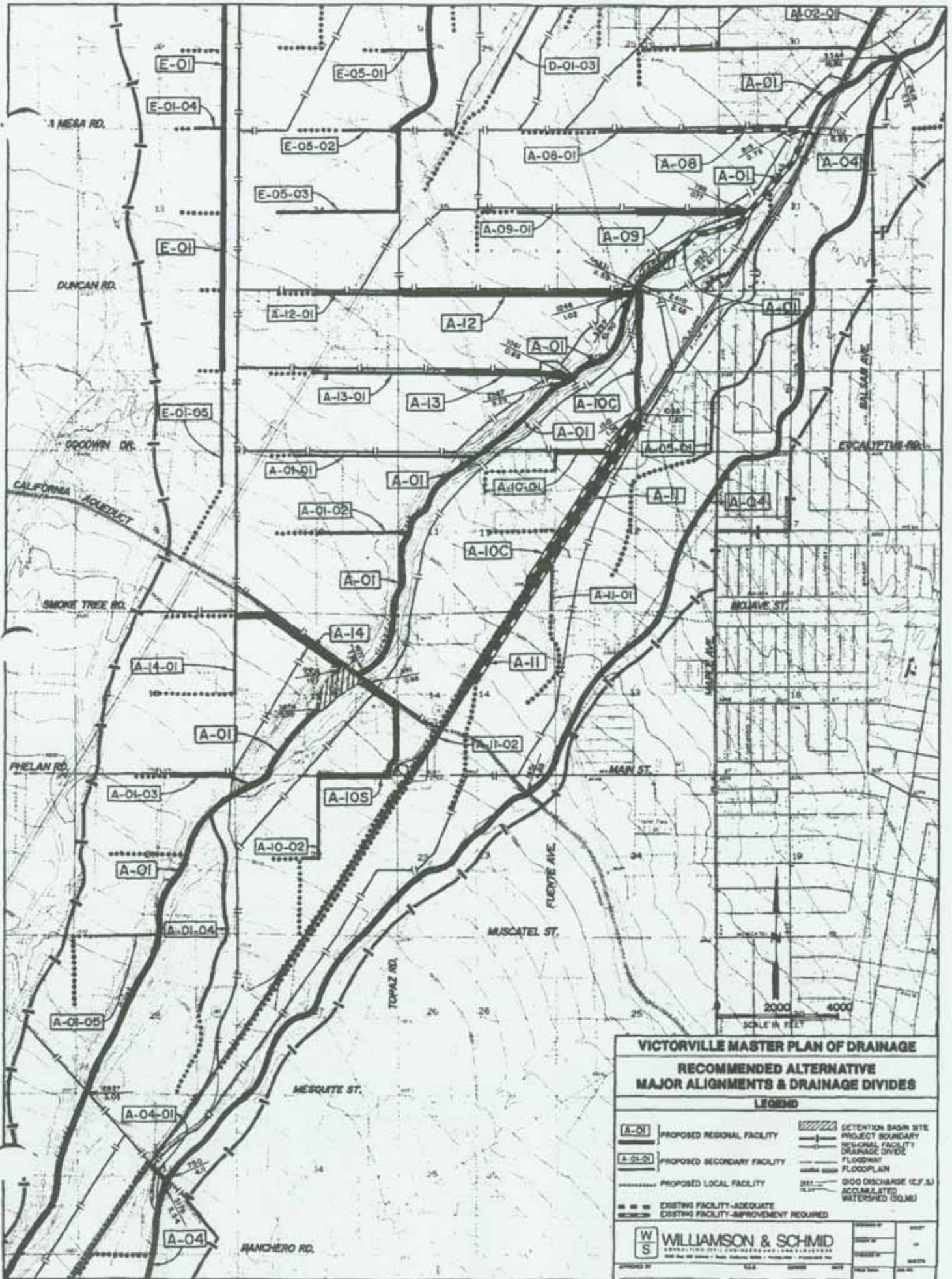


VICTORVILLE MASTER PLAN OF DRAINAGE
RECOMMENDED ALTERNATIVE
MAJOR ALIGNMENTS & DRAINAGE DIVIDES

LEGEND

PROPOSED REGIONAL FACILITY	DETENTION BASIN BY FACILITY DESIGNER
PROPOSED REGIONAL FACILITY	REGIONAL FACILITY DESIGNER FLOODPLAIN
PROPOSED LOCAL FACILITY	FLOODPLAIN
EXISTING FACILITY - ACQUISITION	BASE DRAINAGE (C.F.A.)
EXISTING FACILITY - IMPROVEMENT REQUIRED	ACCUMULATE WATER'S HEAD

WILLIAMSON & SCHMID
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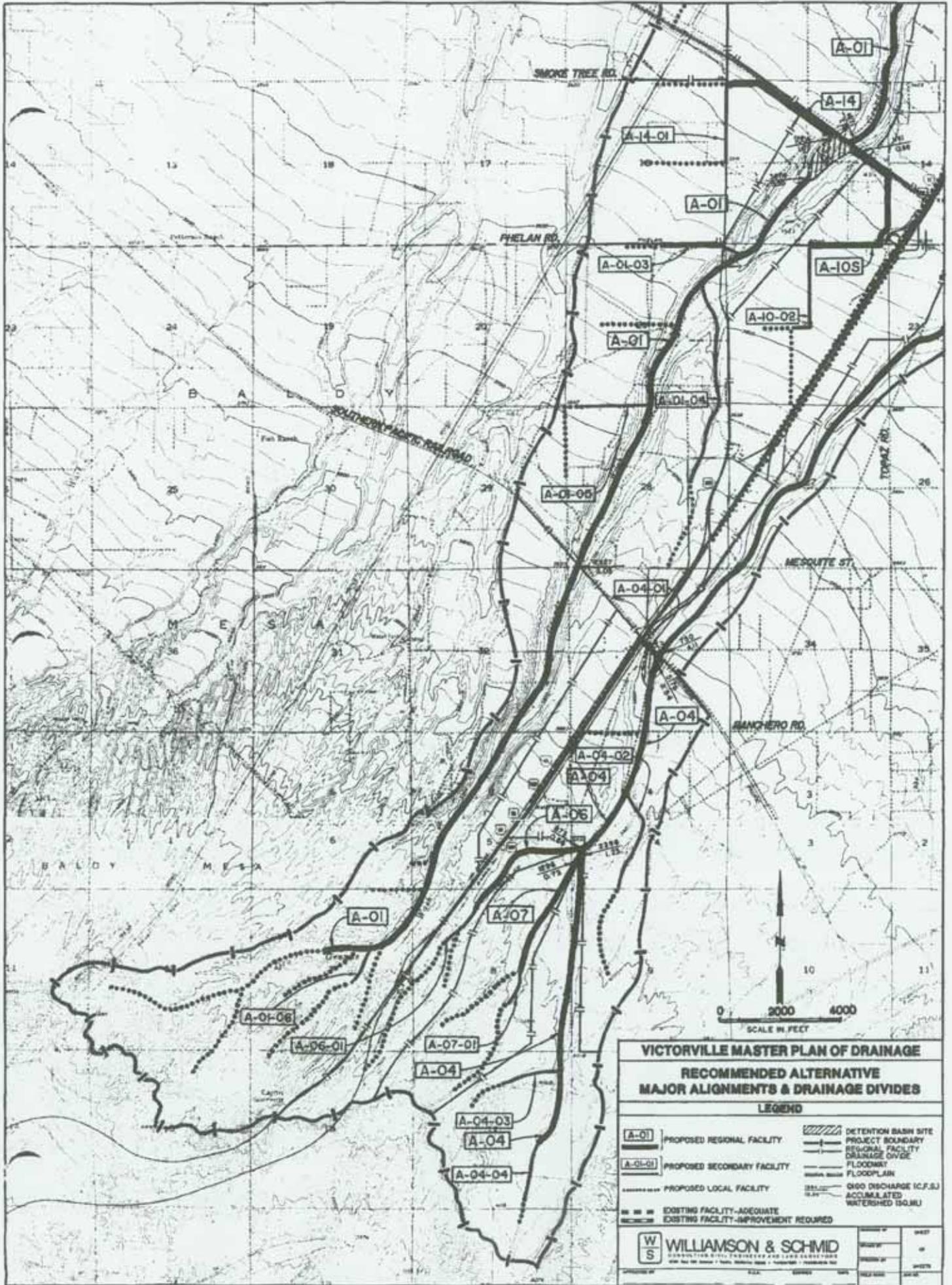
VICTORVILLE MASTER PLAN OF DRAINAGE
RECOMMENDED ALTERNATIVE
MAJOR ALIGNMENTS & DRAINAGE DIVIDES

LEGEND

A-01	PROPOSED REGIONAL FACILITY		DETECTION BASIN SITE
A-01-01	PROPOSED SECONDARY FACILITY		PROJECT BOUNDARY
	PROPOSED LOCAL FACILITY		REGIONAL FACILITY
	EXISTING FACILITY-ADEQUATE		DRAINAGE DIVIDE
	EXISTING FACILITY-IMPROVEMENT REQUIRED		FLOODPLAIN
			WATER DISCHARGE
			WATER DISCHARGE (C.F.S.)
			ACCUMULATED WATERSHED (SQ.M)

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DESIGNED BY: [] DATE: []
 CHECKED BY: [] DATE: []
 APPROVED BY: [] DATE: []



VICTORVILLE MASTER PLAN OF DRAINAGE
RECOMMENDED ALTERNATIVE
MAJOR ALIGNMENTS & DRAINAGE DIVIDES

LEGEND

- A-01 PROPOSED REGIONAL FACILITY
- A-01-01 PROPOSED SECONDARY FACILITY
- PROPOSED LOCAL FACILITY
- EXISTING FACILITY-ADEQUATE
- - - EXISTING FACILITY-IMPROVEMENT REQUIRED
- DETENTION BASIN SITE
- PROJECT BOUNDARY
- REGIONAL FACILITY DRAINAGE DIVIDE
- FLOODPLAIN
- FLOODPLAIN
- Q100 DISCHARGE (C.F.S.) ACCUMULATED WATERSHED (SQ.MI)

W S WILLIAMSON & SCHMID
 CONSULTING CIVIL ENGINEERS AND LAND SURVEYORS
 4000 N. 10th Street, Suite 100, Victorville, CA 92407

PROJECT NO.	10000000	SHEET NO.	10
DATE	10/10/00	DRAWN BY	WSS
SCALE	AS SHOWN	CHECKED BY	WSS
APP'D BY	WSS	DATE	10/10/00

APPENDIX H

Drainage Photographs



Figure 2



Figure 3





Figure 4



Figure 5





Figure 6



Figure 7





Figure 8



Figure 9





Figure 10

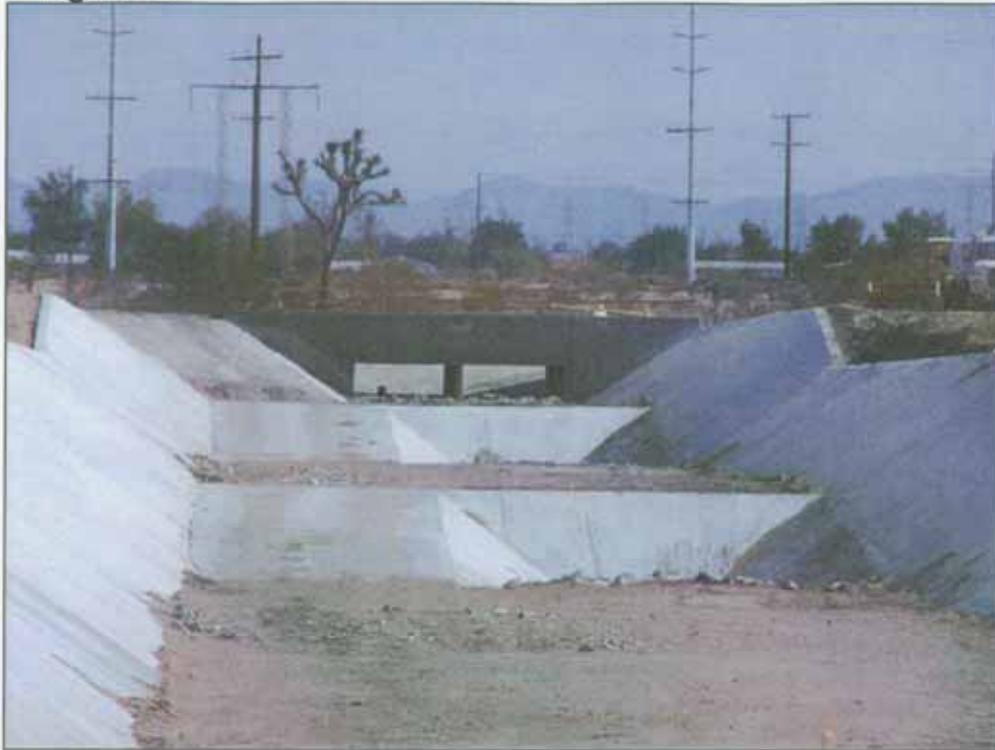


Figure 11





Figure 12



Figure 13

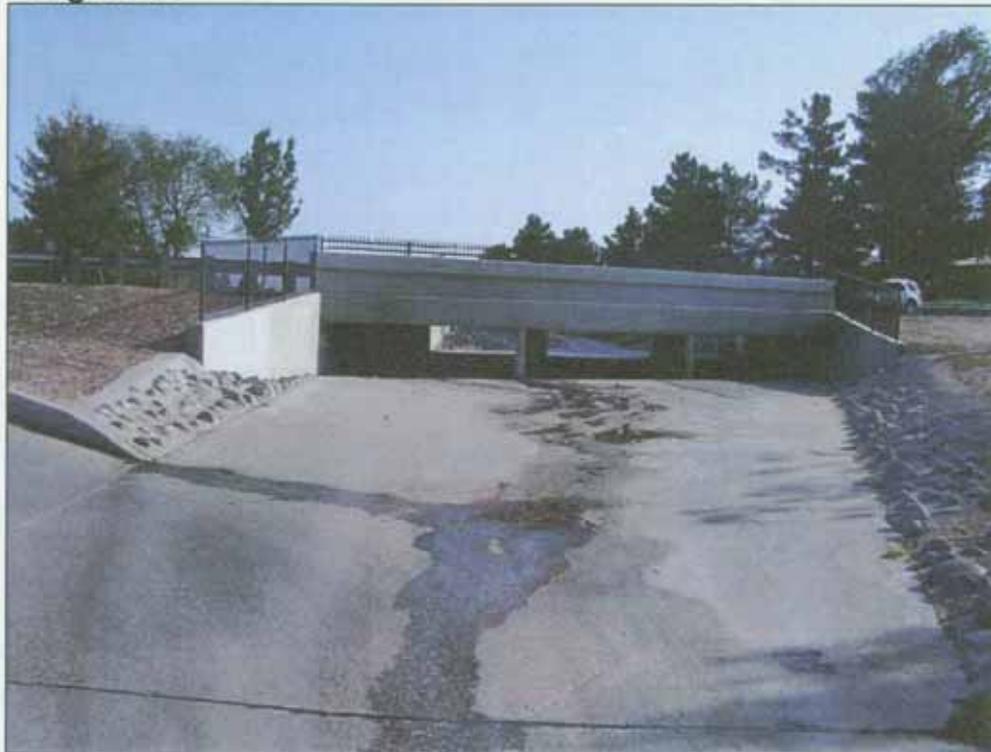




Figure 14



Figure 15

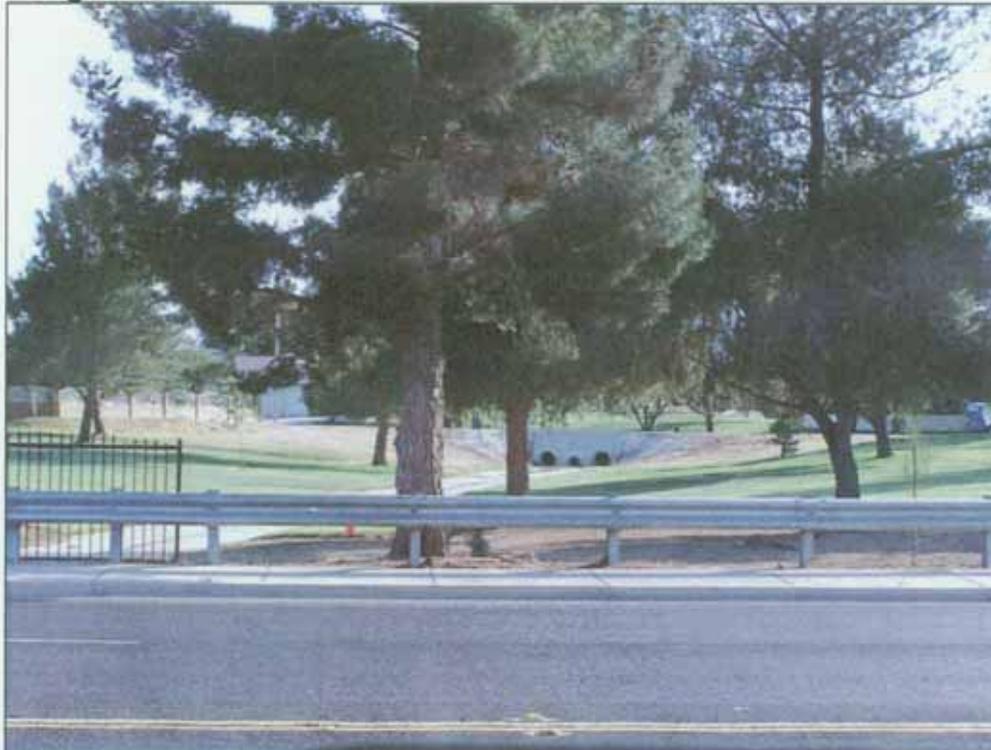




Figure 16

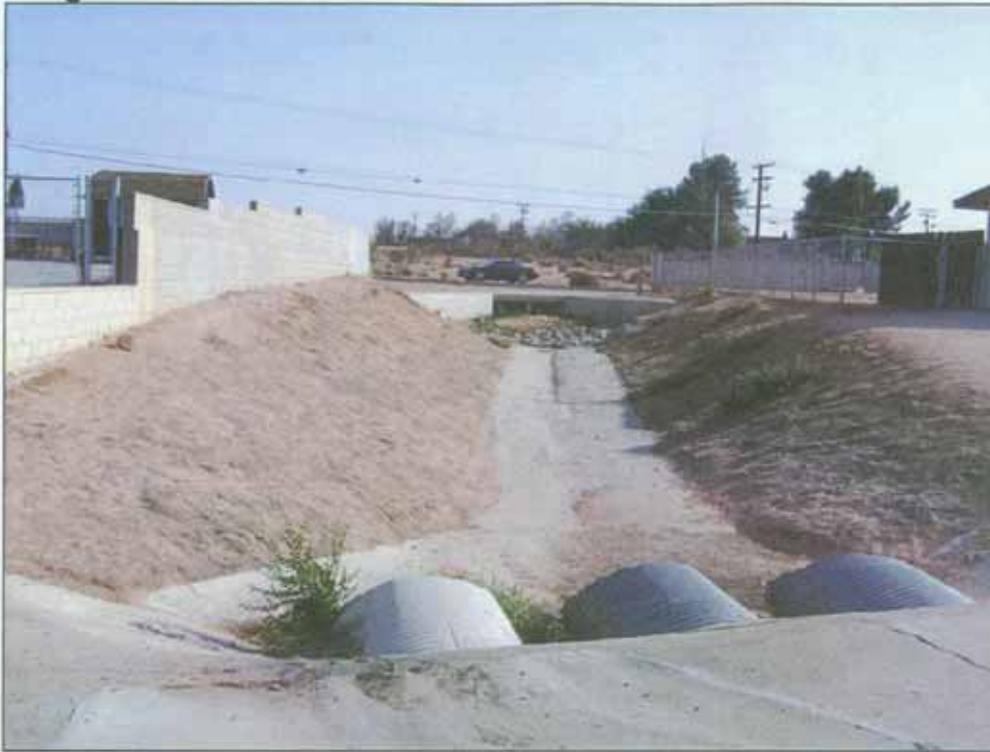
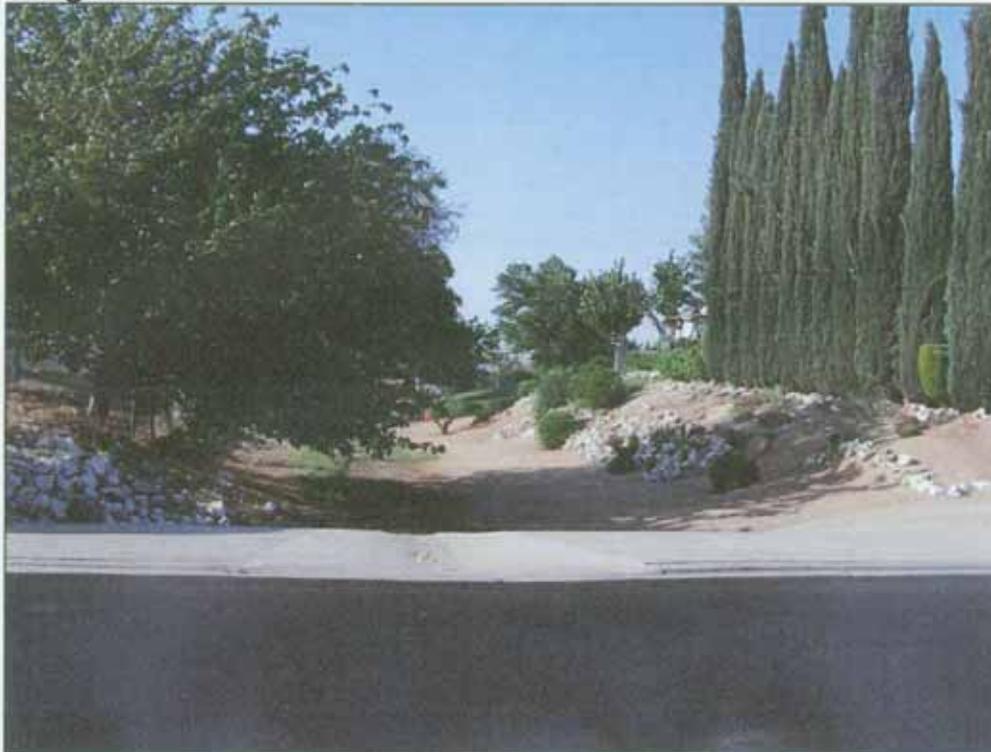


Figure 17



CITY OF VICTORVILLE GENERAL PLAN UPDATE TRANSPORTATION STUDY REPORT



Submitted to the City of Victorville



Prepared by Parsons Brinckerhoff

August 2008



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1.0 INTRODUCTION

The transportation network within a City serves as the back bone for development and provides for mobility of goods and people within it. Hence the Circulation Element of a City's General Plan is an important tool for assuring provision of a transportation system that is consistent with current and planned land uses within the City. The purpose of the Circulation Element is to identify goals, objectives, measures and policies to improve existing and future operations of the City's transportation network. In addition, it sets out guidelines to enhance the transportation network to serve future needs of the City and adjacent areas that will have direct effect on the City's transportation network.

This Baseline Transportation Report has been prepared as part of the City of Victorville's General Plan update, to document technical analyses of existing transportation conditions within the City and to serve as an input for the Circulation Element of the General Plan. This report includes a review of recent studies (completed or underway) that relate to transportation needs or opportunities in the City; an inventory of existing transportation elements, including public transit, non-motorized transportation and goods movement; and an analysis of the City's existing traffic conditions.

1.1 Analysis Area

Located in the heart of San Bernardino County, the analysis area for the City of Victorville includes its sphere of influence as illustrated in Figure 1.1. It is located approximately 35 miles northeast of the City of San Bernardino and about 97 miles northeast of the City of Los Angeles. Nestled just north of the San Bernardino Mountains and at the edge of the Mojave Desert, the City is in an area known as Victor Valley and commonly referred to as the 'High Desert'. The City shares boundaries with the City of Adelanto to the northwest, the Town of Apple Valley to the east, the City of Hesperia to the south and unincorporated San Bernardino County to the southwest and to the north. There are also portions of unincorporated San Bernardino County nested within the City of Victorville.

The Mojave Freeway (Interstate 15 or I-15) and United States Federal Highway 395 (US-395) serve as the primary regional connections to other San Bernardino County cities, while State Route 18 (SR-18) provides connection to San Bernardino County communities east and west of the City. In addition, major regional trucking and rail routes pass through the City. The City contains the Southern California Logistics Airport (SCLA) and within 30-40 minutes of driving from the Ontario International Airport. It is an emerging commercial hub that benefits from its business-friendly environment and central location. Strategically situated along the 'e-Corridor' (a portion of the I-15 between Ontario and Barstow), with global access provided by the all-cargo SCLA.

With a residential population approaching 95,000 and growing rapidly, the City of Victorville's daytime population is anticipated to grow to double this figure to accommodate the needs of the more than 300,000 people who call the Victor Valley area their home. Victorville is home to the largest enclosed regional shopping center between San Bernardino and Las Vegas, along the I-15 corridor. It is an emerging commercial hub that benefits from its business-friendly environment and central locations.



Figure 1.1: Analysis Area





Related Studies

As part of the initial steps in the Baseline Transportation Analysis, recently completed or ongoing studies that relate to transportation conditions in the analysis were identified. Relevant studies were examined in the following areas:

- Southern California Logistics Airport;
- The High Desert Corridor;
- I-15 Comprehensive Corridor Study;
- Interchange improvements on I-15 at La Mesa/Nisqualli;
- Interchange improvements on I-15 at Eucalyptus;
- US-395 Realignment

These studies were reviewed for background information on existing traffic operations and planned transportation improvements in the analysis area.

1.1.1 Southern California Logistics Airport

Victorville is strategically situated along the “e-Corridor” (a portion of I-15 between Ontario and Barstow), with global access provided by the all-cargo Southern California Logistics Airport (SCLA). The SCLA is located in the northwest corner of the City of Victorville and is within a 30 to 40 minute drive of the Ontario International Airport. It is planned to be a domestic and international air cargo facility, with a 4,740-acre business complex integrating manufacturing, industrial, multimodal, and office facilities. The SCLA Specific Plan was adopted by the City to provide a planning tool for implementing the reuse plan established by the Victor Valley Economic Development Authority (VVEDA), pursuant to the Base Realignment and Closure (BRAC) Act, and to implement related policies of the General Plan Land Use, Noise, and Safety Elements. The SCLA Specific Plan is designed to accommodate airport and aviation uses, as well as industrial and commercial land uses. Its circulation plan includes: establishing a mass transit system to serve the site; designating Phantom Road as a minimum six-lane super arterial to connect to Air Expressway; introducing a new north/south road, ‘Perimeter Road’, which will connect future Colusa Road from the north to Phantom East to the South; and, upgrading several roads to arterials, which will eventually connect Phantom East and Phantom West to the rest of the site.

1.1.2 High Desert Corridor

This proposed project will realign SR-18 to a new alignment from south of Yucca Loma Road in the Town of Apple Valley, through the City of Victorville, to US-395 in the City of Adelanto. The proposed alignment proceeds northwest until it nears the Apple Valley Airport, where it turns west. The alignment continues west until it links with Air Expressway near Southern California Logistics Airport in the City of Victorville and proceeds on to US-395. The new facility will be a four-lane expressway between the connection to existing SR-18 and I-15 with at-grade intersections and an interchange at I-15. From I-15 to US-395, the facility will be a six-lane freeway with grade separated interchanges at Phantom East, Phantom West and either Adelanto Road or existing US-395. The project is the first phase of the eventual High Desert



Corridor linking the Victor Valley to the Antelope Valley. The project is jointly funded by the City of Victorville and Town of Apple Valley, using Federal Demonstration and Measure I funds. The City of Victorville was the lead agency for the Project Approval and Environmental Document (PA/ED) of the project.

1.1.3 I-15 Comprehensive Corridor Study

This study examined potential improvements on I-15 between the State Route 60 (SR-60) interchange in Mira Loma (Riverside County) and the Mojave River crossing in Victorville. This major investment study (MIS) effort evaluated a range of alternatives for addressing problems along the I-15 corridor related to the following factors: higher than average truck volumes (10 to 15% of total traffic), steep grades approaching 6% through the Cajon Pass, roadway design limitations particularly at the I-15/I-215 interchange, heavy traffic demand on both weekdays and weekends, and limited alternative travel options. The five alternatives that were selected for detailed evaluation, from an initial set of nine alternatives, include:

- A. No-Build;
- B. Transportation Demand Management/Transportation System Management (TDM/TSM);
- C. High Occupancy Vehicle (HOV) Lanes;
- D. Full Corridor Dedicated Truck Lanes; and
- E. Reversible Managed Lanes.

The Southern California Association of Governments (SCAG), San Bernardino Associated Governments (SANBAG), and the California Department of Transportation (Caltrans) jointly sponsored this study. The I-15 Comprehensive Corridor Study Final Report was prepared December 20, 2005. Two alternatives will be carried forward for further corridor development efforts: Alternative D and Alternative C/E hybrid.

1.1.4 Interchange Improvements on I-15 at La Mesa/Nisqualli

This proposed project involves construction of a new interchange at La Mesa Road/Nisqualli Road on I-15 in the City of Victorville. The project also includes realignment of two frontage streets adjacent to I-15: Amargosa Road and Mariposa Road. The proposed new interchange would be located approximately 1.9 km (1.2 mi) north of the I-15/Bear Valley Road Interchange and approximately 2.7 km (1.7 mi) south of the I-15/Palmdale Road (SR-18) Interchange. The purpose of the project is to provide vehicular access to existing nearby residential, commercial, and industrial areas within the City of Victorville; relieve traffic congestion and reduce traffic delays during peak hours at adjacent interchanges and on adjacent arterial and collector roads; and improve mainline operations by relieving back-ups on the existing Bear Valley Road off-ramp. The project proponent is the City of Victorville, in cooperation with Caltrans and the Federal Highway Administration (FHWA). The PA/ED phase was approved by FHWA in August 2006.



1.1.5 Interchange Improvements on I-15 at Eucalyptus

The proposed project is a joint project between the City of Victorville and the City of Hesperia, with the City of Hesperia acting as lead agency. It includes construction of a new interchange at Eucalyptus Street on I-15. The proposed new interchange would be located approximately 1.9 km (1.2 mi) south of I-15/Bear Valley Road Interchange; and about 3.7 km (2.3 mi) north of the I-15/Main Street Interchange. The purpose of this project is to reduce congestion at the Bear Valley Road interchange and Main Street interchange. The project is expected to reduce operational conflicts, accidents and provide levels of service that are consistent with the goals of both the City of Victorville and Hesperia's Congestion Management Plan. This project is consistent and compatible with the Caltrans Route Concept Fact Sheet for Interstate 15 dated March 1999. The concept proposes an ultimate 10-lane facility (8 mixed-flow lanes plus two High Occupancy Vehicle Lanes (HOV) lanes) operating at a Level of Service "E" or better.

The estimated order of magnitude for the construction costs for the build alternatives range from \$26 million to \$45 million. Right-of-way cost estimates range in magnitude from \$20 million to \$28million. The Project Approval/Environmental Document (PA/ED) support component is estimated to cost \$600,000 and is anticipated to be funded with federal, state and local funds. Federal, state and local funding for programming construction would be required. The Project Study Report/Project Development Support (PSR/PDS) for this new interchange was approved by Caltrans on May 18, 2005. However, upon approval of the PSR/PDS, the City of Victorville decided not to proceed any further on the project and allocated their funds to other projects. There has been no further activity on the project since approval of the PSR/PDS.

1.1.6 US-395 Realignment

In October 2006, the SANBAG Board approved the contract for the preparation of a program level Environmental Impact Report (EIR) for the realignment of US-395 from I-15 in Hesperia to current US-395 in the northern parts of the City of Adelanto. Concurrent with the EIR, the United States Environmental Protection Agency (EPA) has issued a notice of its intent to prepare an Environmental Impact Statement (EIS) for this project. The facility is proposed to be a six-lane freeway from I-15 to Palmdale Road (SR-18); a four-lane freeway from Palmdale Road to Desert Flower Road; and a four-lane expressway from Desert Flower Road north to SR-58 at Kramer Junction.

2.0 TRANSPORTATION SYSTEM ELEMENTS

This section describes the existing transportation system in the City of Victorville. The City's circulation system is comprised of freeways and their interchanges, arterial and local streets, public transportation and non-motorized transportation. In addition to these facilities and services, the implementation and management of the circulation system includes parking policies and goods and freight movement.

2.1 Freeways

Figure 2.1 illustrates the City's existing circulation network, including the City's local thoroughfares and limited access freeways. Regional access to the City of Victorville is provided primarily by the I-15 freeway and several other highways.



2.1.1 Interstate 15

Over years, the I-15 has emerged as a multi-faceted corridor, serving commuters in the cities of Victor Valley. For the City, it provides access to and from Riverside County to the south and Barstow, continuing to Nevada, to the north. Also called the Mojave Freeway, this is a major north-south corridor having three lanes through Victorville in each direction. According to the California Department of Transportation (Caltrans), this section of the I-15 carried an annual average daily traffic (AADT) of 60,000 to 100,000 vehicles in 2005, of which, approximately 24% comprised of truck traffic. In Victorville, seven full-service interchanges with the I-15 are currently provided at the following streets:

- Bear Valley Road
- Palmdale Road (SR-18) / 7th Street
- Roy Rogers Drive / La Paz Drive
- Mojave Drive
- National Trails Highway / D Street
- E Street
- Stoddard Wells Road

2.1.2 United States Federal Highway 395

US-395 is another north-south highway that passes through the western part of the City. Predominantly a two-lane highway, this facility has a stretch of four lanes just south and north of its intersection with Palmdale Road. Currently it has five at-grade intersections with the following arterials:

- Bear Valley Road / Duncan Road
- Luna Road
- Palmdale Road (SR-18)
- Mojave Drive
- Cactus Road

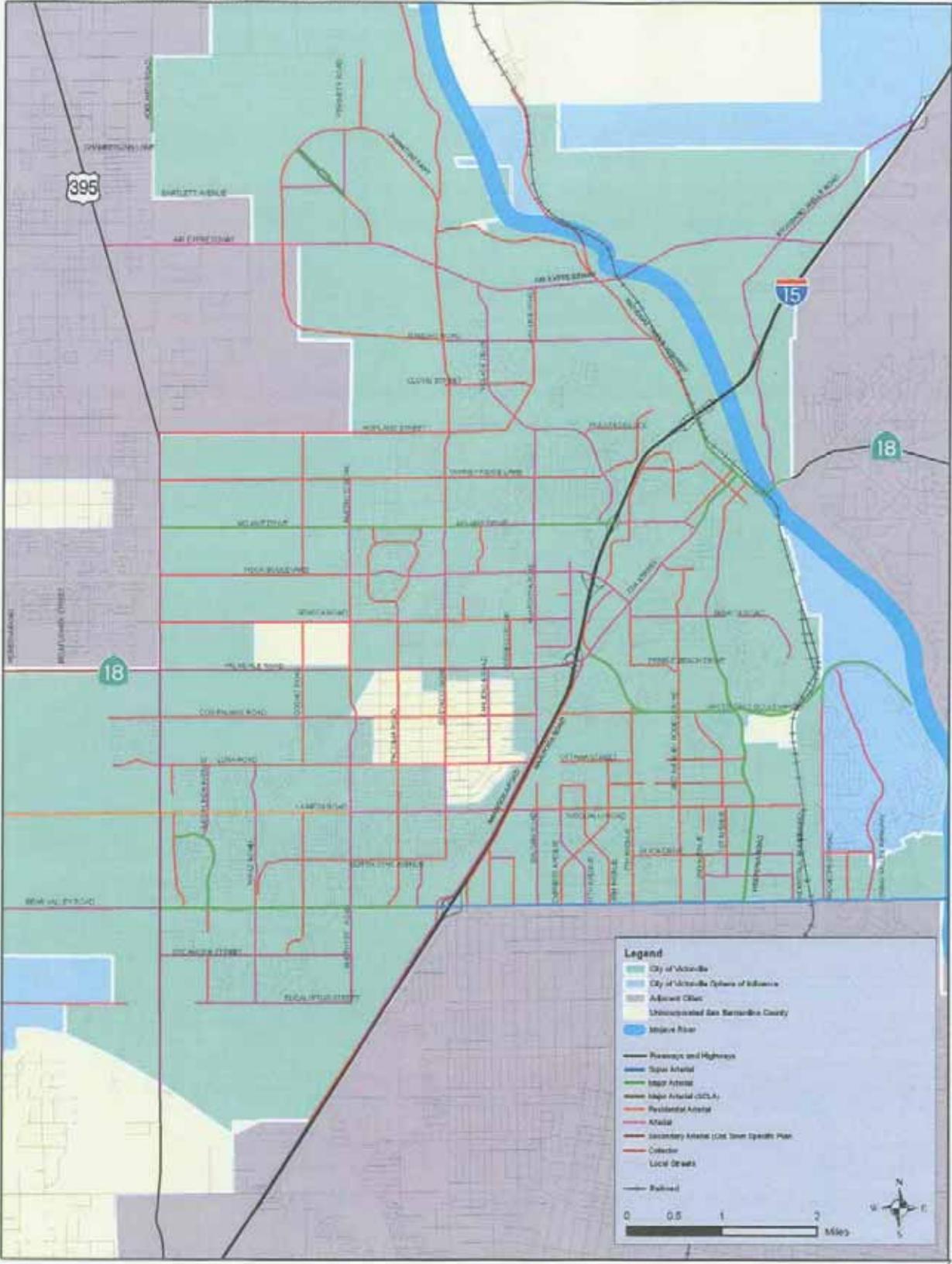
Caltrans traffic data shows that in 2005, this facility carried an AADT of approximately between 16,000 and 25,000 vehicles, of which about 17% was truck traffic. With the southern terminus of this facility at its junction with I-15 in the City of Hesperia, this facility connects the City of Victorville to the City of Adelanto and unincorporated northwestern San Bernardino County, before continuing onto adjacent Kern County.

2.1.3 State Route 18

The existing SR-18 is a four-lane divided street with turn lanes in the Town of Apple Valley, where it also called Happy Trails Highway, and a four-lane divided street with a continuous left turn lane in the City of Victorville (D Street). When SR-18 junctions with I-15, travelers must follow I-15 south to Palmdale road, where SR-18 proceeds west and is called Palmdale Road. A designated truck route within the City of Victorville, this facility carried an AADT of 17,000 to 46,000 vehicles in 2005, according to Caltrans traffic data, of which, close to 9% was truck traffic. For the City, it provides access to and from Antelope Valley to the west and the Town of Apple Valley, continuing further eastward to Lucerne Valley.



Figure 2.1: Existing Roadway Classification





2.1.4 Historic Route 66

One of the original federal routes, Route 66 or National Trails Highway was established in 1926. Its original length of approximately 2,500 miles connected the Cities of Chicago, Illinois and Los Angeles, California, traversing through the states of Missouri, Kansas, Oklahoma, Texas, New Mexico and Arizona. Being a major migratory path west, especially during the Dust Bowl of the 1930s, it supported the economies of the communities through which it passed. These communities later fought to keep it alive when the new interstate freeway system began dominating the country's transportation network. This route was officially decommissioned after the interstate freeways began to define this country's surface transportation and segments of this route that were not replaced by interstate freeway alignments were designated as national scenic byways and renamed 'Historic Route 66' (Hist-66).

Today, from the southern limit of the City of Victorville, Hist-66 follows the current alignment of I-15 to the freeway's interchange with Palmdale Road (SR-18) / 7th Street. North of this interchange, Hist-66 follows the alignment of 7th Street to D Street. Continuing northeast on D Street it follows the National Trails Highway alignment into the community of Oro Grande on the north-western edge of the City.

2.2 Arterials/Local Roadways

As shown in Figure 2.1 in the previous section, there are several different types of roadway classifications maintained by the City of Victorville that range from two lane, undivided collectors to super arterials with six lanes and a positive separation (raised median). The City has designated standards and requirements for nine different street classifications, which are illustrated by their standard cross-sections in Figures 2.2a through 2.2d. The roadways are designated by their primary function and level of mobility. The typical roadway cross-sections illustrated in Figure 2.2a to 2.2c are general standards and in certain cases, where implementation of the standard street width may not be possible due to various constraints, such as right-of-way, existing development, etc., these may be modified. Figure 2.2d is the standard eight (8) lane cross section for roadways expected to serve a substantial amount of traffic demand. Median, shoulder, lane widths and other features may be modified to the non-desired widths but still provide the functionality and safety designated in standard roadways. If such features are modified, the function of the street is expected to remain the same to serve the City's traffic demand.

Super Arterials

Super arterials transport large volumes of intercity, intra-city, and regional traffic at higher speeds with limited access control points. Super arterials generally connect to freeways to distribute traffic to other facilities, such as major and secondary arterials and collector facilities serving the City, and to other regional networks. At a minimum, super arterials have a 124-foot wide right of way consisting of six travel lanes, two parking lanes, and may have a raised median of up to 12-feet wide. On-street parking, if permitted, is restricted to distances of 300 feet or greater from signalized intersections. This classification is modified in the SCLA Specific Plan area, as discussed later in this section.

Super arterials can also have the lane configuration of six travel lanes, a center left-turn lane, and additional number 4 lanes to accommodate right-turn lanes at intersections and for right in /



right out and merge in / merge out movements for commercial driveway access. This lane configuration requires a curb to curb width of 116 feet and a 136-foot wide right of way. At intersections, the super arterial can have a double left-turn lane, three through lanes, and a right-turn lane. The lane configuration requires a centerline to curb width of 64 feet and a centerline to right of way width of 74 feet.

Currently, this category includes Bear Valley Road east of Petaluma Road. The City's recently updated Circulation Map at build-out indicates that the full extent of Bear Valley Road, Palmdale Road, Mojave Drive, and US-395 are designated as super arterials.

Major Arterials

Major arterials facilitate the mobility of large volumes of intra-city traffic. These streets access freeways or super arterials and distribute traffic to secondary arterials or collector streets. Major arterials have a 100-foot minimum right of way consisting of a minimum of four travel lanes, two parking lanes, and a 12-foot wide, two-way left-turn median lane. Traffic signals are located at major intersections. Parking may be prohibited near intersections or in segments. Similar to the super arterials, this roadway is modified in the SCLA Specific Plan area, as discussed later in this section. Existing major arterials in the planning area include: 7th Street, Amethyst Road, El Evado Road, Green Tree Boulevard, Hesperia Road, and La Mesa Road east of Amethyst Road.

Residential Arterials

Residential arterials transport large volumes of intra-city traffic to and from residential areas. These streets connect to major arterials, arterials, and collectors. Residential arterials have a minimum right of way of 100 feet, four traffic lanes, and two 8-foot parking lanes. Traffic signals are located at major intersections. Parking may be prohibited near intersections or in segments. La Mesa Road, west of Amethyst Road, is the only designated residential arterial.

Arterials

Arterials serve a similar function as major arterials, although they accommodate relatively lower traffic demands. The standard 84-foot right of way contains four travel lanes, with a center left-turn lane, and parking is prohibited. Alternatively, parking may be allowed without a center turn lane and may be prohibited near intersections or in segments. Left-turn and right-turn lanes are provided, as needed, at intersections. Some of the arterials in Victorville include Amargosa Road, Eagle Ranch Parkway, Hook Boulevard, Mariposa Road, Mesa Linda Avenue, Topaz Road, Village Drive, and most of El Evado Road.



Figure 2.2a

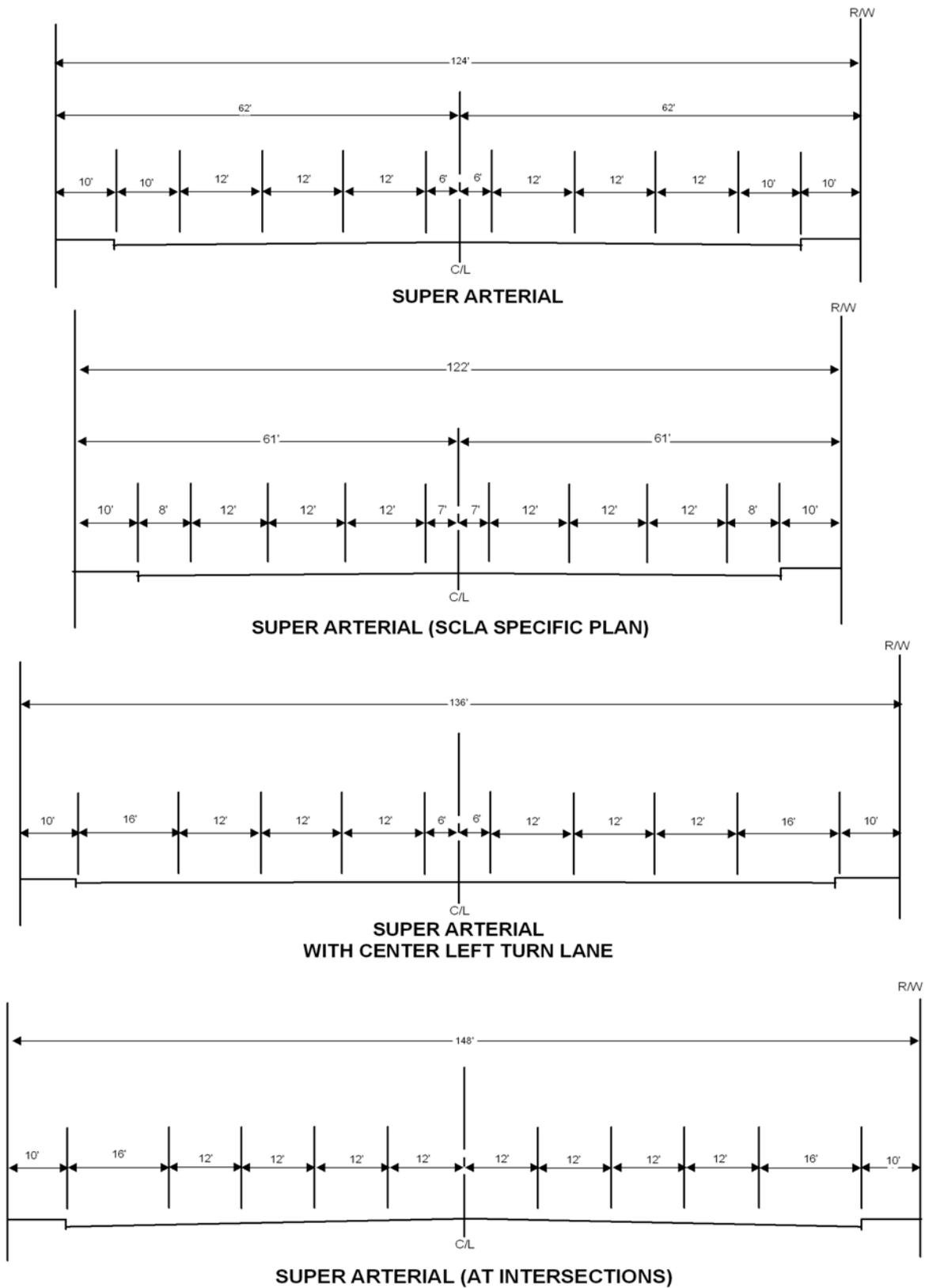




Figure 2.2b

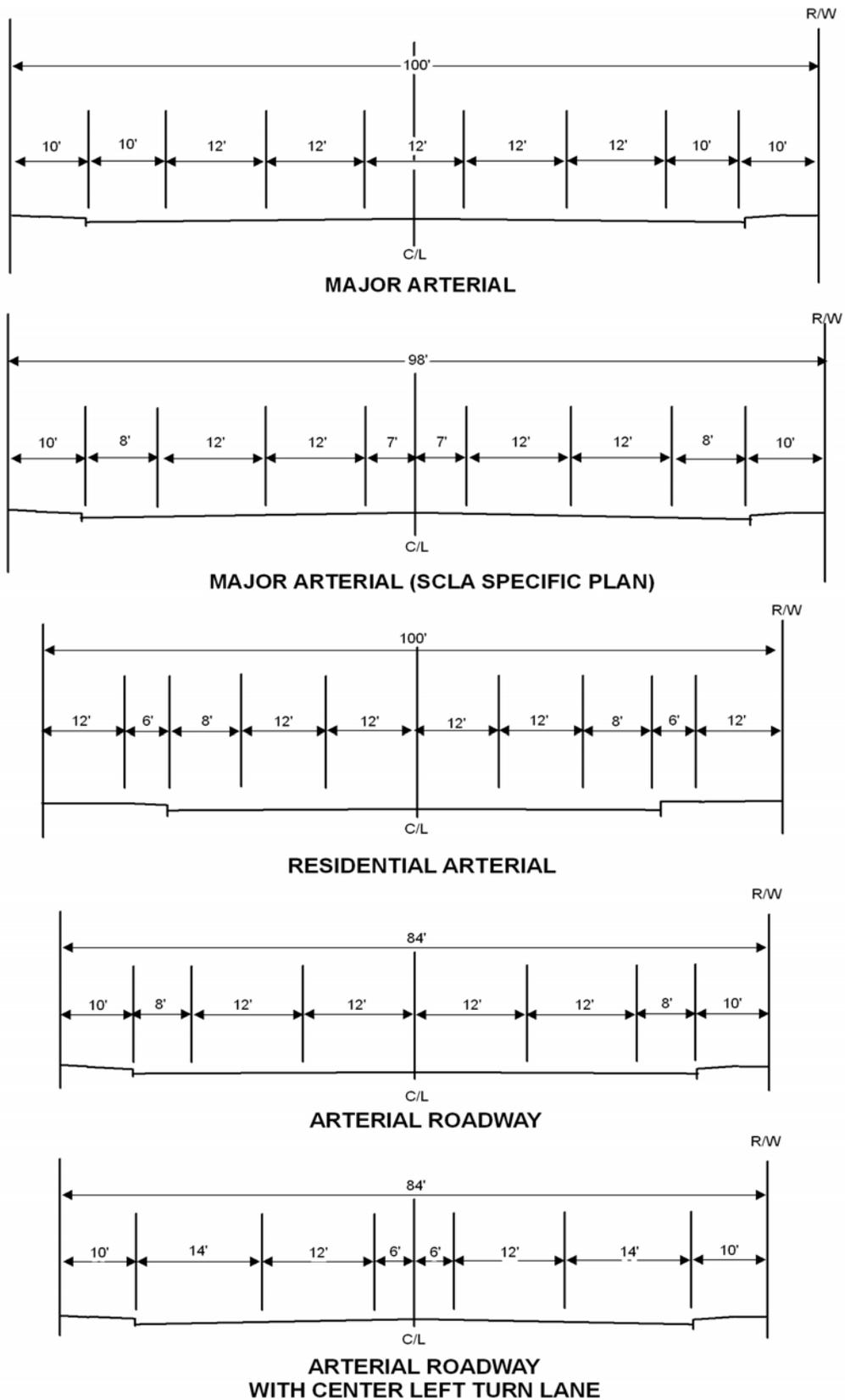




Figure 2.2c

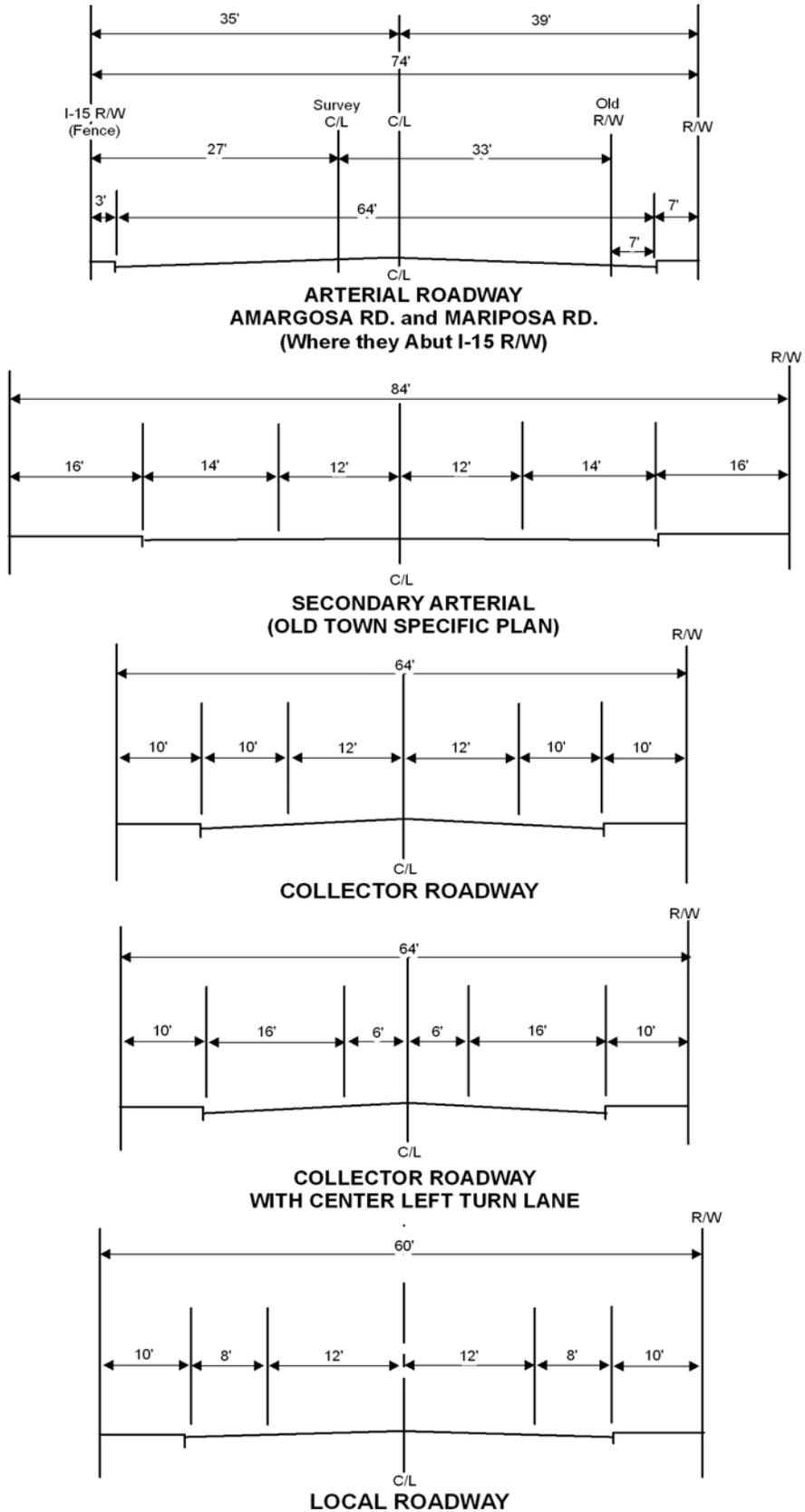
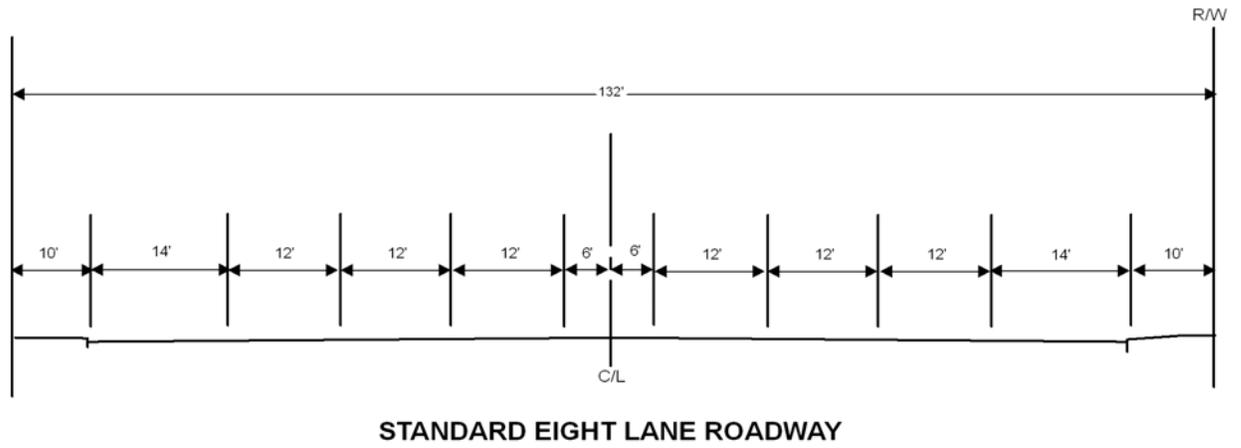




Figure 2.2d





Secondary Arterials

Secondary arterials are localized in the Old Town Specific Plan area, situated in the northeastern part of the City, bounded by I-15 to the west, Hesperia Road to the east, Mojave Drive / Verde Road to the south, and E Street to the north. The 84-foot right of way allows for wider sidewalks and four travel lanes. Exclusive parking and turning lanes (left and right) are not provided. The only secondary arterial is on 7th Street between Forrest Avenue and D Street.

Collectors

Collectors are streets that provide circulation within a defined geographic area, connecting this area to intra-city traffic routes. Some motorists may use collectors as through routes, but the primary function of a collector is to connect local traffic to larger streets and to provide access to nearby destinations.

Collectors contain two travel lanes and two parking lanes, with a 64-foot right of way. Alternatively, collectors may have two travel lanes and a center left-turn lane with parking prohibited near intersections or in segments. Collector streets in the planning area include 1st Avenue, 9th Avenue, Cobalt Road, Cypress Avenue, Luna Road, Pacoima Road, Reno Loop, Sycamore Street, and Tawney Ridge Lane.

Local Streets

Local streets provide direct access to adjacent properties and transport local traffic from these properties to higher-volume, higher-speed facilities. In general, local streets are not intended to carry through traffic. The 60-foot right of way contains two traffic lanes and two parking lanes. Sidewalks are generally provided within a 10-foot, right of way. Most streets in residential neighborhoods are designed as local streets.

Modification of Design Standards in Specific Plan

The above street classification system may be modified for Specific Plans. For example, the SCLA Specific Plan specifies a slightly altered section for super arterials and major arterials. The super arterials in the airport area have a 122-foot wide right of way, with a continuous 14-foot wide left-turn pocket and narrower parking lanes. Similarly, major arterials have a 98-foot right of way, a continuous 14-foot wide left-turn pocket, and narrower parking lanes. Despite varying standards, functionality of the right of way does not deviate from the respective classification hierarchy.

Standard Eight (8) Lane Roadway

The standard eight (8) lane roadway would be implemented on those roadway segments serving a substantial amount of travel demands including commute traffic, goods movement, and local circulation needs. This roadway facility would be constructed where adjacent land uses to the roadway and environmental resources would not be potentially impacted and where substantial right-of-way acquisitions to construct would not be required. Existing roadways will not be widened where substantial impacts would occur if an eight lane segment were constructed. For example,



even travel demands along Bear Valley Road are high and will grow, roadway segments along Bear Valley Road are not planned to be widened to eight lanes due to the resulting impacts.

2.3 Public Transportation

Public transportation serves an alternative means of travel to the automobile and provides improved mobility choices, while making more efficient use of available roadway capacity. In comparison to the base service in 1998, transit service in the Victor Valley transit service area has expanded from providing approximately 4,480,200 passenger miles to approximately 11,055,700 passenger miles in 2003, with the number of average weekday transit trips rising from about 2,579 daily trips in 1998 to roughly 3,766 average weekday transit trips in 2003. This growth in transit services correlates to associated growth in Victorville and surrounding areas.

2.3.1 Bus Service

Bus service in the City of Victorville is provided by the Victor Valley Transit Authority (VVTA), a joint powers agency serving Victorville and adjacent areas. The VVTA service area is comprised of the cities of Adelanto, Hesperia, and Victorville, the Town of Apple Valley, and San Bernardino County. Within the joint powers area, the VVTA currently operates 13 fixed-routes with various transfer points to adjoining routes, with additional subscriber services for certified riders. There are ten fixed-routes providing service within or through Victorville. Transit service currently is offered from 6:00 AM to 9:00 PM, Monday through Friday, and from 7:00 AM to 8:00 PM on Saturdays, with no service on Sundays and national holidays. Table 2.1 and Figure 2.3 summarize the current fixed routes offered by VVTA within the City. The VVTA buses are equipped with bicycle racks that facilitate intermodal bicycle-transit trips. These racks can accommodate two bicycles at a time.

For physically challenged patrons, Direct Access Transit is available by reservation only. Direct Access Transit is available the same dates and times as general transit service and observes the same holidays.

Regional commuter service from the City of Victorville was initiated in July 2002 but discontinued in July 2005. The commuter service was a three-year demonstration project funded with a Congestion Mitigation Air Quality (CMAQ) grant from the Federal Transit Administration (FTA), which at the end of the three-year period would be funded by the VVTA or discontinued on unavailability of funds. The program provided two commuter routes from Victorville to downtown San Bernardino and the other, to Rancho Cucamonga Metrolink station and Ontario Mills. Currently, VVTA does not provide commuter service beyond the Victor Valley region.



Table 2.1 Existing Bus Routes

Route	Description	Route	Key Service	Key Victorville Activity
21	Tri-Community	Victorville - Phelan	Mall Boulevard Bear Valley Road	Mall of Victor Valley
22	Helendale	Victorville - Oro Grande	La Paz Drive 7 th Street Mojave Drive SR-18 D Street National Trails	Victor Plaza Victor Valley Hospital Victor Valley Transportation
31	Adelanto	Adelanto - Victorville	Palmdale Road 7 th Street La Paz Drive	Victor Plaza
32	Adelanto	Victorville - Adelanto	La Paz Drive 7 th Street Palmdale road US-395	Victor Plaza
41	Victorville / St.	Victorville - Apple Valley	La Paz Road 7 th Street D Street Stoddard Well	Victor Plaza Victor Valley Junior High Victor Valley Transportation
43	Apple Valley /	Victorville - Apple Valley	Bear Valley Road	Mall of Victor Valley Desert Valley Hospital Victor Valley College Community Health
44	Mall / Hesperia	Victorville - Hesperia	Bear Valley Road	Mall of Victor Valley
45	Victorville /	Victorville - Hesperia	La Paz Road Green Tree Nisqualli Road Hesperia Road Bear Valley Road	Victor Plaza Victorville Post Office Desert Valley Hospital Victor Valley College
51	Victorville	Victorville	Palmdale Road Amargosa Road Village Drive Mojave Drive Forrest Avenue Seneca Road Hesperia Road Green Tree	Victor Plaza Victorville City Hall Victor Valley High School Victor Valley Hospital Mall of Victor Valley
52	Victorville / Mall	Victorville	7 th Street Palmdale Road La Mesa Road Bear Valley	Victor Plaza Mall of Victor Valley

Source: Victor Valley Transit Authority, 2006



2.3.2 Passenger Rail

Passenger rail service to the City is provided by Amtrak. Figure 2.3 illustrates passenger and freight routes serving the City of Victorville. Located on the north side of D Street, between 2nd Street and 6th Street, in the northeastern section of the City, the Victor Valley Transportation Center offers travelers multi-modal services and facilities. Amtrak's Southwest Chief Liner connecting Chicago, Illinois with Los Angeles, California, via Arizona, New Mexico, Colorado, Kansas and Missouri, offers daily service from the City of Victorville to Los Angeles. This train offers a morning and an evening commute to and from Los Angeles. Westbound, travelers can connect to the Coast Starlight in Los Angeles and the Pacific Surfliner in Fullerton. In addition, Amtrak Motor Coach service to and from San Joaquin trains in Bakersfield also serve Victorville with two daily round trips.

The facility is fully accessible to persons using wheelchairs, is a transfer point for Amtrak national rail service and local bus. It promotes the use of alternative modes other than driving the personal automobiles with availability of approximately 145 parking spaces in a lighted, fenced parking lot and providing bicycle lockers. Since, the station is not staffed by Amtrak, tickets, baggage, or package express shipments are not handled at this location. The nearest stations offering these services are in Los Angeles or Bakersfield.

2.4 Freight Operation

In addition to passenger rail, the City is served by a major freight rail corridor. The Burlington Northern Santa Fe BNSF operates freight rail services through the City of Victorville with a double main line and lead tracks for industrial uses. The services offered include transporting containers, trailers, and chemical/oil tankers. Existing major inter-modal cargo loading facilities are located in ports of Long Beach and Los Angeles and in the future, with the expansion of the SCLA, the City will serve as a major hub for inter-modal cargo transfer and distribution. Freight Operation

2.5 Park and Ride Facilities

Public transportation within the City of Victorville is supported by the convenience of park-and-ride lots. As shown in Figure 2.3, the City has two existing park-and-ride lots, and another proposed to be opened in 2007. The existing lots are located at the following locations:

Victor Valley Transportation, off D Street – 145 parking spaces

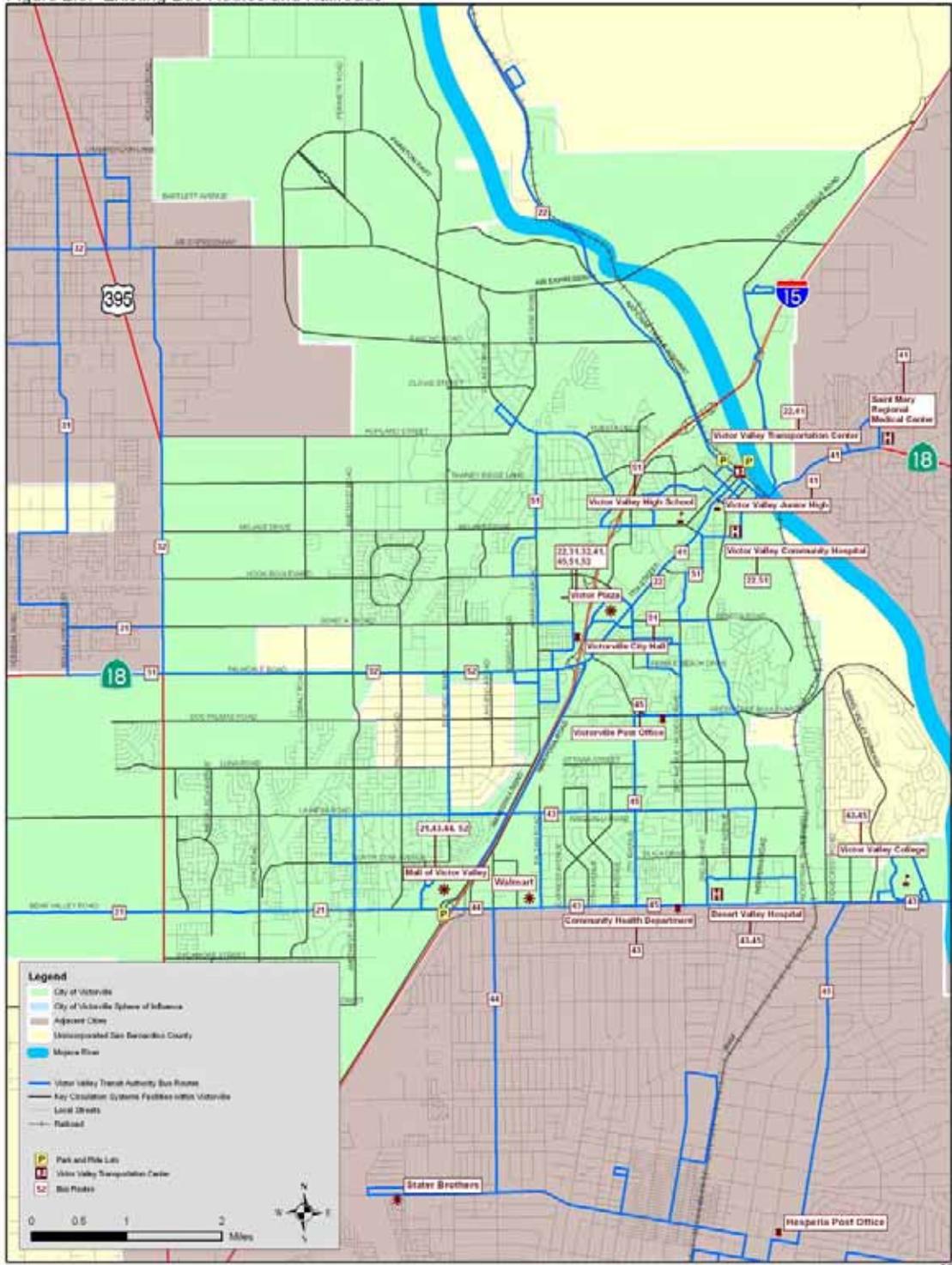
Southwest corner of Amargosa Road and Bear Valley Road – this park-and-ride off Amargosa Road has been improved and has capacity up to 150 parking spaces.

2.6 Bicycle and Pedestrian Facilities

Non-motorized modes of transportation include bicycling and walking, which are both important means of adult and youth transportation in Victorville. In 2001, SANBAG updated the *San Bernardino County Non-Motorized Transportation Plan*. As part of the plan, the Victor Valley Area Non-Motorized Plan was developed which designates various corridors, thoroughfares, and facilities to encourage bicycle and pedestrian use.



Figure 2.3: Existing Bus Routes and Railroads





This plan is intended to encourage San Bernardino County and local jurisdictions to take measurable steps to promote and facilitate the use of non-motorized modes for daily travel and commuting in addition to recreational uses. Supplemental to coordinating and guiding the San Bernardino County's bicycle and pedestrian plans, programs, and projects, the non-motorized transportation plan for the Victor Valley area includes regional and intra-jurisdictional bicycle connections and pedestrian facilities.

The following are the three classifications of bicycle facilities in Victor Valley but not physically identified in the City of Victorville City limits.

Class I bikeways, such as 'bike paths', provide a completely separated right-of-way designated for exclusive use of bicycles and pedestrians with minimum cross flows by motorists. These are shared-use paths that may be used by pedestrians, skaters, wheelchair users, joggers and other non-motorized users.

Class II bikeways, such as 'bike lanes', provide a restricted right-of-way designated for the exclusive or semi-exclusive use of bicycles with through travel by motor vehicles or pedestrians prohibited, but with permitted vehicle parking and cross flows by pedestrians and motorists. This is a portion of roadway that has been designated by striping, signing, pavement delineation, and pavement markings for preferential or exclusive use of bicyclists.

Class III bikeways, such as on-street or off-street 'bike routes,' provide a R.O.W designated by signs or permanent markings and shared with pedestrians or motorists. Under the Caltrans Design Standards, Class III bikeways are designated by signage as a preferred route for bicycle use and routes.



2.7 Goods Movement

Goods movement is important to the vitality of businesses and in providing services to residents in the City of Victorville. In addition to rail freight, the basic mode of transporting goods within the City is trucking and vehicular delivery services. Pursuant to the City's General Plan, truck routes are designated on those arterials that minimize disturbance to noise sensitive land uses, such as residences, hospitals, churches, schools, etc. Chapter 12.36 of the Victorville Municipal Code institutes truck route regulations for commercial vehicles exceeding a maximum gross weight limit of 12,000 pounds. With the exception of making pickups or deliveries of goods, wares and merchandise from or to any building or structure located on non-truck routes, or for building construction or repair in these locations, trucks exceeding the specified weight limit are mandated to drive on City arterials that are clearly marked as a 'Truck Traffic Route'.

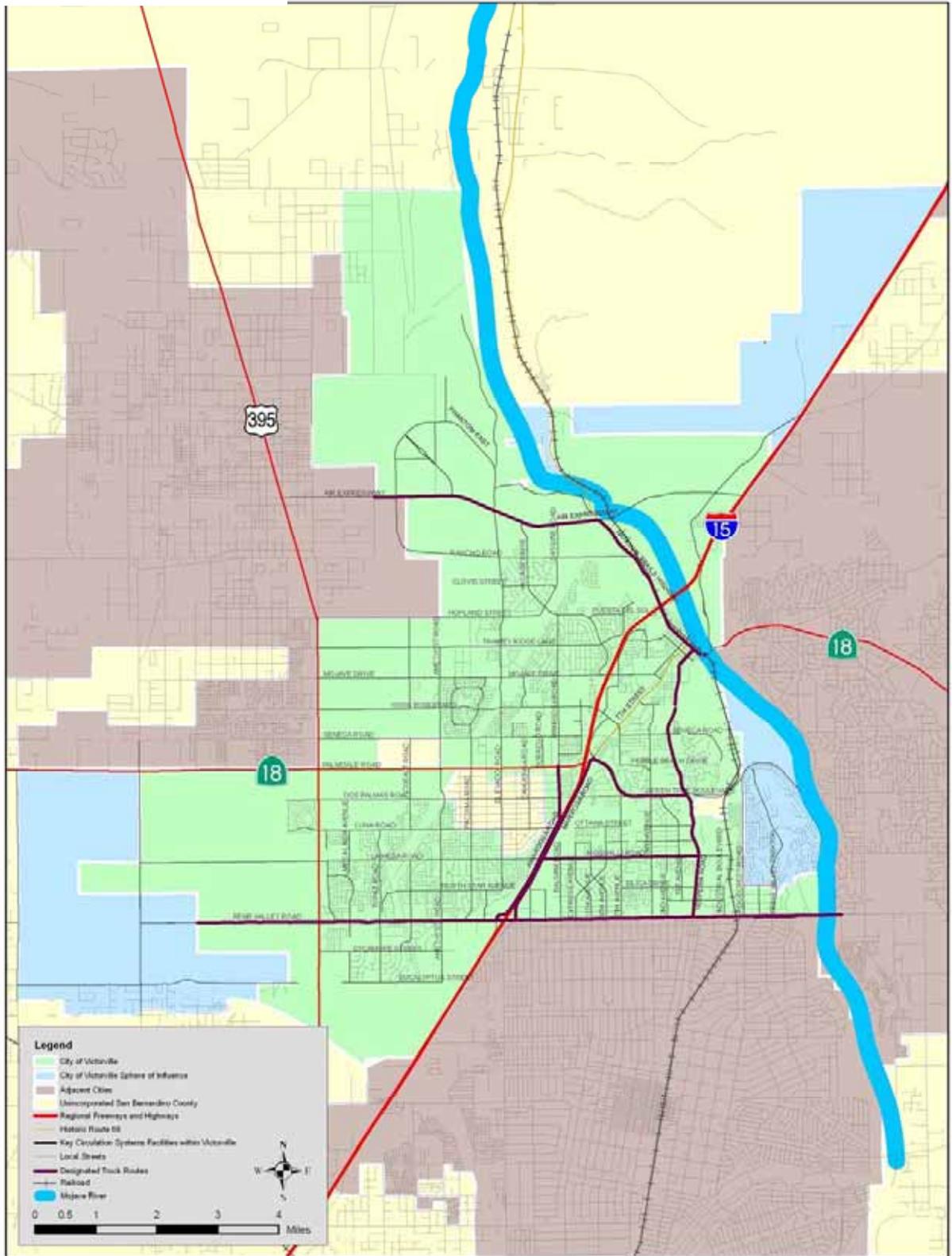
As Figure 2.4 indicates, the following streets are designated as truck routes within the City of Victorville:

- Air Expressway
- National Trails Highway / D Street
- Hesperia Road from Bear Valley Road to D Street
- Green Tree Boulevard from 7th Street to Hesperia Road
- Mariposa Road from Bear Valley Road to Green Tree Boulevard
- Bear Valley Road within the City limits
- Amargosa Road from Bear Valley Road to Palmdale Road
- Nisqualli Road from I-15 to Hesperia Road

All designated truck routes have access to the regional freeways within the Victor Valley area.



Figure 2.4: Existing Truck Routes





3.0 EXISTING TRAFFIC CONDITIONS AND FORECASTED TRAFFIC DEMAND

3.1 Existing Traffic Conditions

This section summarizes the results of traffic analysis that was conducted to evaluate existing conditions on roadways and at intersections within the City of Victorville. Traffic counts throughout the City were conducted in September, October and November 2005. Tube counts were used to determine average daily traffic (ADT) on the City's roadway segments (either 24-hour or 7-day counts were conducted depending on the location).

Roadway segment analysis is based on comparing approximate average daily traffic (ADT) volume to a related highway capacity and service level. The existing travel demand is compared to the capacities for a particular roadway classification. Appendix A provides the detailed summary of the roadway segment analysis and presents existing daily traffic volume, classification of arterial facilities, number of lane and capacity for all roadway segments in the City of Victorville. Appendix A also includes the existing evaluation of State facilities and ramp junctions within the City of Victorville.

Some of the highest traveled corridors within the City are the east-west corridors such as Bear Valley Road, Palmdale Road, portions of D Street, Nisqualli Road, La Paz Drive and Roy Rogers Drive. Bear Valley is probably serves some of the highest travel demands in Victorville and Victor Valley. Within the City limits a large portion of Bear Valley maintains six lanes with several segments approaching or at capacity. Palmdale Road for the most part is a four lane, divided highway and also serves a substantial volume of east-west traffic. Both Bear Valley Road and Palmdale Road serve commuter, inner- and intra- City traffic as well as serving as a principal access to I-15. These roadways currently have roadway segments at poor service levels and travel demands are expected to grow on these roads by 2035. Service levels on segments of Bear Valley Road and Palmdale Road are LOS D or worse with many roadway segments at LOS E or LOS F.

The north-south roadways with some of the highest traffic volumes and delays include Hesperia Road, Amargosa Road, Mariposa Road, and US-395. Hesperia Road is located on the east side of I-15 and is the principal north-south roadway that provides continuous connectivity from Old Town south to Bear Valley Road. US-395 is located on the west side of the City and providing inner-City access as well regional access and intra-City travel for the Victor Valley. Amargosa Road and Mariposa Road parallel I-15 and primarily serve the commercial, office and industrial uses along the corridor as well as serving as a by-pass to I-15 congestion due to high peak period commuter travel.

Existing intersection operations are also summarized in Appendix B. Many of the intersections along the heavily traveled roadways mentioned above are operating at LOS D or worse with long delays. A number of ramp intersections that access I-15 operate at low service levels due to the high peak hour demands along Interstate 15.

3.2 Future Traffic Conditions – Forecasted Year 2035

To support future travel demand and land use growth, circulation plan changes are recommended for the 2035 build-out year. The 2035 circulation plan modifications are based on



future average daily traffic (ADT) volumes generated by the validated City of Victorville travel demand model. Although the City of Victorville’s General Plan update is designated for year 2030, the forecasted timeframe utilized from the model was year 2035 which represent General Plan buildout conditions. The forecasted year 2035 growth scenario is the latest validated year in the model. Using the travel demand model year 2035 provides a conservative or worse case scenario for the transportation and circulation conditions in 2030. The City of Victorville travel demand model is sub-regional model of the SANBAG regional model that provides more detail and accuracy for the City of Victorville and the adjacent areas of the Victor Valley. The City of Victorville travel demand model takes into account planned land uses changes, roadway and transportation improvements and modifications, infrastructure changes, modal usage, demographic forecasts, and regional growth.

The 2035 trip forecast assumes seven of the City’s twelve land use planning areas are 90 percent or more built out. The planning areas and their 2035 buildout assumptions (%) are: North Mojave (92), Turner Heights (100), Central City (93), Spring Valley Lake (95), East Bear Valley (97), West Bear Valley (100) and Golden Triangle (90). The Northern Expansion Area is assumed 43 percent built out in 2035; approximately 50 percent of this area is designated Open Space.

As indicated in Table 3.2-1, the proposed General Plan Update, based on the proposed land use changes, result in substantial increases in square footage and dwelling units. The land use comparisons were taken directly from the City of Victorville’s travel demand model.

Table 3.2.-1					
Land Use Comparisons – Existing Conditions to Buildout					
	Total Acres	Square Foot (in 000s) (Commercial & Industrial)	Total Dwelling Units	Single Family Units	Multi-Family Units
Existing (2005)	22,577	29,829	33,515	26,803	6,712
Buildout	99,253	118,794	138,617	87,014	51,603
Increase (Buildout - Existing)	76,676	88,965	105,108	60,211	44,891
Source: City of Victorville Travel Demand Model, PB.					

Table 3.2-2 provides projections of the trips generated by the existing (2005) and the proposed General Plan Update (2030) Land Use Plan. The generated trips are based on the land uses presented in Table 3.2.1.



Table 3.2-2 Travel Demand Model – Calculated Trip Generation for Existing Conditions (2005) to General Plan 2030					
	Total Acres	Square Foot (Commercial & Industrial)	Total Dwelling Units	Single Family Units	Multi-Family Units
Existing (2005)	457,178	203,905	253,272	210,352	42,920
General Plan 2030	1,475,793	633,544	842,249	606,541	235,708
Increase (from Existing)	1,018,615	429,638	588,977	396,189	192,788
Percentage Difference	+223%	+211%	+233%	+188%	+449%
Source: City of Victorville Travel Demand Model, PB.					

The proposed General Plan Update will result in a substantial increase in trips at buildout of approximately 1.8 million ADT. However, the proposed year 2035 Circulation System is planned to match the projected traffic load and the capacity of the street system. Both the level of service for roadway segments and for area intersections and recommended traffic improvements when feasible.

Forecasted travel demands indicate the City of Victorville and Victor Valley is expected to have substantial growth resulting in large demands on the circulation network. Existing high traveled corridors such as Bear Valley Road, Palmdale Road, Hesperia Road and US-395 will have more demands. Substantial increases in travel demands are also seen on the following City roadways:

- Amethyst Road from Bear Valley Road to Palmdale Road
- El Evado Road from Palmdale Road to Mojave Road
- Roy Rogers Drive from Amargosa Road to Civic Drive
- Green Tree Boulevard from Hesperia Road to Yates Road (planned extension)
- Phantom East from Air Expressway Boulevard to Perimeter Road
- Amargosa Road from Luna Road to Dos Palmas Road
- Hook Road from Amethyst Road to US 395
- Nisqualli Road from east of Hesperia to 11th Street
- Seneca Drive from Amargosa Road to US 395
- La Mesa Road
- La Paz Drive

The roadways listed above would operate at a LOS D or worse if no improvements or upgrades to the existing geometry or roadway capacity were made. Many of the roadway segments would have long delays and substantial vehicle queues.



The City of Victorville is located in the heart of the Victor Valley and its transportation system serves both local circulation and regional travel in and throughout San Bernardino County. Several regional highways including Federal highways such as Interstate 15 and US-395 transverse through the City carrying substantial amounts of traffic considered as “passer by traffic”. This traffic is not produced or attracted to areas within the City of Victorville as it is destined to areas outside of the City such as other Victor Valley cities or recreational areas. This regional demand may impact the circulation within Victorville’s City limits but the traffic does originate or is destined for areas within the City. The regional demand impacting the Federal and State highway facilities is the surrounding growth in Southern California and should not be attributed to the City and should the City be responsible for mitigating these facilities serving substantial travel demands originating and destined for areas outside of the City.

3.3 Congestion Management Program (CMP)

The San Bernardino County Congestion Management Program monitors traffic levels in the County based on traffic volumes at roadway intersections. The *Congestion Management Program* (CMP) was created statewide as a result of Proposition 111 and has been implemented locally by the San Bernardino County Metropolitan Transportation Authority (SBCMTA). The CMP for San Bernardino County requires that the traffic impact of individual development projects of potentially regional significance be analyzed. A project is classified by the CMP as regionally significant if it would increase traffic at a CMP intersection by 50 or more two-way trips during either AM or PM peak hours.

A CMP traffic impact analysis is required if a project will add 150 or more trips to the freeway mainline location in either direction, during the AM or PM weekday peak hour. Analysis is also required at all CMP intersections stated in the CMP to which the project will add 50 or more peak hour trips. The traffic impact analysis must be submitted to Caltrans for review and comment. Since the City complies with the Nexus Study requirements included in the CMP, traffic studies are not required to be reviewed by SANBAG.

Roadways within the City of Victorville included in the SANBAG Congestion Management Program (CMP) include Interstate 15, US-395, SR-18 (D Street and Palmdale Road and Bear Valley Road (Amargosa Road to east). CMP segments designated with LOS F in the existing (2005) scenario include Bear Valley Road from Hesperia Road to Amargosa Road, US-395 from Cactus Road to Bear Valley Road and SR-18 between Interstate 15 and Stoddard Wells Road.

The following CMP seven (7) intersections are required to be monitored by the City of Victorville for LOS analysis and the report submitted to SANBAG. The 2005 LOS (AM/PM) is: (1) Bear Valley Road/Amargosa Road (LOS C/D), (2) Bear Valley Road/Mariposa Road (C/D), (3) Bear Valley Road/Cottonwood Avenue (LOS C/C), (4) Bear Valley Road/7th Avenue (LOS D/C), (5) Bear Valley Road/Hesperia Road (LOS C/C), (6) Bear Valley Road/I Avenue-Tamarisk Road (LOS C/C) and Palmdale Road/Mariposa Road (LOS C/D).

Traffic increases that would cause an intersection to operate at level of service (LOS) F during peak periods are considered unacceptable by the CMP. LOS F equates to a volume/capacity ratio greater than 1.00, and indicates that the roadway is operating beyond its capacity level, and that travel speeds are reduced to an unacceptable level.



4.0 RECOMMENDED CIRCULATION IMPROVEMENTS/UPGRADES

To maintain the circulation and mobility in the City of Victorville, recommendations for planned roadway improvements or roadway classifications upgrades are presented. These upgrades have been developed based on an evaluation of roadway capacities by facility classifications compared to future ADT volumes forecasted from the model. In addition, preliminary assessment and initial roadway classifications were coordinated with the City's traffic engineering staff.

Planned Changes to the Roadway Network

By 2035 other roadway extensions and improvements are planned or approved to be in place within the City. These roadway upgrades include the construction of new extensions roadways, realignments and roadway classification and capacity upgrades. Included with these approved or planned improvements would be intersection modifications, new intersections, traffic control upgrades such as signalization, and geometric modifications such as shoulders and turn lanes. The following roadway changes, consisting of new extensions and/or realignments, are already planned for implementation prior to the 2035 build-out year. The planned changes include but are not necessarily limited to the extensions listed below.

- The extension of Topaz Road from Sycamore Street to Bear Valley Road
- The extension of La Mesa Road west of Cantina Drive and to Balsam Road
- The extension of Dos Palmas Road from Mesa Linda Avenue to US-395
- The extension of Pacoima Road from Maricopa Road to Seneca Road
- The extension of Seneca Road from Amethyst Road to US-395
- The extension of Hook Boulevard from Diamond Road to US-395
- The extension of Cobalt Road from Mojave Drive to Hopland Street
- The extension/realignment of Tawney Ridge Lane from Ferndale Road to US-395
- The extension of Hopland Street from Cobalt Road to US-395
- The extension of El Evado Road from Haver Hill Street to Air Expressway Boulevard
- The extension of Rancho Road from Amargosa Road to National Trails Highway
- The extension/realignment of Rancho Road from El Evado Road to Air Expressway Boulevard
- The extension of Air Expressway Boulevard from National Trails Highway to the I-15 Freeway
- The extension of Green Tree Boulevard from Hesperia Road to Yates Road
- The extension of Seneca Road east of Hesperia Road
- The extension of Silica Drive from 3rd Avenue to west of Highgate Avenue
- The extension of 3rd Avenue from south of Mayapan Lane to Bear Valley Road
- The realignment of Spring Valley Parkway from Huerta Street to Bear Valley Road
- The extension of Ottawa Street from Arrowhead Drive to Ottawa Plane

Recommended Roadway Classification Upgrades and Improvements

The roadway classification standards for the City of Victorville is shown in Table 4.1. Table 4.1 shows two different categories of super arterials and major arterials for the areas outside and inside the SCLA Specific Plan area. The difference super arterials and major arterials outside



and inside the SCLA Specific Plan area is the width of the roadway; however, the overall ADT capacities are the same for each roadway type. In addition, certain roads, including Amargosa Road, Mariposa Road, and all roads in the Old Town Specific Plan, are limited by their built-out environments and have a set ADT capacity.

The values presented in Table 4.1 represent the approximate ADT volume capacity. A LOS C for roadway segment is the general accepted service level for City such as Victorville and the surrounding Victor Valley and generally, a LOS C ranges between 70% to 79% of the approximate ADT volume capacity. As detailed in Appendix A, several segments are currently and are expected to operate conditions at LOS D or worse.

Facility Type	Number of Lanes	Two-Way Turn Lane	Positive Median (Divided)	Parking	Total Minimum Width (Feet)	ADT Capacity
Special 8 Lane Arterial	8	N	Y	Y/N	148	75,000
Super Arterial (SA1) /Super Arterial Modified (SA2)	6	N	Y	Y\N	124	56,300
Super Arterial (SCLA Specific Plan)	6	N	N	Y\N	122	56,300
Major Arterial	4	Y	Y	Y	100	37,500
Major Arterial (SCLA Specific Plan)	4	N	N	Y	98	37,500
Arterial	4	Y/N	N	Y/N	84	37,500
Amargosa Road & Mariposa Road ¹	4	N	N	N	74	37,500
Secondary Arterial (Old Town Specific Plan)	4	N	N	N	84	25,000
Residential Arterial	4	N	N	Y	100	25,000
Collector	2	Y/N	N	Y/N	64	18,800/ 12,500
Local	2	N	N	Y	60	10,000

¹Certain segments only.



Roadway classification changes are recommended for the 2035 circulation system to improve service levels and maintain circulation and mobility within the City. These recommendations result from the evaluation of the expected growth and changes to the existing circulation within the City of Victorville and surrounding areas. Even though some facilities are proposed to be upgraded with additional capacity, the calculated service level may still be below unacceptable levels.

To reach an acceptable level of service on roadways with substantial forecasted travel demands, the transportation corridor would be required to be upgraded above and exceed the highest roadway classification desired by the City to satisfy the expected ADT volume. However, due to the potential impacts to the surrounding land uses, environmental resources, right-of-way needs, and to the community, the necessary upgrades and improvements may not be feasible for certain roadways. For example, Bear Valley Road is forecasted to have an ADT volume above 60,000 daily vehicles and in some segments this forecast is expected to exceed 70,000 daily vehicles. Bear Valley Road will be upgraded to the highest practical roadway classification of super arterial with an approximate ADT capacity of 56,300 vehicles. Future traffic operations on Bear Valley Road may remain at less than desirable levels due to the corridor's high demands resulting from the surrounding land uses and it serving as a principal corridor for the entire Victor Valley area. Upgrading Bear Valley Road to meet the traffic demands would proposed negative impacts to surrounding neighborhoods, property owners and environmental resources.

A standard eight (8) lane, divided roadway classification is also proposed for certain roadway segments that are expected to serve substantial amounts of traffic demands. The eight lane cross section is proposed for roadways where expansion to this width would not result in large impacts to the surrounding land uses, environment or neighborhoods.

The following is a summary of the roadway classification recommendations with the proposed circulation plan. The list identifies those roadways that would be upgrade to a higher classification and associated capacity. The existing or current roadway classification is provided in parentheses. The roadway classification and associated capacity and geometrics are listed in Table 4.1. Detailed summaries for the existing and year 2035 ADT volumes, facility type, roadway capacities, and service level is provided in Appendix A.

Standard Eight (8) Lane Roadway

- El Evado Road from Air Expressway to High Desert Corridor (Major Arterial)
- Eucalyptus Street from Amethyst Road to Interstate 15 (Major Arteria)

Super Arterials (SA1)

- Amethyst Road from Bear Valley Road to Palmdale Road (Collector/Major Arterial)
- Palmdale Road from the I-15 Freeway to Bellflower Street (Major Arteria)
- El Evado Road from Palmdale Road to Mojave Drive (Collector/Major Arterial)
- Mojave Drive from Village Drive to La Paz Drive (Arterial)
- Roy Rogers Drive from Amargosa Road to Civic Drive (Major Arterial)
- Green Tree Boulevard from Hesperia Road to Yates Road (planned extension, now Arterial)



Modified Super Arterials (SA2)

- Amethyst Road from Bear Valley Road to Palmdale Road (Collector/Major Arterial)
- Palmdale Road from the I-15 Freeway to Bellflower Street (Major Arterial)
- 7th Street from Green Tree Boulevard to Lorene Drive (Major Arterial)
- Hesperia Road from Center Street to Seneca Road (Arterial)
- Hesperia Road from Seneca Road to Green Tree Boulevard (Major Arterial)
- Green Tree Boulevard from Arrowhead Drive to Hesperia Road (Major Arterial)
- Green Tree Boulevard from 7th Street to Arrowhead Drive (Major Arterial)
- El Evado Road from Palmdale Road to Tawney Ridge Lane (Major Arterial)
- Amethyst Road from Palmdale Road to Mojave Drive (Major Arterial)
- Hesperia Road from Nisqualli Road to Silica Road (Major Arterial)
- Hesperia Road from Silica Road to Bear Valley Road (Major Arterial)
- El Evado Road from La Mesa Road to Palmdale Road (Major Arterial)
- Amethyst Road from Bear Valley Road to Palmdale Road (Major Arterial)
- Amethyst Road from Eucalyptus Street to Bear Valley Road (Major Arterial)
- Eucalyptus Street from Topaz Road to Amargosa Road (Arterial)
- Smoketree Road from Topaz Road to Amargosa Road (Arterial)
- Eucalyptus Street from Bellflower Street to US-394 (Major Arterial)
- Bellflower Street from Palmdale Road to Sycamore Street (Major Arterial)
- Bellflower Street from Sycamore Street to Eucalyptus Street (Major Arterial)
- Mojave Drive from Interstate 15 to La Paz Drive (Arterial)
- Roy Rogers Drive from I-15 SB Ramps to I-15 NB Ramps (Arterial)

Major Arterials

- La Mesa Road from Amethyst Road to El Rio Road (Arterial)
- El Evado Road from La Mesa Road to Palmdale Road (Collector/Arterial)
- Amargosa Road from north of Luna Road to Dos Palmas Road (Arterial)
- Mojave Drive from Amargosa Road to Ashley Glen Drive (Arterial)
- La Paz Drive from Plaza Drive to Valley Center Drive (Arterial)
- El Evado Road from Mojave Drive to Air Expressway Boulevard (Collector)
- Air Expressway Boulevard from El Evado Road to National Trails Highway
- Nisqualli Road from Balsam Road to 11th Avenue (Collector)

Arterials

- Topaz Road from Bear Valley Road to San Miguel Street (Collector)
- Seneca Drive from Amargosa Road to US-395 (Collector)
- Hook Boulevard from Amethyst Road to US-395 (Local/Collector)
- Hopland Street from west of Amethyst Road to US-395 (Collector)
- Ridgecrest Road from Chinquapin Drive to Yates Road (Collector)
- Yates Road from Ridgecrest Road to Fortuna Lane (Collector)
- Spring Valley Parkway from Bear Valley Road to Pahute Road (Collector)
- Silica Road from Hesperia Road to 1st Avenue (Local)
- Nisqualli Road from east of Hesperia Road to 11th Street (Collector)
- Topaz Road from La Mesa Road to Luna Road (Local/new road)
- 7th Avenue from Bear Valley Road to Nisqualli Road (Collector)



- Arrowhead Drive from Nisqualli Road to Yates Road (Collector)
- Ottawa Street from Arrowhead Drive to 11th Street (Collector)
- 2nd Avenue from Bear Valley Road to Jasmine Street (Collector)
- 3rd Avenue from Bear Valley Road to south of Mayapan Lane (Local Street)
- Balsam Road from Nisqualli Road to north of Nisqualli Road (Collector)

Secondary Arterials (Old Town Specific Plan)

- All roadways in the Old Town Specific Plan area should be classified as a secondary arterial or smaller, with a maximum ADT of 26,000. This is due to the existing built-out environment, which prevents future expansion. Including the following:
- D Street from the I-15 Freeway to 11th Street (Arterial/Collector)
- Hesperia Road from Verde Street to B Street (Collector)
- Amargosa Road and Mariposa Road (Collector)
- Amargosa Road, from north of Bear Valley Road to Luna Road, and Mariposa Road, from north of Bear Valley Road to Yates Road, will have a maximum ADT of 26,000. This is due to the existing built-out environment, which prevents future expansion.

Residential Arterial

- La Mesa Road from Cantina Drive to west of US-395 (Local Street)
- 11th Avenue from Bear Valley Road to Nisqualli Road (Collector)

Collector

- Cobalt Road from Hook Boulevard to Mojave Drive (Local Street)
- Pacoima Road from Maricopa Road to Seneca Road (Local Street)
- Luna Road from Cantina Drive to US-395 (Local Street)
- Dos Palmas Road from west of Cobalt Road to US-395 (planned extension) (Local Street)
- Tawney Ridge Lane from west of Amargosa Road to US-395 (planned extension/realignment) (new)
- 5th Street from Yucca Avenue to D Street (Local Street)
- Cypress Avenue from 9th Avenue to Nisqualli Road (Local Street)
- Yates Road from the I-15 Freeway to Arrowhead Drive (Local Street)
- Jasmine Street from Industrial Boulevard to Hesperia Road (Local Street)
- Hughes Road from La Paz Drive to Hesperia Road (Local Street)
- Puesta Del Sol Drive from Village Drive to Tawney Ridge Lane (Local)
- West Trail from Mojave Drive to Reno Loop Road (Local Street)
- East Trail from Mojave Drive to Reno Loop Road (Local Street)
- Reno Loop Road (Local Street)
- South Trail from Reno Loop Road to Seneca Road (Local Street)



The recommended roadway classifications changes for the SCLA and the Old Town Specific Plan are listed in Table 4.2.

Table 4.2	
Recommended Roadway Classifications for SCLA and Old Town Specific Plan (Proposed Classification)	
Old Town Specific Plan	
1	Change 7 th Street from Forrest Ave to D St. (Arterial)
Southern California Logistics Authority (SCLA)	
1	Phantom East from Air Expressway to Perimeter Road (Super Arterial)
2	Phantom West from Perimeter Rd. to Air Expressway Blvd. (Major Arterial)
3	Air Expressway Blvd. From west of Phantom West to Village Dr. (Major Arterial)

5.0 GOALS, OBJECTIVES, POLICIES, AND IMPLEMENTATION

The following goals, objectives, policies, and implementation measures are intended to achieve the vision of the City of Victorville. As part of this transportation evaluation the goals, objectives, and policies will also be documented in the Circulation Element of the General Plan Update and use to guide the City’s efforts to continue to build and maintain an efficient transportation system and circulation infrastructure to support the community development policies set forth in the Land Use Element.

Goal #1: GOOD MOBILITY – Provide a safe, efficient transportation system that enhances mobility for local residents and businesses, and facilitates regional travel for people and goods movement..

Objective 1.1: Provide sufficient traffic carrying capacity at intersections throughout the roadway network, to achieve LOS performance standards.

Policy 1.1.1: Maintain LOS “D” or better at intersections (as defined in the most current version of the Highway Capacity Manual), except in certain high-activity areas designated by the Planning Commission, where a LOS E is acceptable.

Policy 1.1.2: If a development project would worsen an intersection peak hour LOS to E or worse, it is considered a significant impact that must be mitigated. If a development project would worsen an already deficient intersection by an amount determined to be substantial by the City Traffic Engineer, it is considered a significant impact that must be mitigated.

Implementation Measure 1.1.1.1: Assess the traffic impacts of new development and redevelopment projects to determine whether the projects would cause affected intersections to operate at a deficient LOS, or would substantially worsen the already deficient LOS. A threshold for determination of what classes of projects trigger a traffic impact analysis or traffic study shall be established by the City Engineer.



Policy 1.1.3: Require new development and redevelopment projects to bear responsibility for the traffic system improvements necessary to mitigate the project's significant impacts at affected intersections, concurrently with the construction of such projects.

Implementation Measure 1.1.3.1: Typically, developers will construct necessary traffic system improvements. Alternately, in lieu of developer-provided improvements, the City will impose exactions, dedications, and/or fees on new development and redevelopment projects to fund improvements that mitigate significant safety and/or congestion impacts on the roadway network. These shall be based on a clear and proportional nexus between the level of project impact and the estimated cost of providing the improvements required to mitigate the impact.

Policy 1.1.4: Complete deficiency plans to mitigate near-deficient and deficient intersections to an acceptable level of service or to prevent degrading to a worse level of service.

Implementation Measure 1.1.4.1: Incorporate deficiency plan projects into the five-year Capital Improvement Program or into longer range plans.

Objective 1.2: Achieve and maintain mobility goals set forth in the countywide CMP, on local CMP segments.

Policy 1.2.1: Support and cooperate with all aspects of the countywide CMP for maintaining levels of service for CMP segments located in the planning area.

Implementation Measure 1.2.1.1: The City will be responsible for requiring, reviewing, and approving traffic impact analyses and traffic studies for all applicable private and public projects, in accordance with CMP standards for these studies.

Implementation Measure 1.2.1.2: Incorporate deficiency plan projects into the five-year Capital Improvement Program. or into longer range plans.

Objective 1.3: Complete the planned highway improvements.

Policy 1.3.1: Participate with Caltrans and SANBAG on the environmental documents for the realignment of US-395 through the Planning Area.

Policy 1.3.2: Complete the Project Approval and Environmental Document for the High Desert Corridor Project.

Policy 1.3.3: Prioritize General Plan improvements for new interchanges, interchange modifications, new road constructions, and road widenings.

Implementation Measure 1.3.3.1: Incorporate deficiency plan projects into the five-year Capital Improvement Program or into longer range plans.

Objective 1.4: Maintain Smooth Traffic Flow, Reduce and Minimize Traffic Conflicts



Policy 1.4.1: Restrict residential driveway access on arterial roadways to locations where a finding can be made that such access will not result in a significant safety problem, will not conflict with traffic movements, and will not result in a congestion impact.

Policy 1.4.2: Minimize through traffic in residential neighborhoods through a variety of land use controls, traffic control devices, signs, traffic calming techniques, etc.

Policy 1.4.3: Support and participate in regional efforts to improve/expand freight movement via trucks and train services, without increasing conflicts with passenger car traffic and without increasing congestion on the highway and arterial roadway networks.

Policy 1.4.4: Continue to enforce truck route restrictions throughout the planning area.

Objective 1.5: Ensure adequate planning and programming of roadway improvements.

Policy 1.5.1: Review and prioritize Transportation Systems Management (TSM) measures and incorporate into Capital Improvement Programming (CIP) as appropriate.

Implementation Measure 1.5.1: Each year, as part of the CIP effort, select a specific set of TSM measures to complete in the next fiscal year, to optimize the efficiency of the local roadway network. TSM measures include, but are not limited to:

- Intersection widening
- Installation of traffic control devices – signals and stop signs
- Signal timing optimization
- Signal synchronization
- Channelization
- Exclusive turn lanes
- Continuous, two-way left turn lanes
- Turn prohibitions
- Parking prohibitions
- One way streets
- Intelligent Transportation System technologies
- Traffic surveillance and incident control

Goal #2: EFFICIENT MULTI-MODAL TRANSPORTATION NETWORK - Meet diverse transportation needs of existing and future residents and businesses in the planning area through convenient, safe, multi-modal means.

Objective 2.1: Complete the Non-Motorized components of the Circulation Plan by 2020

Policy 2.1.1: Each year, as part of the CIP effort, consider the allocation of funds toward the completion of some portion of the Non-Motorized components of the Circulation Plan.

Objective 2.2: Expand public transit in conjunction with population growth



Policy 2.2.1: Require new development and redevelopment projects (public and private) to incorporate needed public transit facilities as identified by the Victor Valley Transit Authority (VVTA).

Implementation Measure 2.2.1.1: Consult with the VVTA during planning/design of major new development and redevelopment projects and public facilities, to incorporate appropriate public transit improvements, in optimal locations.

Implementation Measure 2.2.1.2: Consult with the VVTA regarding regular assessments of special transit needs for low-income, elderly, handicapped, and other residents who do not have access to private automobiles or the public bus system.

Goal #3: ADEQUATE INFRASTRUCTURE - Develop and maintain infrastructure that supports the transportation and circulation needs of the community in a cost-effective and environmentally sensitive manner.

Objective 3.1: Meet multiple infrastructure needs within common public rights-of-way.

Policy 3.1.1: Planning and design of new roadways and the expansion/completion of existing roadways shall include a consideration of water, sewer, storm drainage, communications, and energy facilities that can be co-located within the roadway right of way.

Implementation Measure 3.1.1.1: Establish specifications for the construction of utility infrastructure within each roadway functional classification.

Objective 3.2: Design infrastructure that minimizes impacts to the environment.

Policy 3.2.1: Minimize or prohibit the use of landscape materials that require regular watering in the design of landscaping for public streets.

Policy 3.2.2: Include in the design specifications for public and private streets structural and non-structural techniques to filter stormwater runoff prior to conveyance to storm drain inlets.

Policy 3.2.3: Program the funding and construction of wet and dry utilities within City service areas concurrent with the actual need for those improvements.

Objective 3.3: Provide adequate infrastructure improvements in conjunction with new development and redevelopment projects

Policy 3.3.1: Require private and public development projects to be responsible for constructing roadway improvements along all frontages abutting a public street right of way, in accordance with the design specifications for that roadway. Such road frontage improvements shall be constructed concurrently with, and completed prior to the opening of the project.

Implementation Measure 3.3.1.1: Require private and public development projects to be responsible for constructing roads, traffic control devices, and wet and dry utility improvements necessary to meet the needs of the project, and to properly integrate the projects into the



established and planned infrastructure systems. Such improvements shall be constructed concurrently with and completed prior to opening of the project.

6.0 FUTURE CIRCULATION

6.1 Year 2030 Circulation and Operations

Through implementation of the 2030 Circulation Element, the City seeks to maintain LOS C or better on all non-CMP roadway segments and LOS D or better on all non-CMP intersections. For CMP segments and intersections, the City seeks to maintain LOS E or better. In addition to these standards, the City of Victorville would continue to use the following thresholds of significance for traffic impacts: (1) If a development project worsens an intersection peak hour LOS to E or worse, it is considered a significant impact and must be mitigated; (2) If a development project would worsen an already deficient intersection by a substantial amount as determined by the City Traffic Engineer, it is considered a significant impact that must be mitigated.

The forecasted Level of Service (LOS) for each roadway segment for 2035 is summarized in Appendix A. The majority of the segments with unacceptable LOS occurs along Interstate 15 and Bear Valley Road, or occurs on roadway segments in built out areas of the City where the forecasted traffic volumes exceed the existing roadway capacity. LOS D, which is unacceptable for local streets where LOS C is the standard, occurs on approximately twenty-five (25) local and collector roadway segments.

The recommended roadway classifications and capacities used for the 2035 Circulation Plan are listed in Table 4.1. LOS C for roadway segments is the general accepted service level for local roadway segments in the City and LOS D for City intersections. Even though extensive upgrades are recommended for the circulation system to increase capacity, an acceptable level of services will not occur along certain roadways without resulting in other negative impacts such as residential displacements, neighborhood impacts and other environmental impacts.

When forecasted traffic volumes exceed 50,600 ADT on a six-lane arterial, a level of service of D at intersections will not be achieved. The proposed new Modified Super Arterial also has a capacity of 50,600 ADT at LOS D and the new eight-lane divided roadway classification has a capacity of 67,500 at LOS D. Therefore, forecasted traffic volumes above 67,500 ADT within the City on collectors and arterials will not achieve LOS D.

Chapter 4, identified the roadways recommended for upgrades in classification and associated capacity increases with the proposed Circulation Plan. The recommended roadway segment upgrades were based on forecasted travel demands in year 2035 and discussions with City Staff. Despite the proposed roadway improvements outlined in Chapter 4, and incorporated in the proposed General Plan 2030 Circulation Plan, proposed General Plan growth will cause thirty-nine (39) segments in the Planning Area to experience unacceptable levels of service at General Plan buildout. These deficient segments are located in built-out areas, along Interstate 15, US-395, SR-18, and along Bear Valley Road, and are listed in Table 6.1.



1	7 th Avenue from Ottawa Street to Nisqualli Road
2	7 th Street from D Street to Palmdale Road/Green Tree Blvd.
3	Air Expresssway Blvd. from Village Dr. to Phantom East St.
4	Bear Valley Rd. from Fish Hatchery Rd. to Bellflower St.
5	Cahuenga Rd. from Luna Rd. to La Mesa Rd.
6	Cantina Dr. from Luna Rd. to Bear Valley Rd.
7	Cobalt Rd. from Hopland St. to Luna Rd.
8	Cottonwood Ave. from Mariposa Rd. to Bear Valley Rd.
9	D St. from 11 th St. to I-15 NB Ramps
10	Dos Palmas Rd. from El Evado Rd. to Hook Blvd.
11	Eucalyptus Rd. from Amargosa Rd. to Bellflower St.
12	Green Tree Blvd. from 7 th St. to Ridgecrest Rd.
13	Hesperia Rd. from D St. to Silica Rd.
14	Hook Blvd. from Amethyst Rd. to Cobalt Rd.
15	Industrial Blvd. from Silica Rd. to Bear Valley Rd.
16	La Mesa Rd. from Amargosa Rd. to Monte Vista Rd.
17	La Paz Dr. from I-15 NB Ramps to Lorene Dr.
18	Luna Rd. from Amethyst Rd. to Baldy Mesa Rd.
19	Mariposa Rd. from I-15 NB Off-ramp to Kingswood Dr.
20	Mesa Linda St. from Sycamore St. to Verano St.
21	Mesa St. from US-395 to Pena Ave.
22	Mojave Dr. from Del Rey Dr. to Cobalt Rd.
23	National Trails Hwy from Turner Rd. to I-15 SB Ramps
24	Nisqualli Rd. from 11 th Ave. to Mariposa Rd.
25	Olivine Rd. from Cantina Dr. to Beaver Ave.
26	Ottawa St. from Hesperia Rd. to Mariposa Rd.
27	Pacoima Rd. from La Mesa Rd. to Northstar Ave.
28	Pahute Rd. Spring Valley Pkwy to Balsam Rd.
29	Palmdale Rd. (SR18) from Green Tree Blvd to Mesa Linda Ave.
30	Phantom East St. from Shay Rd. to Air Expressway Blvd.
31	Rodeo Dr. from Victor St. to Pebble Beach Dr.
32	Roy Rogers Dr. from I-15 NB Ramps to I-15 SB Ramps
33	Seneca Rd. from Hesperia Rd. to Us-395
34	Spring Valley Pkwy from Driftwood Dr. to Country Club Dr.
35	Smoketree Rd. from Amargosa Rd. to Topaz Rd.
36	Stoddard Wells Rd. from Dante St. to I-15 SB Ramps
37	Sycamore St. from Mesa Linda St. to Monte Vista Rd.
38	Village Dr. from Mojave Dr. to Air Base Rd/Air Expressway Blvd.
39	Yates Rd. from Arrowhead Rd. to Mariposa Rd.



For intersections and roadway segments included in the CMP network, the acceptable level of service is LOS E or better. As indicated earlier, the roadways within the City of Victorville included in the SANBAG CMP) include: Interstate 15, US-395, SR-18 (D Street and Palmdale Road) and Bear Valley Road (Amargosa Road to east). As shown in Table 6.2, each of these four segments have a forecasted 2035 level of service of LOS F despite recommended Circulation Plan improvements.

For intersections included in the CMP, a project has a significant impact if determined by the City Traffic resulting in a LOS F. If the intersection is already at LOS F, a significant impact occurs when the project increases the traffic demand substantially as determined by the City Traffic Engineer. There are seven (7) intersections on the CMP network in the City that are forecasted as LOS F in 2035 (reference (Table 6.2).

Proposed General Plan 2030 growth would contribute to these deficient CMP segments and intersections. Proposed General Plan circulation improvements and objectives and policies (including Objective 1.2 and Policy 1.2.1 listed above) would not reduce these deficiencies to less than significant levels.

Table 6.2 Roadway Segments/Intersections in the Congestion Management Program (CMP) Without/With the Proposed Circulation Plan		
Roadway Segments		
No.	Description	LOS Without/With Mitigation
1	Bear Valley Road from Hesperia Road to Amargosa Road	LOS F/F
2	SR-18 (D Street and Palmdale Road)	LOS F/F
3	Interstate 15	LOS F/F
4	US-395	LOS F/F
Intersections		
1	Bear Valley Road/Amargosa Road	LOS F/F
2	Bear Valley Road/Mariposa Road	LOS F/F
3	Bear Valley Road/Cottonwood Avenue	LOS F/F
4	Bear Valley Road/7 th Avenue	LOS F/F
5	Bear Valley Road/Hesperia Road	LOS F/F
6	Bear Valley Road/I Avenue-Tamarisk Road	LOS F/F
7	Mariposa Road/Mariposa Road	LOS F/F



7.0 REFERENCES

City of Victorville, *City of Victorville General Plan*. July 1997.

City of Victorville Planning Department, *Southern California Logistics Airport Specific Plan*, February 2004.

Parsons Brinckerhoff, *I-15 Comprehensive Corridor Study Final Report*, Prepared for Southern California Association of Governments (SCAG), San Bernardino Associated Governments (SANBAG), and the California Department of Transportation. December 20, 2005.

Parsons Brinckerhoff, *Interstate 15 - La Mesa/Nisqualli Interchange, City of Victorville, San Bernardino County, California, Draft Environmental Assessment/Initial Study*, Prepared for the City of Victorville, The California Department of Transportation, and Federal Highway Administration. September 2005.

San Bernardino Associated Governments (SANBAG), *High Desert Corridor*, http://www.sanbag.ca.gov/projects/other_high-desert-corridor.html, accessed by Theresa Dau, Parsons Brinckerhoff on February 15, 2006.

Alta Transportation Consulting, *San Bernardino County Non-Motorized Transportation Plan 2001 Update*, Prepared for San Bernardino Associated Governments (SANBAG) with funding from Southern California Association of Governments, June 2001.

City of Victorville Travel Demand Model, Calibrated and Validated by Parsons Brinckerhoff in February 2008. Year 2035 Travel Demand Forecasts generated in May 2008.

Proposition 111, passed in 1990 – Proposition 111 added nine cents per gallon to the state fuel tax to fund local, regional, and state transportation projects and services. It also required urban counties to develop congestion management agencies, whose primary responsibilities are to coordinate transportation planning, funding and other activities in a congestion management program.

APPENDIX A
SUMMARY OF ROADWAY SEGMENT
LEVEL OF SERVICE ANALYSIS

Table A
PLANNING AREA ROADWAY SEGMENT LEVEL OF SERVICE
BY SEGMENT, CLASS OF ROADWAY, CAPACITY, ADT, LOS, V/C AND LOS,
EXISTING (2005) AND GENERAL PLAN BUILDOUT

Roadway	From	To	2005								2035					
			Exist. Class.	Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
1st Ave	Nisqualli Rd	Silica Rd	C	2U	12,500		5,800	0.46	A		2U	12,500	6,382	6,400	0.51	A
1st Ave	Silica Rd	Jasmine St	C	2U	12,500		2,200	0.17	A		2U	12,500	2,374	2,400	0.19	A
2nd Ave	Silica Rd	Bear Valley Rd	A	4U	25,000	6,840	6,800	0.27	A		4U	25,000	6,877	6,900	0.28	A
3rd Ave	Green Tree Blvd	Ottawa St	C	2U	12,500		6,500	0.52	A	A	4D	37,500	7,366	7,400	0.20	A
3rd Ave	Ottawa St	Nisqualli Rd	C	2U	12,500	6,300	6,300	0.50	A	A	4D	37,500	6,931	6,900	0.18	A
3rd Ave	Nisqualli Rd	Silica Dr	C	2U	12,500	1,290	1,300	0.10	A	C	2D	18,800	8,326	8,300	0.44	A
3rd Ave	Silica Dr	Bear Valley Rd	C	2U	12,500		-	-	-	A	4D	37,500	5,881	5,900	0.16	A
5th Ave	Silica Dr	Bear Valley Rd	L	2U	10,000	1,860	1,900	0.19	A		2U	10,000	2,045	2,000	0.20	A
6th St	D St	C St	C	2U	12,500		600	0.05	A		2U	12,500	6,107	6,100	0.49	A
6th St	C St	B St	C	2U	12,500		1,300	0.10	A		2U	12,500	7,424	7,400	0.59	A
6th St	B St	A St	C	2U	12,500		900	0.07	A		2U	12,500	7,473	7,500	0.60	A
6th St	A St	Union St	C	2U	12,500		3,900	0.31	A		2U	12,500	3,417	3,400	0.27	A
6th St	Union St	Mojave Dr	C	2U	12,500	4,120	4,100	0.33	A		2U	12,500	4,871	4,900	0.39	A
7th Ave	Yates Rd	Ottawa St	C	2U	12,500		11,300	0.90	D	MA	4D	37,500	29,899	29,900	0.80	C
7th Ave	Ottawa St	Nisqualli Rd	C	2U	12,500		10,600	0.84	D	MA	4D	37,500	31,637	31,600	0.84	D

Table A
PLANNING AREA ROADWAY SEGMENT LEVEL OF SERVICE
BY SEGMENT, CLASS OF ROADWAY, CAPACITY, ADT, LOS, V/C AND LOS,
EXISTING (2005) AND GENERAL PLAN BUILDOUT

Roadway	From	To	2005								2035					
			Exist. Class.	Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
7th Ave	Nisqualli Rd	Silica Dr	C	2U	12,500		12,200	0.98	E	A	4D	37,500	26,632	26,600	0.71	C
7th Ave	Silica Dr	Lindero St	C	2U	12,500		14,000	1.12	F	A	4D	37,500	25,904	25,900	0.69	B
7th Ave	Lindero St	Bear Valley Rd	C	2D	12,500	12,080	12,100	0.97	E	A	4D	37,500	25,146	25,100	0.67	B
7th St	D St	C St	2A	4U	25,000		17,400	0.69	B	A	4D	37,500	43,903	43,900	1.17	F
7th St	C St	B St	2A	4U	25,000		19,700	0.79	C	A	4D	37,500	42,076	42,100	1.12	F
7th St	B St	A St	2A	4U	25,000		21,900	0.88	D	A	4D	37,500	41,252	41,300	1.10	F
7th St	A St	Forrest Ave	2A	4U	25,000		22,400	0.90	D	A	4D	37,500	35,864	35,900	0.96	E
7th St	Forrest Ave	Center St	MA	4D	37,500	19,830	19,800	0.53	A		4D	37,500	35,214	35,200	0.94	E
7th St	Center St	Union St	MA	4D	37,500		22,500	0.60	A		4D	37,500	29,808	29,800	0.79	C
7th St	Union St	Mojave Dr	MA	4D	37,500		26,300	0.70	B		4D	37,500	31,383	31,400	0.84	D
7th St	Mojave Dr	Victor St	MA	4D	37,500		19,700	0.53	A		4D	37,500	27,067	27,100	0.72	C
7th St	Victor St	Plaza Dr	MA	4D	37,500		24,300	0.65	B		4D	37,500	29,309	29,300	0.78	C
7th St	Plaza Dr	La Paz Dr	MA	4D	37,500		22,700	0.60	A		4D	37,500	32,186	32,200	0.86	D
7th St	La Paz Dr	Lorene Dr	MA	4D	37,500		19,500	0.52	A		4D	37,500	34,180	34,200	0.91	E
7th St	Lorene Dr	Green Tree Blvd	MA	4D	37,500		21,300	0.57	A	SA2	6D	56,000	48,164	48,200	0.86	D
7th St	Mojave Dr	Palmdale Rd / Green Tree Blvd	MA	4D	37,500	24,600	24,600	0.66	B	SA2	6D	56,000	48,164	48,200	0.86	D
11th Ave	Winona St	Nisqualli Rd	C	2U	12,500	2,220	2,200	0.18	A		2U	12,500	2,446	2,400	0.20	A

Table A
PLANNING AREA ROADWAY SEGMENT LEVEL OF SERVICE
BY SEGMENT, CLASS OF ROADWAY, CAPACITY, ADT, LOS, V/C AND LOS,
EXISTING (2005) AND GENERAL PLAN BUILDOUT

Roadway	From	To	Exist. Class.	2005							2035					
				Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
11th Ave	Nisqualli Rd	Cypress Ave	C	2U	12,500	1,170	1,200	0.09	A	RA	4U	25,000	4,043	4,000	0.16	A
11th Ave	Cypress Ave	Lindero St	C	2U	12,500	1,890	1,900	0.15	A	RA	4U	25,000	4,452	4,500	0.18	A
11th Ave	Lindero St	Bear Valley Rd	C	2U	12,500		2,200	0.18	A	RA	4U	25,000	3,537	3,500	0.14	A
11th St	D St	B St	C	2U	12,500		2,800	0.23	A		2U	14,500	4,343	4,300	0.30	A
11th St	B St	Verde St	L	2U	10,000	3,500	3,500	0.35	A		2U	10,000	4,795	4,800	0.48	A
Adelanto Rd	La Paz Ave	Chamberlaine Way	C	2U	12,500		100	0.01	A	MA_SP	4U	37,500	12,797	12,800	0.34	A
Adelanto Rd	Chamberlaine Way	Bartlett Ave	C	2U	12,500		100	0.01	A	MA_SP	4U	37,500	11,316	11,300	0.30	A
Air Base Rd / Air Expressway Blvd	National Trails Hwy	Gas Line Rd	C	2U	12,500		11,000	0.88	D	MA	4D	37,500	15,403	15,400	0.41	A
Air Base Rd / Air Expressway Blvd	Gas Line Rd	Village Dr	C	2U	12,500		10,200	0.81	D	MA	4D	37,500	14,841	14,800	0.40	A
Air Base Rd / Air Expressway Blvd	Village Dr	Phantom East St	C	2U	12,500		18,800	1.50	F	MA	4D	37,500	34,238	34,200	0.91	E
Amargosa Rd	Village Dr	Tawney Ridge Ln	A	4D	37,500	6,630	6,600	0.18	A		4D	37,500	12,467	12,500	0.33	A
Amargosa Rd	Tawney Ridge Ln	Mojave Dr	A	4D	37,500	8,360	8,400	0.22	A		4D	37,500	16,718	16,700	0.45	A
Amargosa Rd	Mojave Dr	Roy Rogers Dr	A	4D	37,500	15,560	15,600	0.41	A		4D	37,500	20,384	20,400	0.54	A
Amargosa Rd	Roy Rogers Dr	Seneca Rd	A	4D	37,500		10,900	0.29	A		4D	37,500	22,414	22,400	0.60	A
Amargosa Rd	Seneca Rd	Civic Dr	A	4D	37,500		9,600	0.26	A		4D	37,500	26,996	27,000	0.72	C

Table A
PLANNING AREA ROADWAY SEGMENT LEVEL OF SERVICE
BY SEGMENT, CLASS OF ROADWAY, CAPACITY, ADT, LOS, V/C AND LOS,
EXISTING (2005) AND GENERAL PLAN BUILDOUT

Roadway	From	To	Exist. Class.	2005							2035					
				Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
Amargosa Rd	Civic Dr	Palmdale Rd	A	4D	37,500		9,700	0.26	A		4D	37,500	19,847	19,800	0.53	A
Amargosa Rd	Palmdale Rd	Dos Palmas Rd	A	4D	37,500		16,300	0.44	A		4D	37,500	21,685	21,700	0.58	A
Amargosa Rd	Dos Palmas Rd	Luna Rd	A	4D	37,500		12,900	0.34	A		4D	37,500	20,318	20,300	0.54	A
Amargosa Rd	Luna Rd	La Mesa Rd	A	4D	37,500		10,500	0.28	A		4D	37,500	23,472	23,500	0.63	B
Amargosa Rd	La Mesa Rd	King Ranch Rd	A	4D	37,500	17,830	17,800	0.48	A		4D	37,500	23,854	23,900	0.64	B
Amargosa Rd	King Ranch Rd	Bear Valley Rd	A	4D	37,500	19,600	19,600	0.52	A		4D	37,500	23,372	23,400	0.62	B
Amargosa Rd	Bear Valley Rd	Christa Way	A	4D	37,500		11,800	0.32	A		4D	37,500	25,816	25,800	0.69	B
Amargosa Rd	Christa Way	California Aqueduct	C	2U	12,500	5,930	5,900	0.47	A	A	4D	37,500	16,656	16,700	0.44	A
Amethyst Rd	Rancho Rd	Hopland Sr	L	2U	10,000		-	-	-	A	4D	37,500	18,640	18,600	0.50	A
Amethyst Rd	Hopland Sr	Mojave Dr	L	2U	10,000		-	-	-	A	4D	37,500	19,511	19,500	0.52	A
Amethyst Rd	Mojave Dr	Quail Cove Pl	MA	3D	37,500	1,940	1,900	0.05	A	SA2	6D	56,000	37,054	37,100	0.66	B
Amethyst Rd	Quail Cove Pl	Hook Blvd	MA	3D	37,500	1,980	2,000	0.05	A	SA2	6D	56,000	38,548	38,500	0.69	B
Amethyst Rd	Hook Blvd	Woodpecker Rd	MA	3D	37,500	2,840	2,800	0.08	A	SA2	6D	56,000	42,324	42,300	0.76	C
Amethyst Rd	Woodpecker Rd	Seneca Rd	MA	3D	37,500	2,930	2,900	0.08	A	SA2	6D	56,000	42,568	42,600	0.76	C
Amethyst Rd	Seneca Rd	Begonia St	C	2U	12,500	2,440	2,400	0.20	A	SA2	6D	56,000	44,418	44,400	0.79	C

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BY SEGMENT, CLASS OF ROADWAY, CAPACITY, ADT, LOS, V/C AND LOS,
EXISTING (2005) AND GENERAL PLAN BUILDOUT

Roadway	From	To	Exist. Class.	2005							2035					
				Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
Amethyst Rd	Begonia St	Palmdale Rd	C	2U	12,500	2,470	2,500	0.20	A	SA2	6D	56,000	41,400	41,400	0.74	C
Amethyst Rd	La Mesa Rd	Northstar Ave	MA	4D	37,500	13,370	13,400	0.36	A	SA2	6D	56,000	41,247	41,200	0.74	C
Amethyst Rd	Northstar Ave	Glengarry Dr	A	4U	25,000	15,700	15,700	0.63	B	SA2	6D	56,000	42,302	42,300	0.76	C
Amethyst Rd	Glengarry Dr	Bear Valley Rd	A	4U	25,000	16,890	16,900	0.68	B	SA2	6D	56,000	44,324	44,300	0.79	C
Amethyst Rd	Bear Valley Rd	Sycamore St	A	4U	25,000		0	0.00	A	SA2	6D	56,000	41,654	41,700	0.74	C
Amethyst Rd	Sycamore St	Eucalyptus St / Christa Way	N				-	-	-	SA2	6D	56,000	39,686	39,700	0.71	C
Arlette Dr	Joshua St	Hook blvd	C	2U	12,500	2,780	2,800	0.22	A		2U	12,500	3,057	3,100	0.24	A
Ashley Glen Dr	Mojave Dr	Joshua St	C	2U	12,500		-	-	-		2U	12,500	3,398	3,400	0.27	A
Ashley Glen Dr	Joshua St	Hook Blvd	C	2U	12,500		2,200	0.18	A		2U	12,500	6,415	6,400	0.51	A
Avalon Ave	Fresno Dr	A St	L	2U	10,000	1,490	1,500	0.15	A	L	2U	10,000	1,640	1,600	0.16	A
Balsam Rd	Winona St	Nisqualli Rd	C	2U	12,500		-	-	-		2U	12,500	4,034	4,000	0.32	A
Balsam Rd	Nisqualli Rd	Bear Valley Rd	A	4U	25,000	8,210	8,200	0.33	A	MA	4D	37,500	16,576	16,600	0.44	A
Baldy Mesa Rd	Palmdale Rd	Luna Rd	L	2U	10,000		200	0.02	A	MA	4D	37,500	28,767	28,800	0.77	C
Baldy Mesa Rd	Luna Rd	La Mesa Rd	L	2U	10,000		200	0.02	A	MA	4D	37,500	29,749	29,700	0.79	C
Baldy Mesa Rd	La Mesa Rd	Bear Valley Rd	C	2U	12,500		200	0.02	A	MA	4D	37,500	28,326	28,300	0.76	C
Baldy Mesa Rd	Bear Valley Rd	5th St	C	2U	12,500		1,700	0.13	A	MA	4D	37,500	23,549	23,500	0.63	B

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EXISTING (2005) AND GENERAL PLAN BUILDOUT

Roadway	From	To	Exist. Class.	2005							2035					
				Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
Baldy Mesa Rd	5th St	Mesa Street	C	2U	12,500		1,700	0.14	A	MA	4D	37,500	24,071	24,100	0.64	B
Bear Valley Rd	Fish Hatchery Rd	Jacaranda Ave	SA	6D	56,000		47,700	0.85	D	MA	4D	37,500	70,517	70,500	1.88	F
Bear Valley Rd	Jacaranda Ave	Peach Ave	SA	6D	56,000		35,700	0.64	B	MA	4D	37,500	68,524	68,500	1.83	F
Bear Valley Rd	Peach Ave	Industrial Blvd	SA	6D	56,000		67,300	1.20	F	MA	4D	37,500	71,459	71,500	1.91	F
Bear Valley Rd	Industrial Blvd	Hesperia Rd	SA	6D	56,000		60,800	1.09	F	MA	4D	37,500	74,140	74,100	1.98	F
Bear Valley Rd	Hesperia Rd	2nd Ave	SA	6D	56,000	53,610	53,600	0.96	E		6D	56,000	58,458	58,500	1.04	F
Bear Valley Rd	2nd Ave	3rd Ave	SA	6D	56,000		45,500	0.81	D		6D	56,000	58,430	58,400	1.04	F
Bear Valley Rd	3rd Ave	7th Ave	SA	6D	56,000		42,600	0.76	C		6D	56,000	59,366	59,400	1.06	F
Bear Valley Rd	7th Ave	11th Ave	SA	6D	56,000		43,500	0.78	C		6D	56,000	57,109	57,100	1.02	F
Bear Valley Rd	11th Ave	Balsam Rd	SA	6D	56,000		41,800	0.75	C		6D	56,000	58,425	58,400	1.04	F
Bear Valley Rd	Balsam Rd	Locust Ave	SA	6D	56,000		41,100	0.73	C		6D	56,000	65,006	65,000	1.16	F
Bear Valley Rd	Locust Ave	Cottonwood Ave	SA	6D	56,000		55,500	0.99	E		6D	56,000	65,595	65,600	1.17	F
Bear Valley Rd	Mariposa Rd	I-15 NB Ramps	SA	6D	56,000	73,470	73,500	1.31	F		6D	56,000	85,095	85,100	1.52	F
Bear Valley Rd	I-15 Ramps ^{SB}	Amargosa Rd	SA	6D	56,000	53,320	53,300	0.95	E		6D	56,000	70,987	71,000	1.27	F
Bear Valley Rd	Amargosa Rd	Amethyst Rd	MA	4D	37,500	44,860	44,900	1.20	F	SA	6D	56,000	75,483	75,500	1.35	F
Bear Valley Rd	Topaz Rd	Eagle Ranch	MA	4D	37,500	18,730	18,700	0.50	A	SA	6D	56,000	58,913	58,900	1.05	F

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EXISTING (2005) AND GENERAL PLAN BUILDOUT

Roadway	From	To	Exist. Class.	2005							2035					
				Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
		Pkwy/Mesa Linda St														
Bear Valley Rd	Eagle Ranch Pkwy/Mesa Linda St	Cantina Dr	MA	4D	37,500	17,150	17,200	0.46	A	SA	6D	56,000	54,096	54,100	0.97	E
Bear Valley Rd	Cantina Dr	US-395	MA	4D	37,500	17,640	17,600	0.47	A	SA	6D	56,000	36,388	36,400	0.65	B
Bear Valley Rd	US-395	Mesa View Dr	C	2U	12,500	7,700	7,700	0.62	B	SA	6D	56,000	48,592	48,600	0.87	D
Bear Valley Rd	Mesa View Dr	Bellflower St	C	2U	12,500		3,200	0.25	A	SA	6D	56,000	46,660	46,700	0.83	D
Bear Valley Rd	Bellflower St	Monte Vista Rd	C	2U	12,500		3,100	0.25	A	SA	6D	56,000	40,623	40,600	0.73	C
Bear Valley Rd	Monte Vista Rd	Baldy Mesa Rd	C	2U	12,500		2,900	0.23	A	SA	6D	56,000	35,608	35,600	0.64	B
Bear Valley Rd	Baldy Mesa Rd	White Rd	C	2U	12,500		1,100	0.09	A	SA	6D	56,000	38,481	38,500	0.69	B
Bellflower St	Palmdale Rd	Luna Rd	L	2U	10,000		-	-	-	SA2	6D	56,000	28,895	28,900	0.52	A
Bellflower St	Luna Rd	La Mesa Rd	L	2U	10,000		-	-	-	SA2	6D	56,000	30,512	30,500	0.54	A
Bellflower St	La Mesa Rd	Bear Valley Rd	L	2U	10,000		-	-	-	SA2	6D	56,000	33,684	33,700	0.60	A
Bellflower St	Bear Valley Rd	Sycamore St	L	2U	10,000		-	-	-	SA2	6D	56,000	38,298	38,300	0.68	B
Bellflower St	Sycamore St	Eucalyptus St	L	2	10,000					SA2	6D	56,000	39,553	39,600	0.71	C
Bructe Rd	Hopland St	Tawney Ridge Ln	L	2U	10,000		-	-	-	C	2U	12,500	1,221	1,200	0.10	A
Bructe Rd	Tawney Ridge	Mojave Dr	L	2U	10,000		-	-	-	C	2U	12,500	726	700	0.06	A

Table A
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EXISTING (2005) AND GENERAL PLAN BUILDOUT

Roadway	From	To	Exist. Class.	2005							2035					
				Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
	Ln															
Brucite Rd	Mojave Dr	Hook Blvd	L	2U	10,000		-	-	-	C	2U	12,500	5,681	5,700	0.45	A
Burning Tree Dr	Pebble Beach Dr	Green Tree Blvd	C	2U	12,500		2,900	0.23	A		2U	12,500	6,038	6,000	0.48	A
Cahuenga Rd	Palmdale Rd	Dos Palmas Rd	C	2U	12,500		100	0.00	A		2U	12,500	11,952	12,000	0.96	E
Cahuenga Rd	Dos Palmas Rd	Luna Rd	C	2U	12,500		500	0.04	A		2U	12,500	5,855	5,900	0.47	A
Cantina Dr	Holly Rd	Mojave Dr	N				-	-	-	C	2U	37,500	7,628	7,600	0.20	A
Cantina Dr	Mojave Dr	Seneca Rd	N				-	-	-	A	4D	37,500	11,327	11,300	0.30	A
Cantina Dr	Seneca Rd	Palmdale Rd	N				-	-	-	A	4D	37,500	18,324	18,300	0.49	A
Cantina Dr	Palmdale Rd	Dos Palmas Rd	N				-	-	-	A	4D	37,500	28,530	13,200	0.76	C
Cantina Dr	Dos Palmas Rd	Luna Rd	N				-	-	-	A	4D	37,500	29,534	12,000	0.79	C
Cantina Dr	Luna Rd	La Mesa Rd	N				-	-	-	A	4D	37,500	32,551	13,200	0.87	D
Cantina Dr	La Mesa Rd	Eagle Ranch Pkwy	C	2U	12,500		-	-	-		2U	12,500	34,007	13,800	2.72	F
Cantina Dr	Eagle Ranch Pkwy	Bear Valley Rd	C	2U	12,500	2,560	2,600	0.20	A		2U	12,500	17,719	14,000	1.42	F
Civic Dr	Mojave Dr	Roy Rogers Dr	C	2U	12,500		800	0.06	A		2U	12,500	6,961	7,000	0.56	A
Civic Dr	Roy Rogers Dr	Seneca Rd	A	4U	25,000	5,720	5,700	0.23	A		4U	25,000	9,138	9,100	0.37	A

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EXISTING (2005) AND GENERAL PLAN BUILDOUT

Roadway	From	To	Exist. Class.	2005							2035					
				Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
Civic Dr	Seneca Rd	Park Ave	A	4U	25,000	4,440	4,400	0.18	A		4U	25,000	4,881	4,900	0.20	A
Civic Dr	Park Ave	Amargosa Rd	A	4U	25,000		300	0.01	A		4U	25,000	11,105	11,100	0.44	A
Clovis St	Amargosa Rd	Village Dr	C	2U	12,500		900	0.07	A	L	2U	12,500	1,330	1,300	0.11	A
Clovis St	Village Dr	El Evado Rd	C	2U	12,500		1,900	0.15	A	L	2U	12,500	4,580	4,600	0.37	A
Clovis St	El Evado Rd	Cordova Rd	N				-	-	-	L	2U	12,500	545	500	0.04	A
Clovis St	Cordova Rd	Amethyst Rd	N				-	-	-	L	2U	12,500	1,135	1,100	0.09	A
Cobalt Rd	Hopland St	Mojave Dr	L	2U	10,000		-	-	-		2U	12,500	11,456	11,500	0.92	E
Cobalt Rd	Mojave Dr	Hook Blvd	L	2U	10,000		-	-	-		2U	12,500	17,381	17,400	1.39	F
Cobalt Rd	Hook Blvd	Seneca Rd	L	2U	10,000		-	-	-		2U	12,500	12,837	12,800	1.03	F
Cobalt Rd	Seneca Rd	Palmdale Rd	C	2U	12,500	970	1,000	0.08	A		2U	12,500	5,224	5,200	0.42	A
Cobalt Rd	Palmdale Rd	Dos Palmas Rd	C	2U	12,500	5,120	5,100	0.41	A	C	2U	12,500	10,420	10,400	0.83	D
Cobalt Rd	Dos Palmas Rd	Luna Rd	C	2U	12,500		3,100	0.25	A	C	2U	12,500	10,464	10,500	0.84	D
Cobalt Rd	La Mesa Rd	Northstar Ave	C	2U	12,500		2,400	0.19	A	C	2U	12,500	6,583	6,600	0.53	A
Cobalt Rd	Northstar Ave	Bear Valley Rd	C	2U	12,500	2,020	2,000	0.16	A	C	2U	12,500	4,640	4,600	0.37	A
Cobalt Rd	Bear Valley Rd	Sycamore St	C	2U	12,500		4,400	0.36	A	C	2U	12,500	4,649	4,600	0.37	A
Cobalt Rd	Sycamore St	Eucalyptus St	C	2U	12,500		-	-	-	C	2U	12,500	4,247	4,200	0.34	A

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Roadway	From	To	Exist. Class.	2005							2035					
				Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
Cobalt Rd	Eucalyptus St/Mesa Street	Smoke Tree Road	N				-	-	-	C	2U	12,500	0	0	0.00	A
Condor Rd	Tawney Ridge Ln	Mojave Dr	C	2U	12,500	1,610	1,600	0.13	A	C	2U	12,500	3,067	3,100	0.25	A
Cordova Rd	Rancho Rd	Clovis St	N				-	-	-	C	2U	12,500	1,267	1,300	0.10	A
Cordova Rd	Clovis St	Hopland St	N				-	-	-	C	2U	12,500	1,820	1,800	0.15	A
Cordova Rd	Hopland St	Tawney Ridge Ln	C	2U	12,500		-	-	-	C	2U	12,500	1,705	1,700	0.14	A
Cordova Rd	Tawney Ridge Ln	Mojave Dr	C	2U	12,500		-	-	-	C	2U	12,500	764	800	0.06	A
Cottonwood Ave	Mariposa Rd	Bear Valley Rd	C	2U	12,500	8,240	8,200	0.66	B	C	2U	12,500	13,596	13,600	1.09	F
Cypress Ave	Yates Rd	Ottawa St	N				-	-	-	C	2U	12,500	1,190	1,200	0.10	A
Cypress Ave	Ottawa St	Nisqualli Rd	N				-	-	-	C	2U	12,500	2,678	2,700	0.21	A
Cypress Ave	Nisqualli Rd	9th Ave	C	2U	12,500		1,300	0.10	A	L	2U	10,000	3,268	3,300	0.33	A
Cypress Ave	9th Ave	11th St	C	2U	12,500		600	0.05	A	L	2U	10,000	1,533	1,500	0.15	A
Cypress Ave	11th St	Bear Valley Rd	C	2U	12,500		100	0.01	A	L	2U	10,000	1,100	1,100	0.11	A
D St	11th St	Hesperia Rd	MA	4D	37,500	45,700	45,700	1.22	F	MA_SP	4D	37,500	52,473	52,500	1.40	F
D St	Hesperia Rd	7th St	MA	4D	37,500	42,130	42,100	1.12	F	MA_SP	4D	37,500	42,158	42,200	1.12	F
D St	7th St	6th St	MA	4D	37,500		29,700	0.79	C	MA_SP	4D	37,500	46,810	46,800	1.25	F

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Roadway	From	To	Exist. Class.	2005							2035					
				Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
D St	6th St	Forrest Ave	MA	4D	37,500		28,400	0.76	C	MA_SP	4D	37,500	43,983	44,000	1.17	F
D St	Forrest Ave	3rd St	MA	4D	37,500		28,600	0.76	C	MA_SP	4D	37,500	44,625	44,600	1.19	F
D St	3rd St	2nd St	MA	4D	37,500		28,700	0.77	C	MA_SP	4D	37,500	44,829	44,800	1.20	F
D St	Sherman Way	I-15 NB Ramps	MA	4D	37,500	38,200	38,200	1.02	F	MA_SP	4D	37,500	45,610	45,600	1.22	F
Del Rey Dr	Forrest Ave	Mojave Dr	L	2U	10,000	2,970	3,000	0.30	A		2U	10,000	2,991	3,000	0.30	A
Del Rey Dr	Mojave Dr	7th St	L	2U	10,000		2,200	0.22	A		2U	10,000	7,370	7,400	0.74	C
Dos Palmas Rd	Park Ave	Amargosa Rd	C	2U	12,500		-	-	-		2U	12,500	2,423	2,400	0.19	A
Dos Palmas Rd	Amargosa Rd	Cahuenga Rd	C	2U	12,500		-	-	-		2U	12,500	4,714	4,700	0.38	A
Dos Palmas Rd	Cahuenga Rd	El Evado Rd	C	2U	12,500		-	-	-		2U	12,500	7,467	7,500	0.60	A
Dos Palmas Rd	El Evado Rd	Pacoima Rd	C	2U	12,500		-	-	-		2U	12,500	13,235	13,200	1.06	F
Dos Palmas Rd	Pacoima Rd	Amethyst Rd	L	2U	10,000		-	-	-	C	2U	12,500	13,712	13,700	1.10	F
Dos Palmas Rd	Amethyst Rd	Cobalt Rd	C	2U	12,500		-	-	-		2U	12,500	6,673	6,700	0.53	A
Dos Palmas Rd	Cobalt Rd	Topaz Rd	L	2U	10,000		-	-	-	C	2U	12,500	8,584	8,600	0.69	B
Dos Palmas Rd	Topaz Rd	Mesa Linda St	L	2U	10,000		-	-	-	C	2U	12,500	13,079	13,100	1.05	F
Dos Palmas Rd	Mesa Linda St	US-395	L	2U	10,000		-	-	-	C	2U	12,500	11,201	11,200	0.90	D
Dos Palmas Rd	US 395	Bellflower St	L	2U	10,000		-	-	-	C	2U	12,500	15,597	15,600	1.25	F
Dos Palmas Rd	Bellflower St	Monte Vista Rd	L	2U	10,000		-	-	-	C	2U	12,500	12,363	12,400	0.99	E

Table A
PLANNING AREA ROADWAY SEGMENT LEVEL OF SERVICE
BY SEGMENT, CLASS OF ROADWAY, CAPACITY, ADT, LOS, V/C AND LOS,
EXISTING (2005) AND GENERAL PLAN BUILDOUT

Roadway	From	To	Exist. Class.	2005							2035					
				Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
Dos Palmas Rd	Monte Vista Rd	Braceo St	L	2U	10,000		-	-	-	C	2U	12,500	11,440	11,400	0.92	E
Dos Palmas Rd	Braceo St	Baldy Mesa Rd	L	2U	10,000		-	-	-	C	2U	12,500	4,937	4,900	0.39	A
E St	Willow St	I-15 NB Ramps	L	2U	10,000	1,590	1,600	0.16	A		2U	10,000	3,592	3,600	0.36	A
East Trail	Mojave Dr	Reno Loop Rd	C	2U	12,500		2,600	0.20	A	A	4D	37,500	4,000	4,000	0.11	A
Eagle Ranch Pkwy	Cantina Dr	Mesa Linda St	MA	4D	37,500		-	-	-		4D	37,500	4,838	4,800	0.13	A
Eagle Ranch Pkwy	Mesa Linda St	Redrock Rd	MA	4D	37,500		2,100	0.06	A		4D	37,500	6,582	6,600	0.18	A
Eagle Ranch Pkwy	Redrock Rd	Bear Valley Rd	A	4D	25,000	3,870	3,900	0.15	A		4D	30,000	7,606	7,600	0.25	A
El Evado Rd	Air Base Rd	Rancho Rd	N				-	-	-	8 L	8D	75,000	33,901	33,900	0.45	A
El Evado Rd	Rancho Rd	Clovis St	C	2U	12,500		-	-	-	8 L	8D	75,000	25,663	25,700	0.34	A
El Evado Rd	Clovis St	Hopland St	C	2U	12,500		1,900	0.15	A	8 L	8D	75,000	28,173	28,200	0.38	A
El Evado Rd	Hopland St	Tawney Ridge Ln	C	2U	12,500		2,700	0.21	A	8 L	8D	75,000	28,253	28,300	0.38	A
El Evado Rd	Tawney Ridge Ln	Mojave Dr	C	2U	12,500	4,240	4,200	0.34	A	SA2	6D	56,000	39,161	39,200	0.70	B
El Evado Rd	Mojave Dr	Hook Blvd	MA	4D	37,500		5,800	0.15	A	SA2	6D	56,000	46,210	46,200	0.83	D
El Evado Rd	Hook Blvd	Seneca Rd	MA	4D	37,500	13,880	13,900	0.37	A	SA2	6D	56,000	37,800	37,800	0.68	B
El Evado Rd	Seneca Rd	Begonia St	C	2U	12,500	13,380	13,400	1.07	F	SA2	6D	56,000	41,080	41,100	0.73	C
El Evado Rd	Begonia St	Palmdale Rd	C	2U	12,500	16,260	16,300	1.30	F	SA2	6D	56,000	44,230	44,200	0.79	C

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BY SEGMENT, CLASS OF ROADWAY, CAPACITY, ADT, LOS, V/C AND LOS,
EXISTING (2005) AND GENERAL PLAN BUILDOUT

Roadway	From	To	Exist. Class.	2005							2035					
				Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
El Evado Rd	Palmdale Rd	Dos Palmas Rd	C	2U	12,500		10,800	0.86	D	SA2	6D	56,000	31,937	31,900	0.57	A
El Evado Rd	Dos Palmas Rd	Luna Rd	C	2U	12,500	10,410	10,400	0.83	D	SA2	6D	56,000	31,592	31,600	0.56	A
El Evado Rd	Luna Rd	Manzano Rd	MA	4D	37,500	8,250	8,300	0.22	A	SA2	6D	56,000	35,008	35,000	0.63	B
El Evado Rd	Manzano Rd	La Mesa Rd	MA	4D	37,500	7,850	7,800	0.21	A	SA2	6D	56,000	35,161	35,200	0.63	B
El Evado Rd	La Mesa Rd	Northstar Ave	C	2D	12,500	4,670	4,700	0.37	A	MA	4D	37,500	5,136	5,100	0.14	A
Eucalyptus St	Amargosa Rd	Amethyst Rd	N				-	-	-	8 L	8D	75,000	81,149	81,100	1.08	F
Eucalyptus St	Amethyst Rd	Cobalt Rd	N				-	-	-	SA2	6D	56,000	43,161	43,200	0.77	C
Eucalyptus St	Cobalt Rd	Topaz Rd	C	2U	12,500		-	-	-	SA2	6D	56,000	44,150	44,200	0.79	C
Eucalyptus St	Topaz Rd	Mesa Linda St	C	2U	12,500		-	-	-	MA	4D	37,500	40,036	40,000	1.07	F
Eucalyptus St	Mesa Linda St	Cantina Dr	C	2U	12,500		-	-	-	MA	4D	37,500	34,222	34,200	0.91	E
Eucalyptus St	Cantina Dr	US-395	C	2U	12,500		-	-	-	MA	4D	37,500	30,743	30,700	0.82	D
Eucalyptus St	US-395	Pena Ave	N				-	-	-	SA2	6D	56,000	61,842	61,800	1.10	F
Eucalyptus St	Pena Ave	Mesa View Dr	N				-	-	-	SA2	6D	56,000	59,039	59,000	1.05	F
Eucalyptus St	Mesa View Dr	Bellflower St	N				-	-	-	SA2	6D	56,000	52,503	52,500	0.94	E
Forrest St	3rd Ave	Moore Sr	L	2U	10,000	1,410	1,400	0.14	A		2U	10,000	1,554	1,600	0.16	A
George Blvd	Phantom St	Nevada Ave	MA_SP	4U	37,500		300	0.01	A		4U	25,000	3,237	3,200	0.13	A
George Blvd	Nevada Ave	Air Exwy	C	2U	14,500	1,500	1,500	0.10	A	MA_SP	4U	35,000	10,433	10,400	0.30	A

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BY SEGMENT, CLASS OF ROADWAY, CAPACITY, ADT, LOS, V/C AND LOS,
EXISTING (2005) AND GENERAL PLAN BUILDOUT

Roadway	From	To	Exist. Class.	2005							2035					
				Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
Green Tree Blvd	7th St	St Andrews Dr	A	4U	25,000	25,610	25,600	1.02	F	SA2	6D	56,000	46,232	46,200	0.83	D
Green Tree Blvd	St Andrews Dr	Burning Tree Dr	A	4U	25,000		27,400	1.09	F	SA2	6D	56,000	45,402	45,400	0.81	D
Green Tree Blvd	Burning Tree Dr	Yates Rd	A	4U	25,000		25,900	1.04	F	SA2	6D	56,000	47,531	47,500	0.85	D
Green Tree Blvd	Yates Rd	Rodeo Dr	A	4U	25,000		17,000	0.68	B	SA2	6D	56,000	30,640	30,600	0.55	A
Green Tree Blvd	Rodeo Dr	Hesperia Rd	A	4D	25,000		12,800	0.51	A	SA2	6D	56,000	35,940	35,900	0.64	B
Green Tree Blvd	Hesperia Rd	Industrial Blvd	N				-	-	-	SA	6D	56,000	54,778	54,800	0.98	E
Green Tree Blvd	Industrial Blvd	Ridgecrest Rd	N				-	-	-	SA	6D	56,000	58,827	58,800	1.05	F
Hesperia Rd	D St	B St	C	2D	12,500	8,110	8,100	0.65	B		2D	12,500	10,181	10,200	0.81	D
Hesperia Rd	B St	Forrest Ave	C	2D	12,500		13,800	1.11	F		2D	12,500	15,267	15,300	1.22	F
Hesperia Rd	Forrest Ave	Rio Vista St	C	2D	12,500	13,480	13,500	1.08	F		2D	12,500	24,789	24,800	1.98	F
Hesperia Rd	Rio Vista St	Verde St	C	2D	12,500	13,710	13,700	1.10	F		2D	12,500	25,173	25,200	2.01	F
Hesperia Rd	Verde St	Center St	MA	4D	37,500	17,540	17,500	0.47	A		4D	37,500	26,764	26,800	0.71	C
Hesperia Rd	Center St	Seneca Rd	MA	4D	37,500		18,800	0.50	A	SA2	6D	56,000	36,463	36,500	0.65	B
Hesperia Rd	Seneca Rd	Hughes Rd	MA	4D	37,500		24,900	0.66	B	SA2	6D	56,000	55,682	55,700	0.99	E
Hesperia Rd	Hughes Rd	Green Tree Blvd	MA	4D	37,500	28,660	28,700	0.76	C	SA2	6D	56,000	54,434	54,400	0.97	E
Hesperia Rd	Green Tree Blvd	Ottawa St	MA	4D	37,500	30,410	30,400	0.81	D	SA	6D	56,000	42,461	42,500	0.76	C

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EXISTING (2005) AND GENERAL PLAN BUILDOUT

Roadway	From	To	Exist. Class.	2005							2035					
				Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
Hesperia Rd	Ottawa St	Winona St	MA	4D	37,500	34,760	34,800	0.93	E		4D	37,500	43,334	43,300	1.16	F
Hesperia Rd	Winona St	Nisqualli Rd	MA	4D	37,500		37,200	0.99	E		4D	37,500	41,617	41,600	1.11	F
Hesperia Rd	Nisqualli Rd	Silica Rd	MA	4D	37,500	41,460	41,500	1.11	F	SA2	6D	56,000	49,724	49,700	0.89	D
Hesperia Rd	Silica Rd	Jasmine St	MA	4D	37,500		39,400	1.05	F	SA2	6D	56,000	29,857	29,900	0.53	A
Hesperia Rd	Jasmine St	Bear Valley Rd	MA	4D	37,500	27,140	27,100	0.72	C	SA2	6D	56,000	29,678	29,700	0.53	A
Holly Rd	US-395	Mesa Linda Ave	L	2U	10,000		-	-	-	A	4D	37,500	16,214	16,200	0.43	A
Holly Rd	Mesa Linda Ave	Topaz Rd	L	2U	10,000		-	-	-	A	4D	37,500	14,900	14,900	0.40	A
Hopland St	Topaz Rd	Cobalt Rd	L	2U	10,000		-	-	-	A	4D	37,500	20,093	20,100	0.54	A
Hopland St	Cobalt Rd	Amethyst Rd	C	2U	12,500		-	-	-	A	4D	37,500	19,890	19,900	0.53	A
Hopland St	Amethyst Rd	El Evado Rd	C	2U	12,500		-	-	-		2U	12,500	9,679	9,700	0.77	C
Hopland St	El Evado Rd	Llanada Ave	C	2U	12,500		800	0.07	A		2U	12,500	7,272	7,300	0.58	A
Hook Blvd	Amargosa Rd	Arlette Dr	A	4D	37,500	17,610	17,600	0.47	A		4D	37,500	24,247	24,200	0.65	B
Hook Blvd	Arlette Dr	Ashley Glen Dr	A	4D	37,500		11,400	0.30	A		4D	37,500	26,951	27,000	0.72	C
Hook Blvd	Ashley Glen Dr	El Evado Rd	A	4D	37,500	17,150	17,200	0.46	A		4D	37,500	24,893	24,900	0.66	B
Hook Blvd	El Evado Rd	Reno Loop Rd East	A	4D	37,500		8,100	0.22	A		4D	37,500	15,686	15,700	0.42	A
Hook Blvd	Reno Loop Rd East	Reno Loop Rd West	A	4D	37,500	6,190	6,200	0.16	A		4D	37,500	18,558	18,600	0.49	A

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EXISTING (2005) AND GENERAL PLAN BUILDOUT

Roadway	From	To	Exist. Class.	2005							2035					
				Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
Hook Blvd	Reno Loop Rd West	Amethyst Rd	A	4D	37,500	2,610	2,600	0.07	A		4D	37,500	17,618	17,600	0.47	A
Hook Blvd	Amethyst Rd	Brucite Rd	C	2U	12,500	640	600	0.05	A		2U	12,500	13,405	13,400	1.07	F
Hook Blvd	Brucite Rd	Cobalt Rd	C	2U	12,500		-	-	-		2U	12,500	18,800	18,800	1.50	F
Hughes Rd	La Paz Dr	Rodeo Dr	C	2U	12,500	1,270	1,300	0.10	A		2U	12,500	3,655	3,700	0.29	A
Hughes Rd	Rodeo Dr	Hesperia Rd	C	2U	12,500	1,760	1,800	0.14	A		2U	12,500	1,993	2,000	0.16	A
Industrial Blvd	Seneca Rd	Green Tree Blvd	N				-	-	-	A	4D	37,500	4,670	4,700	0.12	A
Industrial Blvd	Silica Rd	Bear Valley Rd	A	4D	37,500	21,780	21,800	0.58	A		4D	30,000	24,569	24,600	0.82	D
Jeraldo Dr	Mojave Dr	Joshua St	C	2U	12,500		800	0.06	A		2U	12,500	849	800	0.07	A
Jasmine St	Industrial Blvd	Hesperia Rd	A	4U	25,000		10,300	0.41	A		4U	25,000	11,288	11,300	0.45	A
Jasmine St	Hesperia Rd	1st Ave	A	4U	25,000		6,000	0.24	A		4U	25,000	6,601	6,600	0.26	A
Jasmine St	1st Ave	2nd Ave	A	4U	25,000		4,600	0.18	A		4U	25,000	5,052	5,100	0.20	A
Karen Dr	Hook blvd	Seneca Rd	N				-	-	-	C	2U	12,500	4,096	4,100	0.33	A
Kentwood Blvd	Civic Dr	Palmdale Rd	MA	4D	37,500	10,390	10,400	0.28	A	A	4D	37,500	16,089	16,100	0.43	A
La Mesa Rd	Amargosa Rd	El Evado Rd	A	4U	25,000	6,890	6,900	0.28	A	5D	5D	46,875	50,725	50,700	1.08	F
La Mesa Rd	El Evado Rd	Petaluma Rd	A	4U	25,000	7,750	7,700	0.31	A	A	4D	37,500	24,849	24,800	0.66	B
La Mesa Rd	Petaluma Rd	Pacoima Rd	A	4U	25,000	7,580	7,600	0.30	A	A	4D	37,500	24,761	24,800	0.66	B
La Mesa Rd	Pacoima Rd	Triple Tree Tr	A	4U	25,000	8,190	8,200	0.33	A	A	4D	37,500	26,592	26,600	0.71	C

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EXISTING (2005) AND GENERAL PLAN BUILDOUT

Roadway	From	To	2005								2035					
			Exist. Class.	Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
La Mesa Rd	Triple Tree Tr	Amethyst Rd	A	4U	25,000	7,860	7,900	0.31	A	A	4D	37,500	26,731	26,700	0.71	C
La Mesa Rd	Amethyst Rd	Cobalt Rd	A	4U	25,000		2,400	0.10	A		4U	25,000	24,003	24,000	0.96	E
La Mesa Rd	Cobalt Rd	Topaz Rd	A	4D	37,500	5,170	5,200	0.14	A		4D	37,500	23,411	23,400	0.62	B
La Mesa Rd	Topaz Rd	Blair St	A	4D	37,500	4,980	5,000	0.13	A		4D	37,500	24,003	24,000	0.64	B
La Mesa Rd	Blair St	Mesa Linda St	A	4D	37,500	2,780	2,800	0.07	A		4D	37,500	21,279	21,300	0.57	A
La Mesa Rd	Mesa Linda St	Cantina Dr	L	2U	10,000		-	-	-	RA	4U	25,000	15,815	15,800	0.63	B
La Mesa Rd	Cantina Dr	US 395	N				-	-	-	MA	4D	37,500	23,047	23,000	0.61	B
La Mesa Rd	US 395	Pana Rd	N				-	-	-	MA	4D	37,500	25,335	25,300	0.68	B
La Mesa Rd	Pana Rd	Mesa View Dr	L	2U	10,000		-	-	-	MA	4D	37,500	24,312	24,300	0.65	B
La Mesa Rd	Mesa View Dr	Bellflower St	L	2U	10,000		-	-	-	RA	4U	25,000	23,582	23,600	0.94	E
La Mesa Rd	Bellflower St	Verbena Rd	L	2U	10,000		-	-	-	RA	4U	25,000	28,703	28,700	1.15	F
La Mesa Rd	Verbena Rd	Monte Vista Rd	L	2U	10,000		-	-	-	RA	4U	25,000	24,073	24,100	0.96	E
La Mesa Rd	Monte Vista Rd	Braceo St	L	2U	10,000		-	-	-	RA	4U	25,000	9,670	9,700	0.39	A
La Mesa Rd	Braceo St	Baldy Mesa Rd	L	2U	10,000		-	-	-	RA	4U	25,000	12,515	12,500	0.50	A
La Mesa Rd	Baldy Mesa Rd	White Rd	L	2U	10,000		-	-	-	RA	4U	25,000	7,267	7,300	0.29	A
La Paz Dr	Forrest Ave	Mojave Dr	C	2U	12,500	5,280	5,300	0.42	A	L	2U	12,500	5,807	5,800	0.46	A

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EXISTING (2005) AND GENERAL PLAN BUILDOUT

Roadway	From	To	Exist. Class.	2005							2035					
				Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
La Paz Dr	Mojave Dr	Redondo Dr	C	2U	12,500		6,600	0.53	A		2U	12,500	9,871	9,900	0.79	C
La Paz Dr	Redondo Dr	Plaza Dr	C	2U	12,500		9,400	0.75	C		2U	12,500	9,871	9,900	0.79	C
La Paz Dr	Plaza Dr	Roy Rogers Dr	A	4D	37,500	8,970	9,000	0.24	A		4D	37,500	9,871	9,900	0.26	A
La Paz Dr	I-15 NB Ramps	Valley Center Dr	A	4D	37,500	30,600	30,600	0.82	D	5D	5D	46,875	41,941	41,900	0.89	D
La Paz Dr	Valley Center Dr	7th St	A	4D	37,500		10,100	0.27	A		4D	37,500	41,701	41,700	1.11	F
La Paz Dr	7th St	Seneca Rd	A	4U	25,000		9,500	0.38	A		4U	25,000	26,155	26,200	1.05	F
La Paz Dr	Seneca Rd	Lorene Dr	C	2U	12,500		3,800	0.30	A	L	2U	12,500	11,905	11,900	0.95	E
La Paz Dr	Lorene Dr	Hughes Rd	C	2U	12,500		3,600	0.28	A	L	2U	12,500	8,921	8,900	0.71	C
La Paz Dr	Hughes Rd	Pebble Beach Dr	C	2U	12,500		1,800	0.14	A	L	2U	12,500	4,812	4,800	0.38	A
Lindero St	7th Ave	9th Ave	C	2U	12,500		-	-	-	L	2U	10,000	2,437	2,400	0.24	A
Lindero St	9th Ave	11th St	C	2U	12,500		-	-	-	L	2U	10,000	1,748	1,700	0.17	A
Lindero St	11th St	Cypress Ave	C	2U	12,500		-	-	-	L	2U	10,000	1,716	1,700	0.17	A
Lindero St	Cypress Ave	Balsam Rd	C	2U	12,500		-	-	-	L	2U	10,000	2,854	2,900	0.29	A
Llanada Ave	Amargosa Rd	Village Dr	C	2U	12,500		2,800	0.23	A	L	2U	10,000	3,119	3,100	0.31	A
Llanada Ave	Village Dr	Hopland St	C	2U	12,500		1,100	0.09	A		2U	12,500	3,917	3,900	0.31	A
Locust Ave	Pahute Rd	Bear Valley Rd	C	2U	12,500		-	-	-		2U	12,500	10,038	10,000	0.80	C

Table A
PLANNING AREA ROADWAY SEGMENT LEVEL OF SERVICE
BY SEGMENT, CLASS OF ROADWAY, CAPACITY, ADT, LOS, V/C AND LOS,
EXISTING (2005) AND GENERAL PLAN BUILDOUT

Roadway	From	To	Exist. Class.	2005							2035					
				Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
Luna Rd	Amargosa Rd	Cahuenga Rd	C	2U	12,500		1,700	0.14	A		2U	12,500	6,674	6,700	0.53	A
Luna Rd	Cahuenga Rd	El Evado Rd	C	2U	12,500	3,580	3,600	0.29	A		2U	12,500	6,228	6,200	0.50	A
Luna Rd	El Evado Rd	Pacoima Rd	C	2U	12,500	5,230	5,200	0.42	A		2U	12,500	6,128	6,100	0.49	A
Luna Rd	Pacoima Rd	Amethyst Rd	C	2U	12,500	5,120	5,100	0.41	A		2U	12,500	6,243	6,200	0.50	A
Luna Rd	Amethyst Rd	Cobalt Rd	C	2U	12,500	6,020	6,000	0.48	A		2U	12,500	12,380	12,400	0.99	E
Luna Rd	Cobalt Rd	Topaz Rd	C	2U	12,500	5,880	5,900	0.47	A		2U	12,500	11,419	11,400	0.91	E
Luna Rd	Topaz Rd	Mesa Linda St	C	2U	12,500		2,200	0.18	A		2U	12,500	10,608	10,600	0.85	D
Luna Rd	Mesa Linda St	US 395	L	2U	10,000	5,120	5,100	0.51	A		2U	10,000	13,944	13,900	1.39	F
Luna Rd	US 395	Mesa View Dr	N				-	-	-	C	2U	12,500	15,461	15,500	1.24	F
Luna Rd	Mesa View Dr	Bellflower St	N				-	-	-	C	2U	12,500	10,669	10,700	0.85	D
Luna Rd	Bellflower St	Monte Vista Rd	N				-	-	-	C	2U	12,500	12,960	13,000	1.04	F
Luna Rd	Monte Vista Rd	Braceo St	N				-	-	-	C	2U	12,500	11,360	11,400	0.91	E
Luna Rd	Braceo St	Baldy Mesa Rd	N				-	-	-	C	2U	12,500	14,849	14,800	1.19	F
Mall Blvd	Petaluma Rd	Bear Valley Rd	A	4D	37,500	12,760	12,800	0.34	A		4D	37,500	14,034	14,000	0.37	A
Mariposa Rd	I-15 NB Off-ramp	Kingswood Dr	C	2D	12,500	19,460	19,500	1.56	F		2D	18,800	21,406	21,400	1.14	F
Mariposa Rd	Kingswood Dr	Yates Rd	C	2D	12,500	20,050	20,000	1.60	F	?	4D	37,500	22,051	22,100	0.59	A

Table A
PLANNING AREA ROADWAY SEGMENT LEVEL OF SERVICE
BY SEGMENT, CLASS OF ROADWAY, CAPACITY, ADT, LOS, V/C AND LOS,
EXISTING (2005) AND GENERAL PLAN BUILDOUT

Roadway	From	To	Exist. Class.	2005							2035					
				Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
Mariposa Rd	Yates Rd	Nisqualli Rd	C	2D	12,500	19,610	19,600	1.57	F	?	4D	37,500	25,690	25,700	0.69	B
Mariposa Rd	Nisqualli Rd	Bear Valley Rd	A	4D	37,500	15,770	15,800	0.42	A		4D	37,500	17,909	17,900	0.48	A
Mesa Linda St	Holly Rd	Cactus Rd	L	2U	10,000		-	-	-	C	2U	12,500	1,807	1,800	0.14	A
Mesa Linda St	Cactus Rd	Mojave Dr	L	2U	10,000		-	-	-	C	2U	12,500	4,942	4,900	0.40	A
Mesa Linda St	Mojave Dr	Hook blvd	C	2U	12,500		-	-	-		2U	12,500	5,190	5,200	0.42	A
Mesa Linda St	Hook blvd	Seneca Rd	L	2U	10,000		-	-	-	C	2U	12,500	6,782	6,800	0.54	A
Mesa Linda St	Seneca Rd	Palmdale Rd	N				-	-	-	C	2U	12,500	10,098	10,100	0.81	D
Mesa Linda St	Palmdale Rd	Dos Palmas Rd	N				-	-	-	C	2U	12,500	4,630	4,600	0.37	A
Mesa Linda St	Dos Palmas Rd	Luna Rd	C	2U	12,500		-	-	-		2U	12,500	5,729	5,700	0.46	A
Mesa Linda St	Luna Rd	La Mesa Rd	C	2U	12,500		-	-	-		2U	12,500	4,954	5,000	0.40	A
Mesa Linda St	La Mesa Rd	Eagle Ranch Pkwy	A	4U	25,000	2,330	2,300	0.09	A		4U	25,000	8,190	8,200	0.33	A
Mesa Linda St	Bear Valley Rd	Sequoia St	L	2U	10,000	1,320	1,300	0.13	A	A	4D	37,500	15,873	15,900	0.42	A
Mesa Linda St	Sequoia St	Sycamore St	N				-	-	-	C	2U	12,500	8,206	8,200	0.66	B
Mesa Linda St	Sycamore St	Eucalyptus St	N				-	-	-	C	2U	12,500	12,694	12,700	1.02	F
Mesa Linda St	Eucalyptus St	Verano St	N				-	-	-	C	2U	12,500	12,363	12,400	0.99	E
Mesa Linda St	Verano St	Mesa St	N				-	-	-	C	2U	12,500	5,164	5,200	0.41	A

Table A
PLANNING AREA ROADWAY SEGMENT LEVEL OF SERVICE
BY SEGMENT, CLASS OF ROADWAY, CAPACITY, ADT, LOS, V/C AND LOS,
EXISTING (2005) AND GENERAL PLAN BUILDOUT

Roadway	From	To	Exist. Class.	2005							2035					
				Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
Mesa View Dr	La Mesa Rd	Olivine Rd	L	2U	10,000		-	-	-	C	2U	12,500	3,027	3,000	0.24	A
Mesa View Dr	Olivine Rd	Bear Valley Rd	L	2U	10,000		-	-	-	C	2U	12,500	2,352	2,400	0.19	A
Mesa View Dr	Bear Valley Rd	Sycamore St	L	2U	10,000		-	-	-	C	2U	12,500	8,650	8,600	0.69	B
Mesa View Dr	Sycamore St	Eucalyptus St	L	2U	10,000		-	-	-	C	2U	12,500	8,012	8,000	0.64	B
Mesa St	Amargosa Rd	Topaz Rd	L	2U	10,000		-	-	-	C	2U	12,500	9,639	9,600	0.77	C
Mesa St	Topaz Rd	Eagle Ranch Pkwy	L	2U	10,000		-	-	-	C	2U	12,500	8,195	8,200	0.66	B
Mesa St	Eagle Ranch Pkwy	US-395	L	2U	10,000		-	-	-	C	2U	12,500	4,163	4,200	0.33	A
Mesa St	US-395	Pena Ave	L	2U	10,000		-	-	-	C	2U	12,500	12,285	12,300	0.98	E
Mojave Dr	Victor St	7th St	C	2U	12,500		-	-	-		2U	12,500	4,911	4,900	0.39	A
Mojave Dr	7th St	6th St	A	4U	25,000	11,310	11,300	0.45	A		4U	25,000	12,864	12,900	0.51	A
Mojave Dr	6th St	Del Rey Dr	A	4U	25,000	14,850	14,900	0.59	A		4U	25,000	17,154	17,200	0.69	B
Mojave Dr	Del Rey Dr	La Paz Dr	A	4U	25,000		16,900	0.68	B		4U	25,000	31,692	31,700	1.27	F
Mojave Dr	La Paz Dr	I-15 NB Ramps	A	4U	25,000	23,220	23,200	0.93	E	SA2	6D	56,000	35,398	35,400	0.63	B
Mojave Dr	I-15 Ramps SB	Village Dr	A	4D	37,500	28,690	28,700	0.77	C	SA2	6D	56,000	56,209	56,200	1.00	E
Mojave Dr	Village Dr	Amargosa Rd	A	4D	37,500		9,900	0.26	A	SA	6D	56,000	41,209	41,200	0.74	C
Mojave Dr	Amargosa Rd	Jeraldo Dr	A	4D	37,500		9,400	0.25	A		4D	37,500	24,655	24,700	0.66	B

Table A
PLANNING AREA ROADWAY SEGMENT LEVEL OF SERVICE
BY SEGMENT, CLASS OF ROADWAY, CAPACITY, ADT, LOS, V/C AND LOS,
EXISTING (2005) AND GENERAL PLAN BUILDOUT

Roadway	From	To	Exist. Class.	2005							2035					
				Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
Mojave Dr	Jeraldo Dr	Ashley Glen Dr	A	4D	37,500		7,900	0.21	A		4D	37,500	25,223	25,200	0.67	B
Mojave Dr	Ashley Glen Dr	El Evado Rd	A	4D	37,500		7,000	0.19	A		4D	37,500	26,605	26,600	0.71	C
Mojave Dr	El Evado Rd	East Trail	A	4D	37,500		8,000	0.21	A		4D	37,500	28,954	29,000	0.77	C
Mojave Dr	East Trail	Rocky Knoll Way	A	4D	37,500		5,700	0.15	A		4D	37,500	27,320	27,300	0.73	C
Mojave Dr	Rocky Knoll Way	West Trail	A	4D	37,500		5,700	0.15	A		4D	37,500	26,626	26,600	0.71	C
Mojave Dr	West Trail	Amethyst Rd	A	4D	37,500	12,360	12,400	0.33	A	SA	6D	56,000	28,894	28,900	0.52	A
Mojave Dr	Amethyst Rd	Bruclte Rd	A	4D	37,500	11,270	11,300	0.30	A	SA	6D	56,000	27,833	27,800	0.50	A
Mojave Dr	Bruclte Rd	Cobalt Rd	A	4D	37,500		5,700	0.15	A		4D	37,500	31,500	31,500	0.84	D
Mojave Dr	Cobalt Rd	Topaz Rd	A	4D	37,500		5,900	0.16	A		4D	37,500	28,695	28,700	0.77	C
Mojave Dr	Topaz Rd	Mesa Linda Ave	A	4D	37,500		5,900	0.16	A		4D	37,500	29,443	29,400	0.79	C
Mojave Dr	Mesa Linda Ave	US 395	A	4D	37,500	13,340	13,300	0.36	A	SA	6D	56,000	28,265	28,300	0.50	A
Monte Vista Rd (Aster Rd)	Palmdale Rd	Dos Palmas Rd	L	2U	10,000		-	-	-	A	4D	37,500	7,157	7,200	0.19	A
Monte Vista Rd (Aster Rd)	Dos Palmas Rd	Luna Rd	L	2U	10,000		-	-	-	A	4D	37,500	10,117	10,100	0.27	A
Monte Vista Rd (Aster Rd)	Luna Rd	La Mesa Rd	L	2U	10,000		-	-	-	A	4D	37,500	4,419	4,400	0.12	A
Monte Vista Rd (Aster Rd)	La Mesa Rd	Olivine Rd	L	2U	10,000		-	-	-	A	4D	37,500	12,655	12,700	0.34	A

Table A
PLANNING AREA ROADWAY SEGMENT LEVEL OF SERVICE
BY SEGMENT, CLASS OF ROADWAY, CAPACITY, ADT, LOS, V/C AND LOS,
EXISTING (2005) AND GENERAL PLAN BUILDOUT

Roadway	From	To	Exist. Class.	2005							2035					
				Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
Monte Vista Rd (Aster Rd)	Olivine Rd	Bear Valley Rd	L	2U	10,000		-	-	-	A	4D	37,500	12,136	12,100	0.32	A
Monte Vista Rd (Aster Rd)	Bear Valley Rd	Sycamore St	L	2U	10,000		-	-	-	A	4D	37,500	9,871	9,900	0.26	A
National Trails Hwy	n/o Turner Rd	Turner Rd	C	2U	12,500		4,400	0.35	A		2U	12,500	4,872	4,900	0.39	A
National Trails Hwy	Turner Rd	Air Expwy	C	2U	12,500	11,100	11,100	0.89	D		2U	12,500	12,209	12,200	0.98	E
National Trails Hwy	Air Expwy	Rancho Rd	C	2U	12,500		13,100	1.05	F		2U	12,500	20,022	20,000	1.60	F
National Trails Hwy	Rancho Rd	I-15 SB Ramps	C	2U	12,500	14,910	14,900	1.19	F		2U	12,500	26,007	26,000	2.08	F
Nevada Ave	Phantom West St	George Blvd	C	2U	12,500		-	-	-	MA_SP	4U	25,000	2,810	2,800	0.11	A
Nisqualli Rd	Hesperia Rd	1st Ave	C	2U	12,500	11,930	11,900	0.95	E	A	4D	37,500	18,669	18,700	0.50	A
Nisqualli Rd	1st Ave	3rd Ave	C	2U	12,500		11,200	0.90	D	A	4D	37,500	13,879	13,900	0.37	A
Nisqualli Rd	3rd Ave	Arrowhead Dr	C	2U	12,500	9,350	9,300	0.75	C	A	4D	37,500	16,834	16,800	0.45	A
Nisqualli Rd	Arrowhead Dr	Cypress Ave	C	2U	12,500	9,950	10,000	0.80	C	A	4D	37,500	21,785	21,800	0.58	A
Nisqualli Rd	Cypress Ave	11th Ave	C	2U	12,500		9,700	0.77	C	A	4D	37,500	24,760	24,800	0.66	B
Nisqualli Rd	11th Ave	Balsam Rd	C	2U	12,500		11,000	0.88	D	A	4D	37,500	27,959	28,000	0.75	C
Nisqualli Rd	Balsam Rd	Mariposa Rd	A	4U	25,000		12,700	0.51	A	SA	6D	56,000	40,166	40,200	0.72	C
Nisqualli Rd	11th Ave	Mariposa Rd	A	4U	25,000	11,200	11,200	0.45	A		4U	25,000	27,959	28,000	1.12	F
Northstar Ave	El Evado Rd	Pataluma Rd	A	4U	25,000		4,400	0.18	A		4U	25,000	3,452	3,500	0.14	A

Table A
PLANNING AREA ROADWAY SEGMENT LEVEL OF SERVICE
BY SEGMENT, CLASS OF ROADWAY, CAPACITY, ADT, LOS, V/C AND LOS,
EXISTING (2005) AND GENERAL PLAN BUILDOUT

Roadway	From	To	2005								2035					
			Exist. Class.	Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
Northstar Ave	Pataluma Rd	Pacoima Rd	A	4U	25,000		2,200	0.09	A		4U	25,000	10,702	10,700	0.43	A
Northstar Ave	Pacoima Rd	Amethyst Rd	C	2U	12,500	3,140	3,100	0.25	A		2U	14,500	5,071	5,100	0.35	A
Northstar Ave	Amethyst Rd	Cobalt Rd	C	2U	12,500	2,780	2,800	0.22	A		2U	14,500	3,738	3,700	0.26	A
Northstar Ave	Cobalt Rd	High Desert Rd	C	2U	12,500		-	-	-		2U	12,500	2,506	2,500	0.20	A
Olivine Rd	Cantina Dr	US 395	N				-	-	-	C	2U	12,500	22,257	22,300	1.78	F
Olivine Rd	US 395	Pena Rd	N				-	-	-	C	2U	12,500	4,731	4,700	0.38	A
Olivine Rd	Pena Rd	Mesa View Dr	N				-	-	-	C	2U	12,500	3,413	3,400	0.27	A
Olivine Rd	Mesa View Dr	Bellflower St	N				-	-	-	C	2U	12,500	2,724	2,700	0.22	A
Olivine Rd	Bellflower St	Monte Vista Rd	N				-	-	-	C	2U	12,500	3,804	3,800	0.30	A
Olivine Rd	Monte Vista Rd	Baldy Mesa Rd	N				-	-	-	C	2U	12,500	5,799	5,800	0.46	A
Olivine Rd	Baldy Mesa Rd	Beaver Ave	N				-	-	-	C	2U	12,500	15,269	15,300	1.22	F
Ottawa St	Hesperia Rd	1st Ave	C	2U	12,500	360	400	0.03	A		2U	12,500	18,961	19,000	1.52	F
Ottawa St	1st Ave	3rd Ave	C	2U	12,500		500	0.04	A		2U	12,500	17,672	17,700	1.41	F
Ottawa St	3rd Ave	Arrowhead Dr	N				-	-	-	C	2U	12,500	19,453	19,500	1.56	F
Ottawa St	Arrowhead Dr	Cypress Ave	N				-	-	-	C	2U	12,500	15,815	15,800	1.27	F
Ottawa St	Cypress Ave	Mariposa Rd	N				-	-	-	C	2U	12,500	16,443	16,400	1.32	F

Table A
PLANNING AREA ROADWAY SEGMENT LEVEL OF SERVICE
BY SEGMENT, CLASS OF ROADWAY, CAPACITY, ADT, LOS, V/C AND LOS,
EXISTING (2005) AND GENERAL PLAN BUILDOUT

Roadway	From	To	Exist. Class.	2005							2035					
				Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
Pacoima Rd	Seneca Rd	Palmdale Rd	N				-	-	-	C	2U	12,500	2,848	2,800	0.23	A
Pacoima Rd	Palmdale Rd	Dos Palmas Rd	L	2U	10,000		-	-	-	C	2U	12,500	4,416	4,400	0.35	A
Pacoima Rd	Dos Palmas Rd	Luna Rd	C	2U	12,500		-	-	-		2U	12,500	3,968	4,000	0.32	A
Pacoima Rd	Luna Rd	La Mesa Rd	C	2D	12,500	3,180	3,200	0.25	A		2D	12,500	8,900	8,900	0.71	C
Pacoima Rd	La Mesa Rd	Northstar Ave	C	2U	12,500	3,840	3,800	0.31	A		2U	12,500	12,982	13,000	1.04	F
Pacoima Rd	Northstar Ave	Bear Valley Rd	C	2U	12,500	3,630	3,600	0.29	A		2U	12,500	8,360	8,400	0.67	B
Pahute Rd	Spring Valley Pkwy	Tamarisk Rd	C	2U	12,500		-	-	-		2U	12,500	15,593	15,600	1.25	F
Pahute Rd	Tamarisk Rd	Ridgecrest Rd	C	2U	12,500		-	-	-		2U	12,500	15,661	15,700	1.25	F
Pahute Rd	Cottonwood Ave	Balsam Rd	N				-	-	-	C	2U	12,500	11,382	11,400	0.91	E
Palmdale Rd (SR-18) /7th St	Green Tree Blvd	Mariposa Rd	MA	4D	37,500	41,950	41,900	1.12	F	SA	6D	56,000	77,600	77,600	1.39	F
Palmdale Rd (SR-18)	I-15 SB Ramps	Amargosa Rd	MA	4D	37,500	54,700	54,700	1.46	F	SA	6D	56,000	81,393	81,400	1.45	F
Palmdale Rd (SR-18)	Amargosa Rd	Cahuenga Rd	MA	4D	37,500	33,640	33,600	0.90	D	SA	6D	56,000	61,526	61,500	1.10	F
Palmdale Rd (SR-18)	Cahuenga Rd	El Evado Rd	MA	4D	37,500		24,700	0.66	B	SA	6D	56,000	59,038	59,000	1.05	F
Palmdale Rd (SR-18)	El Evado Rd	Pacoima Rd	MA	4D	37,500		14,600	0.39	A	SA	6D	56,000	51,058	51,100	0.91	E
Palmdale Rd (SR-18)	Pacoima Rd	Amethyst Rd	MA	4D	37,500	27,020	27,000	0.72	C	SA	6D	56,000	45,784	45,800	0.82	D

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BY SEGMENT, CLASS OF ROADWAY, CAPACITY, ADT, LOS, V/C AND LOS,
EXISTING (2005) AND GENERAL PLAN BUILDOUT

Roadway	From	To	Exist. Class.	2005							2035					
				Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
Palmdale Rd (SR-18)	Amethyst Rd	Cobalt Rd	MA	4D	37,500		14,800	0.39	A	SA	6D	56,000	41,814	41,800	0.75	C
Palmdale Rd (SR-18)	Cobalt Rd	Topaz Rd	MA	4D	37,500		13,700	0.36	A	SA	6D	56,000	44,594	44,600	0.80	C
Palmdale Rd (SR-18)	Topaz Rd	Mesa Linda Ave	MA	4D	37,500		13,700	0.37	A	SA	6D	56,000	48,106	48,100	0.86	D
Palmdale Rd (SR-18)	Mesa Linda Ave	Cantina Dr	MA	4D	37,500		13,700	0.36	A	SA	6D	56,000	38,425	38,400	0.69	B
Palmdale Rd (SR-18)	Cantina Dr	US 395	MA	4D	37,500	18,960	19,000	0.51	A	SA	6D	56,000	31,842	31,800	0.57	A
Palmdale Rd (SR-18)	US 395	Pana Rd	MA	4D	37,500	15,980	16,000	0.43	A	SA	6D	56,000	39,757	39,800	0.71	C
Palmdale Rd (SR-18)	Pana Rd	Mesa View Dr	MA	4D	37,500		10,400	0.28	A	SA	6D	56,000	39,761	39,800	0.71	C
Palmdale Rd (SR-18)	Mesa View Dr	Bellflower St	C	2U	12,500		10,300	0.82	D	SA	6D	56,000	37,423	37,400	0.67	B
Palmdale Rd (SR-18)	Bellflower St	Verbena Rd	C	2U	12,500		8,900	0.72	C	SA	6D	56,000	34,380	34,400	0.61	B
Palmdale Rd (SR-18)	Verbena Rd	Monte Vista Rd	C	2U	12,500		6,800	0.54	A	SA	6D	56,000	34,342	34,300	0.61	B
Palmdale Rd (SR-18)	Monte Vista Rd	Baldy Mesa Rd	C	2U	12,500	11,010	11,000	0.88	D	SA	6D	56,000	29,383	29,400	0.52	A
Palmdale Rd (SR-18)	Baldy Mesa Rd	White Rd	C	2U	12,500		7,200	0.57	A	SA	6D	56,000	43,999	44,000	0.79	C
Pena Ave	Bear Valley Rd	Sycamore St	N				-	-	-	C	2U	12,500	7,271	7,300	0.58	A
Pena Ave	Sycamore St	Eucalyptus St	N				-	-	-	C	2U	12,500	6,250	6,200	0.50	A
Pebble Beach Dr	La Paz Dr	Rodeo Dr	C	2U	12,500		1,000	0.08	A	L	2U	10,000	2,847	2,800	0.28	A

Table A
PLANNING AREA ROADWAY SEGMENT LEVEL OF SERVICE
BY SEGMENT, CLASS OF ROADWAY, CAPACITY, ADT, LOS, V/C AND LOS,
EXISTING (2005) AND GENERAL PLAN BUILDOUT

Roadway	From	To	Exist. Class.	2005							2035					
				Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
Perimeter Rd	n/o Phantom East St	Phantom East St	L	2U	10,000		-	-	-	SA_SP	6U	50,000	28,651	28,700	0.57	A
Phantom East St	Shay Rd	Turner Rd	A	4D	37,500		700	0.02	A	SA_SP	6U	50,000	62,120	62,100	1.24	F
Phantom East St	Turner Rd	Air Expwy	A	4D	37,500	1,050	1,100	0.03	A	SA_SP	6U	50,000	68,481	68,500	1.37	F
Phantom West St	George Blvd	Sabre Blvd	A	4U	25,000		2,600	0.11	A	SA_SP	6U	50,000	21,250	21,200	0.42	A
Phantom West St	Sabre Blvd	Mustang St	A	4U	25,000		2,600	0.11	A	SA_SP	6U	50,000	21,023	21,000	0.42	A
Phantom West St	Mustang St	Air Expwy	A	4U	25,000	2,410	2,400	0.10	A	SA_SP	6U	50,000	21,023	21,000	0.42	A
Rancho Rd	Ranch Rd	Gas Line Rd	L	2U	10,000		-	-	-	A	4D	30,000	5,810	5,800	0.19	A
Rancho Rd	Gas Line Rd	Village Dr	L	2U	10,000		-	-	-	A	4D	30,000	4,990	5,000	0.17	A
Rancho Rd	Village Dr	El Evado Rd	C	2U	12,500		-	-	-	A	4D	30,000	9,119	9,100	0.30	A
Rancho Rd	El Evado Rd	Amethyst Rd	L	2U	10,000		-	-	-	C	2D	18,800	8,145	8,100	0.43	A
Redrock Rd	Topaz Rd	Eagle Ranch Pkwy	C	2U	12,500	2,580	2,600	0.21	A		2U	12,500	7,288	7,300	0.58	A
Reno Loop East	E Trail	Hook blvd	C	2U	12,500	3,450	3,500	0.28	A		2U	12,500	3,807	3,800	0.30	A
Reno Loop East	Hook blvd	S Trail	C	2U	12,500	1,240	1,200	0.10	A		2U	12,500	5,055	5,100	0.40	A
Reno Loop West	W Trail	Hook blvd	C	2U	12,500	2,200	2,200	0.18	A		2U	12,500	4,258	4,300	0.34	A
Reno Loop West	Hook blvd	S Trail	C	2U	12,500	900	900	0.07	A		2U	12,500	953	1,000	0.08	A
Ridgecrest Rd	Green Tree Blvd	Pahute Rd	A	4D	37,500		6,700	0.18	A		4D	37,500	30,094	30,100	0.80	C

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BY SEGMENT, CLASS OF ROADWAY, CAPACITY, ADT, LOS, V/C AND LOS,
EXISTING (2005) AND GENERAL PLAN BUILDOUT

Roadway	From	To	Exist. Class.	2005							2035					
				Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
Ridgecrest Rd	Pahute Rd	Bear Valley Rd	A	4D	37,500	11,470	11,500	0.31	A		4D	37,500	15,157	15,200	0.40	A
Rodeo Dr	Victor St	Seneca Rd	C	2U	12,500	4,860	4,900	0.39	A	L	2U	10,000	8,124	8,100	0.81	D
Rodeo Dr	Seneca Rd	Lorene Dr	C	2U	12,500	6,600	6,600	0.53	A		2U	12,500	10,416	10,400	0.83	D
Rodeo Dr	Lorene Dr	Hughes Rd	C	2U	12,500	7,090	7,100	0.57	A		2U	12,500	11,163	11,200	0.89	D
Rodeo Dr	Hughes Rd	Pebble Beach Dr	C	2U	12,500	7,370	7,400	0.59	A		2U	12,500	12,014	12,000	0.96	E
Rodeo Dr	Pebble Beach Dr	Green Tree Blvd	C	2U	12,500		4,000	0.32	A		2U	12,500	8,256	8,300	0.66	B
Roy Rogers Dr	I-15 Ramps NB	I-15 SB Ramps	5D	5D	56,000	31,500	30,600	0.55	A	SA2	6D	56,000	45,610	45,600	0.81	D
Roy Rogers Dr	I-15 Ramps SB	Civic Dr	5D	5D	56,000	30,580	30,600	0.55	A	SA	6D	56,000	42,794	42,800	0.76	C
Roy Rogers Dr	Civic Dr	Amargosa Rd	5D	5D	56,000		18,200	0.32	A	SA	6D	56,000	37,184	37,200	0.66	B
Seneca Rd	Industrial Blvd	Hesperia Rd	A	4U	25,000		-	-	-		4U	25,000	3,886	3,900	0.16	A
Seneca Rd	Hesperia Rd	Rodeo Dr	A	4U	25,000	7,780	7,800	0.31	A		4U	25,000	21,098	21,100	0.84	D
Seneca Rd	Rodeo Dr	La Paz Dr	A	4U	25,000	6,640	6,600	0.27	A		4U	25,000	22,867	22,900	0.91	E
Seneca Rd	Civic Dr	Amargosa Rd	A	4D	37,500	2,420	2,400	0.06	A		4D	30,000	2,663	2,700	0.09	A
Seneca Rd	Amargosa Rd	Borego Rd	C	2U	12,500		4,100	0.33	A		2U	12,500	11,416	11,400	0.91	E
Seneca Rd	Borego Rd	Cahuenga Rd	C	2U	12,500		3,600	0.29	A		2U	12,500	15,954	16,000	1.28	F
Seneca Rd	Cahuenga Rd	El Evado Rd	C	2U	12,500	2,620	2,600	0.21	A		2U	12,500	17,901	17,900	1.43	F

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BY SEGMENT, CLASS OF ROADWAY, CAPACITY, ADT, LOS, V/C AND LOS,
EXISTING (2005) AND GENERAL PLAN BUILDOUT

Roadway	From	To	Exist. Class.	2005							2035					
				Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
Seneca Rd	El Evado Rd	S Trail	C	2U	12,500	2,870	2,900	0.23	A		2U	12,500	17,596	17,600	1.41	F
Seneca Rd	S Trail	Amethyst Rd	C	2U	12,500		200	0.02	A		2U	12,500	18,537	18,500	1.48	F
Seneca Rd	Amethyst Rd	Cobalt Rd	C	2U	12,500		900	0.08	A		2U	12,500	16,482	16,500	1.32	F
Seneca Rd	Cobalt Rd	Topaz Rd	L	2U	10,000		-	-	-		2U	10,000	17,012	17,000	1.70	F
Seneca Rd	Topaz Rd	Mesa Linda Ave	L	2U	10,000		-	-	-		2U	10,000	18,103	18,100	1.81	F
Seneca Rd	Mesa Linda Ave	US 395	L	2U	10,000		-	-	-		2U	10,000	17,864	17,900	1.79	F
Silica Rd	Industrial Blvd	Hesperia Rd	A	4D	37,500		3,200	0.08	A		4D	30,000	13,786	13,800	0.46	A
Silica Rd	Hesperia Rd	2nd Ave	C	2U	12,500		3,200	0.26	A		2U	12,500	8,144	8,100	0.65	B
Silica Rd	2nd Ave	3rd Ave	N				-	-	-	C	2U	12,500	8,859	8,900	0.71	C
Silica Rd	3rd Ave	7th Ave	C	2U	12,500		-	-	-		2U	12,500	5,662	5,700	0.45	A
Spring Valley Pkwy	Driftwood Dr	Country Club Dr	C	2D	12,500		-	-	-	L	2U	12,500	12,156	12,200	0.97	E
Spring Valley Pkwy	Country Club Dr	Pahute Rd	C	2D	12,500		6,100	0.49	A	L	2U	12,500	7,661	7,700	0.61	B
Spring Valley Pkwy	Pahute Rd	Bear Valley Rd	C	2D	12,500	12,970	13,000	1.04	F	A	4D	37,500	21,886	21,900	0.58	A
Smoketree Rd	Amargosa Rd	Topaz Rd	N				-	-	-	A	4D	37,500	40,954	41,000	1.09	F
Smoketree Rd	Topaz Rd	Mesa Linda St	N				-	-	-	A	4D	37,500	16,576	16,600	0.44	A
Stoddard Wells Rd	Dante St	I-15 SB Ramps	A	4D	37,500	3,180	3,200	0.08	A	A	4D	37,500	46,363	46,400	1.24	F

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BY SEGMENT, CLASS OF ROADWAY, CAPACITY, ADT, LOS, V/C AND LOS,
EXISTING (2005) AND GENERAL PLAN BUILDOUT

Roadway	From	To	Exist. Class.	2005							2035					
				Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
Stoddard Wells Rd	I-15 NB Ramps	Happy Trails Hwy	C	2U	12,500		1,500	0.12	A	A	4D	30,000	19,435	19,400	0.65	B
Sycamore St	Amargosa Rd	Amethyst Rd	L	2U	10,000		-	-	-	C	2U	12,500	4,346	4,300	0.35	A
Sycamore St	Amethyst Rd	Cobalt Rd	C	2U	12,500		-	-	-		2U	12,500	6,529	6,500	0.52	A
Sycamore St	Cobalt Rd	Topaz Rd	C	2U	12,500		2,200	0.18	A		2U	12,500	6,865	6,900	0.55	A
Sycamore St	Topaz Rd	Mesa Linda St	C	2U	12,500		800	0.07	A		2U	12,500	6,778	6,800	0.54	A
Sycamore St	Mesa Linda St	US 395	C	2U	12,500		1,000	0.08	A		2U	12,500	16,443	16,400	1.32	F
Sycamore St	US 395	Pana Rd	N				-	-	-	C	2U	12,500	18,992	19,000	1.52	F
Sycamore St	Pana Rd	Mesa View Dr	N				-	-	-	C	2U	12,500	9,431	9,400	0.75	C
Sycamore St	Mesa View Dr	Bellflower St	N				-	-	-	C	2U	12,500	10,011	10,000	0.80	C
Sycamore St	Bellflower St	Verbena Rd	N				-	-	-	C	2U	12,500	6,872	6,900	0.55	A
Sycamore St	Verbena Rd	Monte Vista Rd	N				-	-	-	C	2U	12,500	10,519	10,500	0.84	D
Tawney Ridge Ln	Puesta Del Sol Dr	Sueno Ln	C	2U	12,500		300	0.02	A		2U	12,500	3,902	3,900	0.31	A
Tawney Ridge Ln	Sueno Ln	Village Dr	C	2U	12,500	2,990	3,000	0.24	A		2U	12,500	3,724	3,700	0.30	A
Tawney Ridge Ln	Village Dr	Condor Rd	C	2U	12,500	920	900	0.07	A		2U	12,500	2,594	2,600	0.21	A
Tawney Ridge Ln	Condor Rd	Amargosa Rd	C	2U	12,500		300	0.02	A		2U	12,500	2,662	2,700	0.21	A
Tawney Ridge Ln	Amargosa Rd	Ferndale Rd	L	2U	10,000		-	-	-	C	2U	12,500	5,713	5,700	0.46	A

Table A
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BY SEGMENT, CLASS OF ROADWAY, CAPACITY, ADT, LOS, V/C AND LOS,
EXISTING (2005) AND GENERAL PLAN BUILDOUT

Roadway	From	To	Exist. Class.	2005							2035					
				Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
Tawney Ridge Ln	Ferndale Rd	Cahuenga Rd	L	2U	10,000		-	-	-	C	2U	12,500	5,053	5,100	0.40	A
Tawney Ridge Ln	Cahuenga Rd	El Evado Rd	L	2U	10,000		-	-	-	C	2U	12,500	2,353	2,400	0.19	A
Tawney Ridge Ln	El Evado Rd	Cordova Rd	L	2U	10,000		-	-	-	C	2U	12,500	2,706	2,700	0.22	A
Tawney Ridge Ln	Cordova Rd	Amethyst Rd	N				-	-	-	C	2U	12,500	2,237	2,200	0.18	A
Tawney Ridge Ln	Amethyst Rd	Cobalt Rd	N				-	-	-	C	2U	12,500	5,645	5,600	0.45	A
Tawney Ridge Ln	Cobalt Rd	Topaz Rd	N				-	-	-	C	2U	12,500	1,684	1,700	0.13	A
Tawney Ridge Ln	Topaz Rd	Mesa Linda Ave	N				-	-	-	C	2U	12,500	5,974	6,000	0.48	A
Tawney Ridge Ln	Mesa Linda Ave	Us 395	N				-	-	-	C	2U	12,500	7,504	7,500	0.60	A
Topaz Rd	Holly Rd	Cactus Rd	N				-	-	-	A	4D	37,500	11,456	11,500	0.31	A
Topaz Rd	Cactus Rd	Mojave Dr	N				-	-	-	A	4D	37,500	17,381	17,400	0.46	A
Topaz Rd	Mojave Dr	Hook blvd	N				-	-	-	A	4D	37,500	12,837	12,800	0.34	A
Topaz Rd	Hook blvd	Seneca Rd	N				-	-	-	A	4D	37,500	15,584	15,600	0.42	A
Topaz Rd	Seneca Rd	Palmdale Rd	N				-	-	-	A	4D	37,500	13,920	13,900	0.37	A
Topaz Rd	Palmdale Rd	Dos Palmas Rd	N				-	-	-	A	4D	37,500	15,632	15,600	0.42	A
Topaz Rd	Dos Palmas Rd	Luna Rd	N				-	-	-	A	4D	37,500	14,445	14,400	0.39	A
Topaz Rd	Luna Rd	La Mesa Rd	A	4U	25,000	2,000	2,000	0.08	A	A	4D	37,500	10,436	10,400	0.28	A

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BY SEGMENT, CLASS OF ROADWAY, CAPACITY, ADT, LOS, V/C AND LOS,
EXISTING (2005) AND GENERAL PLAN BUILDOUT

Roadway	From	To	2005								2035					
			Exist. Class.	Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
Topaz Rd	La Mesa Rd	Redrock Rd	A	4D	37,500	3,730	3,700	0.10	A		4D	37,500	13,183	13,200	0.35	A
Topaz Rd	Redrock Rd	San Miguel St	A	4D	37,500	4,480	4,500	0.12	A		4D	37,500	14,859	14,900	0.40	A
Topaz Rd	San Miguel St	Bear Valley Rd	C	2U	12,500	4,480	4,500	0.36	A	A	4D	37,500	16,366	16,400	0.44	A
Topaz Rd	Bear Valley Rd	Sycamore St	N				-	-	-	A	4D	37,500	17,482	17,500	0.47	A
Topaz Rd	Sycamore St	Eucalyptus St	C	2U	12,500		-	-	-	A	4D	37,500	19,866	19,900	0.53	A
Topaz Rd	Eucalyptus St	Verano St	N				-	-	-	A	4D	37,500	17,589	17,600	0.47	A
Topaz Rd	Verano St	Smoketree Rd	N				-	-	-	A	4D	37,500	24,396	24,400	0.65	B
Turner Rd	National Trails Hwy	Air Expwy	L	2U	10,000		-	-	-	C	2U	12,500	950	1,000	0.08	A
Verde St	11th St	Hesperia Rd	L	2U	10,000	4,410	4,400	0.44	A		2U	10,000	5,558	5,600	0.56	A
Verde St	Hesperia Rd	Mojave St	L	2U	10,000	6,400	6,400	0.64	B		2U	10,000	7,037	7,000	0.70	B
Verbena Rd	Palmdale Rd	Dos Palmas Rd	N				-	-	-	C	2U	12,500	3,801	3,800	0.30	A
Verbena Rd	Dos Palmas Rd	Luna Rd	N				-	-	-	C	2U	12,500	4,587	4,600	0.37	A
Verbena Rd	Luna Rd	Olivine Rd	L	2U	10,000		-	-	-	C	2U	12,500	2,972	3,000	0.24	A
Verbena Rd	Olivine Rd	Bear Valley Rd	L	2U	10,000		-	-	-	C	2U	12,500	2,475	2,500	0.20	A
Verbena Rd	Bear Valley Rd	Sycamore St	L	2U	10,000		-	-	-	C	2U	12,500	2,307	2,300	0.18	A

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EXISTING (2005) AND GENERAL PLAN BUILDOUT

Roadway	From	To	Exist. Class.	2005							2035					
				Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
Victor St	Mojave Dr	Rodeo Dr	C	2U	12,500		1,100	0.08	A	L	2U	10,000	2,243	2,200	0.22	A
Victor St	Rodeo Dr	Corta Dr	C	2U	12,500		2,800	0.22	A	L	2U	10,000	6,499	6,500	0.65	B
Victor St	Corta Dr	7th St	C	2U	12,500		3,300	0.27	A	L	2U	10,000	7,829	7,800	0.78	C
Village Dr	Mojave Dr	Calgo Ln	A	4U	25,000	13,060	13,100	0.52	A		4U	25,000	23,596	23,600	0.94	E
Village Dr	Calgo Ln	Tawney Ridge Ln	A	4U	25,000	10,940	10,900	0.44	A		4U	25,000	20,332	20,300	0.81	D
Village Dr	Tawney Ridge Ln	Puesta Del Sol Dr	A	4U	25,000	7,730	7,700	0.31	A		4U	25,000	16,524	16,500	0.66	B
Village Dr	Puesta Del Sol Dr	Amargosa Rd	A	4U	25,000	7,760	7,800	0.31	A		4U	25,000	20,044	20,000	0.80	C
Village Dr	Amargosa Rd	Clovis St	A	4U	25,000	11,520	11,500	0.46	A		4U	25,000	26,130	26,100	1.05	F
Village Dr	Clovis St	Rancho Rd	A	4U	25,000		9,600	0.38	A		4U	25,000	21,698	21,700	0.87	D
Village Dr	Rancho Rd	Air Base Rd	A	4U	25,000		9,100	0.37	A		4U	25,000	23,130	23,100	0.93	E
Wash Road South	Bear Valley Rd	Amargosa Rd	N				-	-	-	C	2U	12,500	0	0	0.00	A
West Trail	Mojave Dr	Reno Loop Rd	C	2U	12,500		1,100	0.09	A		2U	12,500	2,358	2,400	0.19	A
White Rd	Palmdale Rd	Luna Rd	L	2U	10,000		-	-	-	A	4D	37,500	767	800	0.02	A
White Rd	Luna Rd	La Mesa Rd	L	2U	10,000		-	-	-	A	4D	37,500	2,371	2,400	0.06	A
White Rd	La Mesa Rd	Bear Valley Rd	L	2U	10,000		-	-	-	A	4D	37,500	1,972	2,000	0.05	A
Yates Rd	Arrowhead Dr	Mariposa Rd	C	2U	12,500	2,940	2,900	0.24	A		2U	12,500	11,669	11,700	0.93	E

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Roadway	From	To	Exist. Class.	2005							2035					
				Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
State Facilities																
US-395	Cactus Rd	Mojave Dr	C	2U	12,500	23,630	23,600	1.89	F	SA	6D	56,000	39,532	39,500	0.71	C
US-395	Mojave Dr	Hook blvd	C	2U	12,500		17,100	1.37	F	SA	6D	56,000	45,683	45,700	0.82	D
US-395	Hook blvd	Seneca Rd	C	2U	12,500		17,100	1.37	F	SA	6D	56,000	46,987	47,000	0.84	D
US-395	Seneca Rd	Palmdale Rd	C	2U	12,500	27,310	27,300	2.18	F	SA	6D	56,000	32,556	32,600	0.58	A
US-395	Palmdale Rd	Dos Palmas Rd	C	2U	12,500		18,700	1.49	F	SA	6D	56,000	37,307	52,800	0.67	B
US-395	Dos Palmas Rd	Luna Rd	C	2U	12,500		18,200	1.45	F	SA	6D	56,000	30,241	48,000	0.54	A
US-395	Luna Rd	La Mesa Rd	C	2U	12,500		17,500	1.40	F	SA	6D	56,000	33,154	52,800	0.59	A
US-395	La Mesa Rd	Olivine Rd	C	2U	12,500		17,500	1.40	F	SA	6D	56,000	34,802	55,200	0.62	B
US-395	Olivine Rd	Bear Valley Rd	C	2U	12,500	28,450	28,500	2.28	F	SA	6D	56,000	52,448	56,000	0.94	E
US-395	Bear Valley Rd	Sycamore St	A	4U	25,000		19,500	0.78	C	SA	6D	56,000	58,924	58,900	1.05	F
US-395	Sycamore St	Eucalyptus St	A	4U	25,000		19,900	0.80	C	SA	6D	56,000	49,732	49,700	0.89	D
US-395	Eucalyptus St	Mesa St	A	4U	25,000		20,300	0.81	D	SA	6D	56,000	76,788	76,800	1.37	F
US-395	Mesa St	California Aqueduct	A	4U	25,000	24,310	24,300	0.97	E	SA	6D	56,000	83,128	83,100	1.48	F
I-15 SB	High Desert Corridor	Stoddard Wells Rd		2F	37,000	29,000	29,000	0.78	C		2F	37,000	80,664	80,700	2.18	F

Table A
PLANNING AREA ROADWAY SEGMENT LEVEL OF SERVICE
BY SEGMENT, CLASS OF ROADWAY, CAPACITY, ADT, LOS, V/C AND LOS,
EXISTING (2005) AND GENERAL PLAN BUILDOUT

Roadway	From	To	Exist. Class.	2005							2035					
				Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
I-15 NB	High Desert Corridor	Stoddard Wells Rd		2F	37,000	29,000	29,000	0.78	C		2F	37,000	82,685	82,700	2.23	F
I-15 SB	Stoddard Wells Rd	National Trails Hwy		2F	37,000	30,000	30,000	0.81	D		2F	37,000	98,783	98,800	2.67	F
I-15 NB	Stoddard Wells Rd	National Trails Hwy		2F	37,000	30,000	30,000	0.81	D		2F	37,000	98,930	98,900	2.67	F
I-15 SB	National Trails Hwy	Mojave Dr		3F	60,500	36,500	36,500	0.60	A		3F	60,500	100,019	100,000	1.65	F
I-15 NB	National Trails Hwy	Mojave Dr		3F	60,500	36,500	36,500	0.60	A		3F	60,500	100,059	100,100	1.65	F
I-15 SB	Mojave Dr	Roy Rogers Dr / La Paz Dr		3F	60,500	42,500	42,500	0.70	B		3F	60,500	108,710	108,700	1.80	F
I-15 NB	Mojave Dr	Roy Rogers Dr / La Paz Dr		3F	60,500	42,500	42,500	0.70	B		3F	60,500	106,083	106,100	1.75	F
I-15 SB	Roy Rogers Dr / La Paz Dr	Palmdale Rd		3F	60,500	43,500	43,500	0.72	C		3F	60,500	107,500	107,500	1.78	F
I-15 NB	Roy Rogers Dr / La Paz Dr	Palmdale Rd		3F	60,500	43,500	43,500	0.72	C		3F	60,500	105,136	105,100	1.74	F
I-15 SB	Palmdale Rd	La Mesa Rd / Nisqualli Rd		3F	60,500	43,000	43,000	0.71	C		3F	60,500	93,408	93,400	1.54	F
I-15 NB	Palmdale Rd	La Mesa Rd / Nisqualli Rd		3F	60,500	43,000	43,000	0.71	C		3F	60,500	97,993	98,000	1.62	F
I-15 SB	La Mesa Rd / Nisqualli Rd	Bear Valley Rd		3F	60,500	43,000	43,000	0.71	C		3F	60,500	99,245	99,200	1.64	F

Table A
PLANNING AREA ROADWAY SEGMENT LEVEL OF SERVICE
BY SEGMENT, CLASS OF ROADWAY, CAPACITY, ADT, LOS, V/C AND LOS,
EXISTING (2005) AND GENERAL PLAN BUILDOUT

Roadway	From	To	Exist. Class.	2005							2035					
				Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
I-15 NB	La Mesa Rd / Nisqualli Rd	Bear Valley Rd		3F	60,500	43,000	43,000	0.71	C		3F	60,500	101,231	101,200	1.67	F
I-15 SB	Bear Valley Rd	Eucalyptus St		3F	60,500	50,500	50,500	0.83	D		3F	60,500	95,071	95,100	1.57	F
I-15 NB	Bear Valley Rd	Eucalyptus St		3F	60,500	50,500	50,500	0.83	D		3F	60,500	103,126	103,100	1.70	F
I-15 SB	Eucalyptus St	Mojave St		3F	60,500	50,500	50,500	0.83	D		3F	60,500	110,653	110,700	1.83	F
I-15 NB	Eucalyptus St	Mojave St		3F	60,500	50,500	50,500	0.83	D		3F	60,500	107,389	107,400	1.78	F
Ramps																
I-15 NB on-ramp from Stoddard Wells Rd				Direct	12,000	780	800	0.07	A		Direct	12,000	3,577	3,600	0.30	A
I-15 NB off-ramp to Stoddard Wells Rd				Direct	12,000	1,300	1,300	0.11	A		Direct	12,000	19,342	19,300	1.61	F
I-15 SB on-ramp from Stoddard Wells Rd				Direct	12,000	1,950	2,000	0.16	A		Direct	12,000	21,859	21,900	1.82	F
I-15 SB off-ramp to Stoddard Wells Rd				Direct	12,000	1,000	1,000	0.08	A		Direct	12,000	3,791	3,800	0.32	A
I-15 NB on-ramp from E St				Direct	12,000	370	400	0.03	A		Loop	12,000	1,668	1,700	0.14	A
I-15 NB off-ramp to E St				Loop	8,000	1,140	1,100	0.14	A		Loop	8,000	1,337	1,300	0.17	A
I-15 SB on-ramp from E St				Loop	8,000	1,330	1,300	0.17	A		Loop	8,000	1,538	1,500	0.19	A
I-15 SB off-ramp to E St				Direct	12,000	310	300	0.03	A		Direct	12,000	1,255	1,300	0.10	A

Table A
PLANNING AREA ROADWAY SEGMENT LEVEL OF SERVICE
BY SEGMENT, CLASS OF ROADWAY, CAPACITY, ADT, LOS, V/C AND LOS,
EXISTING (2005) AND GENERAL PLAN BUILDOUT

Roadway	From	To	Exist. Class.	2005							2035					
				Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
I-15 NB on-ramp from National Trails Hwy				Loop	8,000	1,900	1,900	0.24	A		Loop	8,000	3,446	3,400	0.43	A
I-15 NB off-ramp to National Trails Hwy				Direct	12,000	12,550	12,500	1.05	F		Direct	12,000	13,801	13,800	1.15	F
I-15 SB on-ramp from National Trails Hwy				Direct	12,000	14,240	14,200	1.19	F		Direct	12,000	15,665	15,700	1.31	F
I-15 SB off-ramp to National Trails Hwy				Loop	8,000	1,910	1,900	0.24	A		Loop	8,000	4,489	4,500	0.56	A
I-15 NB on-ramp from Mojave Dr				Direct	12,000	2,980	3,000	0.25	A		Direct	12,000	10,351	10,400	0.86	D
I-15 NB off-ramp to Mojave Dr				Direct	12,000	4,400	4,400	0.37	A		Direct	12,000	11,796	11,800	0.98	E
I-15 SB on-ramp from Mojave Dr				Direct	12,000	5,400	5,400	0.45	A		Direct	12,000	13,161	13,200	1.10	F
I-15 SB off-ramp to Mojave Dr				Direct	12,000	2,800	2,800	0.23	A		Direct	12,000	7,876	7,900	0.66	B
I-15 NB on-ramps from Roy Rogers Dr				Loop	8,000	3,860	3,900	0.48	A		Loop	8,000	5,583	5,600	0.70	B
I-15 NB off-ramps to Roy Rogers Dr				Direct	12,000	6,540	6,500	0.54	A		Direct	12,000	7,190	7,200	0.60	A
I-15 SB on-ramps from Roy Rogers Dr				Direct	12,000	5,300	5,300	0.44	A		Direct	12,000	6,187	6,200	0.52	A
I-15 SB off-ramps to Roy Rogers Dr				Loop	8,000	4,850	4,900	0.61	B		Loop	8,000	7,948	7,900	0.99	E

Table A
PLANNING AREA ROADWAY SEGMENT LEVEL OF SERVICE
BY SEGMENT, CLASS OF ROADWAY, CAPACITY, ADT, LOS, V/C AND LOS,
EXISTING (2005) AND GENERAL PLAN BUILDOUT

Roadway	From	To	Exist. Class.	2005							2035					
				Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
I-15 NB Direct on-ramp from 7th St				Direct	12,000	3,420	3,400	0.29	A		Direct	12,000	14,776	14,800	1.23	F
I-15 NB Loop on-ramp from EB Palmdale Rd				Loop	8,000	4,530	4,500	0.57	A		Loop	8,000	9,294	9,300	1.16	F
I-15 SB Loop on-ramp from WB 7th St				Loop	8,000	4,830	4,800	0.60	A		Loop	8,000	16,548	16,500	2.07	F
I-15 SB Direct on-ramp from Palmdale Rd				Direct	12,000	3,850	3,900	0.32	A		Direct	12,000	4,235	4,200	0.35	A
I-15 SB off-ramp to Palmdale Rd				Direct	12,000	4,830	4,800	0.40	A		Direct	12,000	16,548	16,500	1.38	F
I-15 NB off-ramp to Mariposa Rd				Direct	12,000	6,420	6,400	0.54	A		Direct	12,000	13,137	13,100	1.09	F
I-15 NB on-ramp from Nisqualli Rd				N			-	-	-		Direct	12,000	18,526	18,500	1.54	F
I-15 NB off-ramp to Nisqualli Rd				N			-	-	-		Direct	12,000	24,524	24,500	2.04	F
I-15 SB on-ramp from Amargosa Rd				N			-	-	-		Direct	12,000	22,401	22,400	1.87	F
I-15 SB off-ramp to Amargosa Rd				N			-	-	-		Direct	12,000	19,325	19,300	1.61	F
I-15 NB on-ramp from Bear Valley Rd				Direct	12,000	8,950	8,900	0.75	C		Direct	12,000	14,812	14,800	1.23	F
I-15 NB off-ramp to Bear Valley Rd				Direct	12,000	16,900	16,900	1.41	F		Direct	12,000	17,154	17,200	1.43	F

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BY SEGMENT, CLASS OF ROADWAY, CAPACITY, ADT, LOS, V/C AND LOS,
EXISTING (2005) AND GENERAL PLAN BUILDOUT

Roadway	From	To	Exist. Class.	2005							2035					
				Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
I-15 SB off-ramp to Bear Valley Rd				Direct	12,000	10,240	10,200	0.85	D		Direct	12,000	19,205	19,200	1.60	F
I-15 SB on-ramp from WB Bear Valley Rd				Loop	8,000	10,090	10,100	1.26	F		Loop	8,000	11,099	11,100	1.39	F
I-15 SB on-ramp from EB Bear Valley Rd				Direct	12,000	6,410	6,400	0.53	A		Direct	12,000	7,048	7,000	0.59	A
I-15 NB on-ramp from Eucalyptus St				N			-	-	-		Direct	12,000	16,192	16,200	1.35	F
I-15 NB off-ramp to Eucalyptus St				N			-	-	-		Direct	12,000	20,455	20,500	1.70	F
I-15 SB on-ramp from Eucalyptus St				N			-	-	-		Direct	12,000	15,582	15,600	1.30	F
I-15 NB on-ramp from Mojave St				N			-	-	-		Direct	12,000	6,442	6,400	0.54	A
I-15 NB off-ramp to Mojave St				N			-	-	-		Direct	12,000	16,758	16,800	1.40	F
I-15 SB on-ramp from Mojave St				N			-	-	-		Direct	12,000	20,642	20,600	1.72	F
I-15 SB off-ramp to Mojave St				N			-	-	-		Direct	12,000	15,787	15,800	1.32	F

Table A
PLANNING AREA ROADWAY SEGMENT LEVEL OF SERVICE
BY SEGMENT, CLASS OF ROADWAY, CAPACITY, ADT, LOS, V/C AND LOS,
EXISTING (2005) AND GENERAL PLAN BUILDOUT

Roadway	From	To	2005								2035					
			Exist. Class.	Lanes	Capacity	Count	ADT	V/C	LOS	Class Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS

Roadway Classifications

8 L	Eight Lane Facility /Arterial	8D
SA	Super Arterial	6D
SA_SP	Super Arterial (SCLA Specific Plan)	6U
SA 2	Super Arterial Modified (reduced RW)	6D
MA	Major Arterial	4D
MA_SP	Major Arterial (SCLA Specific Plan)	4U
RA	Residential Arterial	4U
A	Arterial	4D / 4U
2A	Secondary Arterial	4U
C	Collector	2D / 2U
L	Local	2U
N	New Facilities	

Table B

PLANNING AREA ROADWAY SEGMENT LEVEL OF SERVICE

ROADWAYS EXPECTED WITH A SERVICE LEVEL (LOS) OF D OR HIGHER IN GENERAL PLAN BUILDOUT (2035) SCENARIO

Roadway	From	To	2005								2035					
			Exist. Class.	Lanes	Capacity	Count	ADT	V/C	LOS	Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
7th Ave	Ottawa St	Nisqualli Rd	C	2U	12,500		10,600	0.84	D	MA	4D	37,500	31,637	31,600	0.84	D
7th St	D St	C St	2A	4U	25,000		17,400	0.69	B	A	4D	37,500	43,903	43,900	1.17	F
7th St	C St	B St	2A	4U	25,000		19,700	0.79	C	A	4D	37,500	42,076	42,100	1.12	F
7th St	B St	A St	2A	4U	25,000		21,900	0.88	D	A	4D	37,500	41,252	41,300	1.10	F
7th St	A St	Forrest Ave	2A	4U	25,000		22,400	0.90	D	A	4D	37,500	35,864	35,900	0.96	E
7th St	Forrest Ave	Center St	MA	4D	37,500	19,830	19,800	0.53	A		4D	37,500	35,214	35,200	0.94	E
7th St	Union St	Mojave Dr	MA	4D	37,500		26,300	0.70	B		4D	37,500	31,383	31,400	0.84	D
7th St	Plaza Dr	La Paz Dr	MA	4D	37,500		22,700	0.60	A		4D	37,500	32,186	32,200	0.86	D
7th St	La Paz Dr	Lorene Dr	MA	4D	37,500		19,500	0.52	A		4D	37,500	34,180	34,200	0.91	E
7th St	Lorene Dr	Green Tree Blvd	MA	4D	37,500		21,300	0.57	A	SA2	6D	56,000	48,164	48,200	0.86	D
7th St	Mojave Dr	Palmdale Rd / Green Tree Blvd	MA	4D	37,500	24,600	24,600	0.66	B	SA2	6D	56,000	48,164	48,200	0.86	D
Air Base Rd / Air Expressway Blvd	Village Dr	Phantom East St	C	2U	12,500		18,800	1.50	F	MA	4D	37,500	34,238	34,200	0.91	E

Table B

PLANNING AREA ROADWAY SEGMENT LEVEL OF SERVICE

ROADWAYS EXPECTED WITH A SERVICE LEVEL (LOS) OF D OR HIGHER IN GENERAL PLAN BUILDOUT (2035) SCENARIO

Roadway	From	To	2005								2035					
			Exist. Class.	Lanes	Capacity	Count	ADT	V/C	LOS	Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
Bear Valley Rd	Fish Hatchery Rd	Jacaranda Ave	SA	6D	56,000		47,700	0.85	D	MA	4D	37,500	70,517	70,500	1.88	F
Bear Valley Rd	Jacaranda Ave	Peach Ave	SA	6D	56,000		35,700	0.64	B	MA	4D	37,500	68,524	68,500	1.83	F
Bear Valley Rd	Peach Ave	Industrial Blvd	SA	6D	56,000		67,300	1.20	F	MA	4D	37,500	71,459	71,500	1.91	F
Bear Valley Rd	Industrial Blvd	Hesperia Rd	SA	6D	56,000		60,800	1.09	F	MA	4D	37,500	74,140	74,100	1.98	F
Bear Valley Rd	Hesperia Rd	2nd Ave	SA	6D	56,000	53,610	53,600	0.96	E		6D	56,000	58,458	58,500	1.04	F
Bear Valley Rd	2nd Ave	3rd Ave	SA	6D	56,000		45,500	0.81	D		6D	56,000	58,430	58,400	1.04	F
Bear Valley Rd	3rd Ave	7th Ave	SA	6D	56,000		42,600	0.76	C		6D	56,000	59,366	59,400	1.06	F
Bear Valley Rd	7th Ave	11th Ave	SA	6D	56,000		43,500	0.78	C		6D	56,000	57,109	57,100	1.02	F
Bear Valley Rd	11th Ave	Balsam Rd	SA	6D	56,000		41,800	0.75	C		6D	56,000	58,425	58,400	1.04	F
Bear Valley Rd	Balsam Rd	Locust Ave	SA	6D	56,000		41,100	0.73	C		6D	56,000	65,006	65,000	1.16	F
Bear Valley Rd	Locust Ave	Cottonwood Ave	SA	6D	56,000		55,500	0.99	E		6D	56,000	65,595	65,600	1.17	F
Bear Valley	Mariposa	I-15 NB	SA	6D	56,000	73,470	73,500	1.31	F		6D	56,000	85,095	85,100	1.52	F

Table B

PLANNING AREA ROADWAY SEGMENT LEVEL OF SERVICE

ROADWAYS EXPECTED WITH A SERVICE LEVEL (LOS) OF D OR HIGHER IN GENERAL PLAN BUILDOUT (2035) SCENARIO

Roadway	From	To	2005								2035					
			Exist. Class.	Lanes	Capacity	Count	ADT	V/C	LOS	Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
Rd	Rd	Ramps														
Bear Valley Rd	I-15 SB Ramps	Amargosa Rd	SA	6D	56,000	53,320	53,300	0.95	E		6D	56,000	70,987	71,000	1.27	F
Bear Valley Rd	Amargosa Rd	Amethyst Rd	MA	4D	37,500	44,860	44,900	1.20	F	SA	6D	56,000	75,483	75,500	1.35	F
Bear Valley Rd	Topaz Rd	Eagle Ranch Pkwy/Mesa Linda St	MA	4D	37,500	18,730	18,700	0.50	A	SA	6D	56,000	58,913	58,900	1.05	F
Bear Valley Rd	Eagle Ranch Pkwy/Mesa Linda St	Cantina Dr	MA	4D	37,500	17,150	17,200	0.46	A	SA	6D	56,000	54,096	54,100	0.97	E
Bear Valley Rd	US-395	Mesa View Dr	C	2U	12,500	7,700	7,700	0.62	B	SA	6D	56,000	48,592	48,600	0.87	D
Bear Valley Rd	Mesa View Dr	Bellflower St	C	2U	12,500		3,200	0.25	A	SA	6D	56,000	46,660	46,700	0.83	D
Cahuenga Rd	Palmdale Rd	Dos Palmas Rd	C	2U	12,500		100	0.00	A		2U	12,500	11,952	12,000	0.96	E
Cantina Dr	Luna Rd	La Mesa Rd	N				-	-	-	A	4D	37,500	32,551	13,200	0.87	D
Cantina Dr	La Mesa Rd	Eagle Ranch Pkwy	C	2U	12,500		-	-	-		2U	12,500	34,007	13,800	2.72	F

Table B

PLANNING AREA ROADWAY SEGMENT LEVEL OF SERVICE

ROADWAYS EXPECTED WITH A SERVICE LEVEL (LOS) OF D OR HIGHER IN GENERAL PLAN BUILDOUT (2035) SCENARIO

Roadway	From	To	2005								2035					
			Exist. Class.	Lanes	Capacity	Count	ADT	V/C	LOS	Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
Cantina Dr	Eagle Ranch Pkwy	Bear Valley Rd	C	2U	12,500	2,560	2,600	0.20	A		2U	12,500	17,719	14,000	1.42	F
Cobalt Rd	Hopland St	Mojave Dr	L	2U	10,000		-	-	-		2U	12,500	11,456	11,500	0.92	E
Cobalt Rd	Mojave Dr	Hook Blvd	L	2U	10,000		-	-	-		2U	12,500	17,381	17,400	1.39	F
Cobalt Rd	Hook Blvd	Seneca Rd	L	2U	10,000		-	-	-		2U	12,500	12,837	12,800	1.03	F
Cobalt Rd	Palmdale Rd	Dos Palmas Rd	C	2U	12,500	5,120	5,100	0.41	A	C	2U	12,500	10,420	10,400	0.83	D
Cobalt Rd	Dos Palmas Rd	Luna Rd	C	2U	12,500		3,100	0.25	A	C	2U	12,500	10,464	10,500	0.84	D
Cottonwood Ave	Mariposa Rd	Bear Valley Rd	C	2U	12,500	8,240	8,200	0.66	B	C	2U	12,500	13,596	13,600	1.09	F
D St	11th St	Hesperia Rd	MA	4D	37,500	45,700	45,700	1.22	F	MA_SP	4D	37,500	52,473	52,500	1.40	F
D St	Hesperia Rd	7th St	MA	4D	37,500	42,130	42,100	1.12	F	MA_SP	4D	37,500	42,158	42,200	1.12	F
D St	7th St	6th St	MA	4D	37,500		29,700	0.79	C	MA_SP	4D	37,500	46,810	46,800	1.25	F
D St	6th St	Forrest Ave	MA	4D	37,500		28,400	0.76	C	MA_SP	4D	37,500	43,983	44,000	1.17	F
D St	Forrest Ave	3rd St	MA	4D	37,500		28,600	0.76	C	MA_SP	4D	37,500	44,625	44,600	1.19	F
D St	3rd St	2nd St	MA	4D	37,500		28,700	0.77	C	MA_SP	4D	37,500	44,829	44,800	1.20	F

Table B

PLANNING AREA ROADWAY SEGMENT LEVEL OF SERVICE

ROADWAYS EXPECTED WITH A SERVICE LEVEL (LOS) OF D OR HIGHER IN GENERAL PLAN BUILDOUT (2035) SCENARIO

Roadway	From	To	2005								2035					
			Exist. Class.	Lanes	Capacity	Count	ADT	V/C	LOS	Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
D St	Sherman Way	I-15 NB Ramps	MA	4D	37,500	38,200	38,200	1.02	F	MA_SP	4D	37,500	45,610	45,600	1.22	F
Dos Palmas Rd	El Evado Rd	Pacoima Rd	C	2U	12,500		-	-	-		2U	12,500	13,235	13,200	1.06	F
Dos Palmas Rd	Pacoima Rd	Amethyst Rd	L	2U	10,000		-	-	-	C	2U	12,500	13,712	13,700	1.10	F
Dos Palmas Rd	Topaz Rd	Mesa Linda St	L	2U	10,000		-	-	-	C	2U	12,500	13,079	13,100	1.05	F
Dos Palmas Rd	Mesa Linda St	US-395	L	2U	10,000		-	-	-	C	2U	12,500	11,201	11,200	0.90	D
Dos Palmas Rd	US 395	Bellflower St	L	2U	10,000		-	-	-	C	2U	12,500	15,597	15,600	1.25	F
Dos Palmas Rd	Bellflower St	Monte Vista Rd	L	2U	10,000		-	-	-	C	2U	12,500	12,363	12,400	0.99	E
Dos Palmas Rd	Monte Vista Rd	Braceo St	L	2U	10,000		-	-	-	C	2U	12,500	11,440	11,400	0.92	E
El Evado Rd	Mojave Dr	Hook Blvd	MA	4D	37,500		5,800	0.15	A	SA2	6D	56,000	46,210	46,200	0.83	D
Eucalyptus St	Amargosa Rd	Amethyst Rd	N				-	-	-	8 L	8D	75,000	81,149	81,100	1.08	F
Eucalyptus St	Topaz Rd	Mesa Linda St	C	2U	12,500		-	-	-	MA	4D	37,500	40,036	40,000	1.07	F
Eucalyptus St	Mesa Linda St	Cantina Dr	C	2U	12,500		-	-	-	MA	4D	37,500	34,222	34,200	0.91	E

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ROADWAYS EXPECTED WITH A SERVICE LEVEL (LOS) OF D OR HIGHER IN GENERAL PLAN BUILDOUT (2035) SCENARIO

Roadway	From	To	Exist. Class.	Lanes	Capacity	2005					2035					
						Count	ADT	V/C	LOS	Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
Eucalyptus St	Cantina Dr	US-395	C	2U	12,500		-	-	-	MA	4D	37,500	30,743	30,700	0.82	D
Eucalyptus St	US-395	Pena Ave	N				-	-	-	SA2	6D	56,000	61,842	61,800	1.10	F
Eucalyptus St	Pena Ave	Mesa View Dr	N				-	-	-	SA2	6D	56,000	59,039	59,000	1.05	F
Eucalyptus St	Mesa View Dr	Bellflower St	N				-	-	-	SA2	6D	56,000	52,503	52,500	0.94	E
Green Tree Blvd	7th St	St Andrews Dr	A	4U	25,000	25,610	25,600	1.02	F	SA2	6D	56,000	46,232	46,200	0.83	D
Green Tree Blvd	St Andrews Dr	Burning Tree Dr	A	4U	25,000		27,400	1.09	F	SA2	6D	56,000	45,402	45,400	0.81	D
Green Tree Blvd	Burning Tree Dr	Yates Rd	A	4U	25,000		25,900	1.04	F	SA2	6D	56,000	47,531	47,500	0.85	D
Green Tree Blvd	Hesperia Rd	Industrial Blvd	N				-	-	-	SA	6D	56,000	54,778	54,800	0.98	E
Green Tree Blvd	Industrial Blvd	Ridgecrest Rd	N				-	-	-	SA	6D	56,000	58,827	58,800	1.05	F
Hesperia Rd	D St	B St	C	2D	12,500	8,110	8,100	0.65	B		2D	12,500	10,181	10,200	0.81	D
Hesperia Rd	B St	Forrest Ave	C	2D	12,500		13,800	1.11	F		2D	12,500	15,267	15,300	1.22	F
Hesperia Rd	Forrest Ave	Rio Vista St	C	2D	12,500	13,480	13,500	1.08	F		2D	12,500	24,789	24,800	1.98	F
Hesperia Rd	Rio Vista St	Verde St	C	2D	12,500	13,710	13,700	1.10	F		2D	12,500	25,173	25,200	2.01	F
Hesperia Rd	Seneca Rd	Hughes Rd	MA	4D	37,500		24,900	0.66	B	SA2	6D	56,000	55,682	55,700	0.99	E

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ROADWAYS EXPECTED WITH A SERVICE LEVEL (LOS) OF D OR HIGHER IN GENERAL PLAN BUILDOUT (2035) SCENARIO

Roadway	From	To	Exist. Class.	Lanes	Capacity	2005					2035					
						Count	ADT	V/C	LOS	Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
Hesperia Rd	Hughes Rd	Green Tree Blvd	MA	4D	37,500	28,660	28,700	0.76	C	SA2	6D	56,000	54,434	54,400	0.97	E
Hesperia Rd	Ottawa St	Winona St	MA	4D	37,500	34,760	34,800	0.93	E		4D	37,500	43,334	43,300	1.16	F
Hesperia Rd	Winona St	Nisqualli Rd	MA	4D	37,500		37,200	0.99	E		4D	37,500	41,617	41,600	1.11	F
Hesperia Rd	Nisqualli Rd	Silica Rd	MA	4D	37,500	41,460	41,500	1.11	F	SA2	6D	56,000	49,724	49,700	0.89	D
Hook Blvd	Amethyst Rd	Brucite Rd	C	2U	12,500	640	600	0.05	A		2U	12,500	13,405	13,400	1.07	F
Hook Blvd	Brucite Rd	Cobalt Rd	C	2U	12,500		-	-	-		2U	12,500	18,800	18,800	1.50	F
Industrial Blvd	Silica Rd	Bear Valley Rd	A	4D	37,500	21,780	21,800	0.58	A		4D	30,000	24,569	24,600	0.82	D
La Mesa Rd	Amargosa Rd	El Evado Rd	A	4U	25,000	6,890	6,900	0.28	A	5D	5D	46,875	50,725	50,700	1.08	F
La Mesa Rd	Amethyst Rd	Cobalt Rd	A	4U	25,000		2,400	0.10	A		4U	25,000	24,003	24,000	0.96	E
La Mesa Rd	Mesa View Dr	Bellflower St	L	2U	10,000		-	-	-	RA	4U	25,000	23,582	23,600	0.94	E
La Mesa Rd	Bellflower St	Verbena Rd	L	2U	10,000		-	-	-	RA	4U	25,000	28,703	28,700	1.15	F
La Mesa Rd	Verbena Rd	Monte Vista Rd	L	2U	10,000		-	-	-	RA	4U	25,000	24,073	24,100	0.96	E
La Paz Dr	I-15 NB Ramps	Valley Center Dr	A	4D	37,500	30,600	30,600	0.82	D	5D	5D	46,875	41,941	41,900	0.89	D

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PLANNING AREA ROADWAY SEGMENT LEVEL OF SERVICE

ROADWAYS EXPECTED WITH A SERVICE LEVEL (LOS) OF D OR HIGHER IN GENERAL PLAN BUILDOUT (2035) SCENARIO

Roadway	From	To	2005								2035					
			Exist. Class.	Lanes	Capacity	Count	ADT	V/C	LOS	Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
La Paz Dr	Valley Center Dr	7th St	A	4D	37,500		10,100	0.27	A		4D	37,500	41,701	41,700	1.11	F
La Paz Dr	7th St	Seneca Rd	A	4U	25,000		9,500	0.38	A		4U	25,000	26,155	26,200	1.05	F
La Paz Dr	Seneca Rd	Lorene Dr	C	2U	12,500		3,800	0.30	A	L	2U	12,500	11,905	11,900	0.95	E
Luna Rd	Amethyst Rd	Cobalt Rd	C	2U	12,500	6,020	6,000	0.48	A		2U	12,500	12,380	12,400	0.99	E
Luna Rd	Cobalt Rd	Topaz Rd	C	2U	12,500	5,880	5,900	0.47	A		2U	12,500	11,419	11,400	0.91	E
Luna Rd	Topaz Rd	Mesa Linda St	C	2U	12,500		2,200	0.18	A		2U	12,500	10,608	10,600	0.85	D
Luna Rd	Mesa Linda St	US 395	L	2U	10,000	5,120	5,100	0.51	A		2U	10,000	13,944	13,900	1.39	F
Luna Rd	US 395	Mesa View Dr	N				-	-	-	C	2U	12,500	15,461	15,500	1.24	F
Luna Rd	Mesa View Dr	Bellflower St	N				-	-	-	C	2U	12,500	10,669	10,700	0.85	D
Luna Rd	Bellflower St	Monte Vista Rd	N				-	-	-	C	2U	12,500	12,960	13,000	1.04	F
Luna Rd	Monte Vista Rd	Braceo St	N				-	-	-	C	2U	12,500	11,360	11,400	0.91	E
Luna Rd	Braceo St	Baldy Mesa Rd	N				-	-	-	C	2U	12,500	14,849	14,800	1.19	F
Mariposa Rd	I-15 NB Off-	Kingswood	C	2D	12,500	19,460	19,500	1.56	F		2D	18,800	21,406	21,400	1.14	F

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PLANNING AREA ROADWAY SEGMENT LEVEL OF SERVICE

ROADWAYS EXPECTED WITH A SERVICE LEVEL (LOS) OF D OR HIGHER IN GENERAL PLAN BUILDOUT (2035) SCENARIO

Roadway	From	To	2005								2035					
			Exist. Class.	Lanes	Capacity	Count	ADT	V/C	LOS	Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
	ramp	Dr														
Mesa Linda St	Sycamore St	Eucalyptus St	N				-	-	-	C	2U	12,500	12,694	12,700	1.02	F
Mesa Linda St	Eucalyptus St	Verano St	N				-	-	-	C	2U	12,500	12,363	12,400	0.99	E
Mesa St	US-395	Pena Ave	L	2U	10,000		-	-	-	C	2U	12,500	12,285	12,300	0.98	E
Mojave Dr	Del Rey Dr	La Paz Dr	A	4U	25,000		16,900	0.68	B		4U	25,000	31,692	31,700	1.27	F
Mojave Dr	I-15 SB Ramps	Village Dr	A	4D	37,500	28,690	28,700	0.77	C	SA2	6D	56,000	56,209	56,200	1.00	E
Mojave Dr	Bructe Rd	Cobalt Rd	A	4D	37,500		5,700	0.15	A		4D	37,500	31,500	31,500	0.84	D
National Trails Hwy	Turner Rd	Air Expwy	C	2U	12,500	11,100	11,100	0.89	D		2U	12,500	12,209	12,200	0.98	E
National Trails Hwy	Air Expwy	Rancho Rd	C	2U	12,500		13,100	1.05	F		2U	12,500	20,022	20,000	1.60	F
National Trails Hwy	Rancho Rd	I-15 SB Ramps	C	2U	12,500	14,910	14,900	1.19	F		2U	12,500	26,007	26,000	2.08	F
Nisqualli Rd	11th Ave	Mariposa Rd	A	4U	25,000	11,200	11,200	0.45	A		4U	25,000	27,959	28,000	1.12	F
Olivine Rd	Cantina Dr	US 395	N				-	-	-	C	2U	12,500	22,257	22,300	1.78	F
Olivine Rd	Baldy Mesa Rd	Beaver Ave	N				-	-	-	C	2U	12,500	15,269	15,300	1.22	F

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ROADWAYS EXPECTED WITH A SERVICE LEVEL (LOS) OF D OR HIGHER IN GENERAL PLAN BUILDOUT (2035) SCENARIO

Roadway	From	To	2005								2035					
			Exist. Class.	Lanes	Capacity	Count	ADT	V/C	LOS	Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
Ottawa St	Hesperia Rd	1st Ave	C	2U	12,500	360	400	0.03	A		2U	12,500	18,961	19,000	1.52	F
Ottawa St	1st Ave	3rd Ave	C	2U	12,500		500	0.04	A		2U	12,500	17,672	17,700	1.41	F
Ottawa St	3rd Ave	Arrowhead Dr	N				-	-	-	C	2U	12,500	19,453	19,500	1.56	F
Ottawa St	Arrowhead Dr	Cypress Ave	N				-	-	-	C	2U	12,500	15,815	15,800	1.27	F
Ottawa St	Cypress Ave	Mariposa Rd	N				-	-	-	C	2U	12,500	16,443	16,400	1.32	F
Pacoima Rd	La Mesa Rd	Northstar Ave	C	2U	12,500	3,840	3,800	0.31	A		2U	12,500	12,982	13,000	1.04	F
Pahute Rd	Spring Valley Pkwy	Tamarisk Rd	C	2U	12,500		-	-	-		2U	12,500	15,593	15,600	1.25	F
Pahute Rd	Tamarisk Rd	Ridgecrest Rd	C	2U	12,500		-	-	-		2U	12,500	15,661	15,700	1.25	F
Pahute Rd	Cottonwood Ave	Balsam Rd	N				-	-	-	C	2U	12,500	11,382	11,400	0.91	E
Palmdale Rd (SR-18) /7th St	Green Tree Blvd	Mariposa Rd	MA	4D	37,500	41,950	41,900	1.12	F	SA	6D	56,000	77,600	77,600	1.39	F
Palmdale Rd (SR-18)	I-15 SB Ramps	Amargosa Rd	MA	4D	37,500	54,700	54,700	1.46	F	SA	6D	56,000	81,393	81,400	1.45	F

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ROADWAYS EXPECTED WITH A SERVICE LEVEL (LOS) OF D OR HIGHER IN GENERAL PLAN BUILDOUT (2035) SCENARIO

Roadway	From	To	Exist. Class.	Lanes	Capacity	2005					2035					
						Count	ADT	V/C	LOS	Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
Palmdale Rd (SR-18)	Amargosa Rd	Cahuenga Rd	MA	4D	37,500	33,640	33,600	0.90	D	SA	6D	56,000	61,526	61,500	1.10	F
Palmdale Rd (SR-18)	Cahuenga Rd	El Evado Rd	MA	4D	37,500		24,700	0.66	B	SA	6D	56,000	59,038	59,000	1.05	F
Palmdale Rd (SR-18)	El Evado Rd	Pacoima Rd	MA	4D	37,500		14,600	0.39	A	SA	6D	56,000	51,058	51,100	0.91	E
Palmdale Rd (SR-18)	Pacoima Rd	Amethyst Rd	MA	4D	37,500	27,020	27,000	0.72	C	SA	6D	56,000	45,784	45,800	0.82	D
Palmdale Rd (SR-18)	Topaz Rd	Mesa Linda Ave	MA	4D	37,500		13,700	0.37	A	SA	6D	56,000	48,106	48,100	0.86	D
Phantom East St	Shay Rd	Turner Rd	A	4D	37,500		700	0.02	A	SA_SP	6U	50,000	62,120	62,100	1.24	F
Phantom East St	Turner Rd	Air Expwy	A	4D	37,500	1,050	1,100	0.03	A	SA_SP	6U	50,000	68,481	68,500	1.37	F
Rodeo Dr	Victor St	Seneca Rd	C	2U	12,500	4,860	4,900	0.39	A	L	2U	10,000	8,124	8,100	0.81	D
Rodeo Dr	Seneca Rd	Lorene Dr	C	2U	12,500	6,600	6,600	0.53	A		2U	12,500	10,416	10,400	0.83	D
Rodeo Dr	Lorene Dr	Hughes Rd	C	2U	12,500	7,090	7,100	0.57	A		2U	12,500	11,163	11,200	0.89	D
Rodeo Dr	Hughes Rd	Pebble Beach Dr	C	2U	12,500	7,370	7,400	0.59	A		2U	12,500	12,014	12,000	0.96	E
Roy Rogers Dr	I-15 NB Ramps	I-15 SB Ramps	5D	5D	56,000	31,500	30,600	0.55	A	SA2	6D	56,000	45,610	45,600	0.81	D
Seneca Rd	Hesperia	Rodeo Dr	A	4U	25,000	7,780	7,800	0.31	A		4U	25,000	21,098	21,100	0.84	D

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Roadway	From	To	2005								2035					
			Exist. Class.	Lanes	Capacity	Count	ADT	V/C	LOS	Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
	Rd															
Seneca Rd	Rodeo Dr	La Paz Dr	A	4U	25,000	6,640	6,600	0.27	A		4U	25,000	22,867	22,900	0.91	E
Seneca Rd	Amargosa Rd	Borego Rd	C	2U	12,500		4,100	0.33	A		2U	12,500	11,416	11,400	0.91	E
Seneca Rd	Borego Rd	Cahuenga Rd	C	2U	12,500		3,600	0.29	A		2U	12,500	15,954	16,000	1.28	F
Seneca Rd	Cahuenga Rd	El Evado Rd	C	2U	12,500	2,620	2,600	0.21	A		2U	12,500	17,901	17,900	1.43	F
Seneca Rd	El Evado Rd	S Trail	C	2U	12,500	2,870	2,900	0.23	A		2U	12,500	17,596	17,600	1.41	F
Seneca Rd	S Trail	Amethyst Rd	C	2U	12,500		200	0.02	A		2U	12,500	18,537	18,500	1.48	F
Seneca Rd	Amethyst Rd	Cobalt Rd	C	2U	12,500		900	0.08	A		2U	12,500	16,482	16,500	1.32	F
Seneca Rd	Cobalt Rd	Topaz Rd	L	2U	10,000		-	-	-		2U	10,000	17,012	17,000	1.70	F
Seneca Rd	Topaz Rd	Mesa Linda Ave	L	2U	10,000		-	-	-		2U	10,000	18,103	18,100	1.81	F
Seneca Rd	Mesa Linda Ave	US 395	L	2U	10,000		-	-	-		2U	10,000	17,864	17,900	1.79	F
Spring Valley Pkwy	Driftwood Dr	Country Club Dr	C	2D	12,500		-	-	-	L	2U	12,500	12,156	12,200	0.97	E
Smoketree Rd	Amargosa Rd	Topaz Rd	N				-	-	-	A	4D	37,500	40,954	41,000	1.09	F

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Roadway	From	To	2005								2035					
			Exist. Class.	Lanes	Capacity	Count	ADT	V/C	LOS	Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
Stoddard Wells Rd	Dante St	I-15 SB Ramps	A	4D	37,500	3,180	3,200	0.08	A	A	4D	37,500	46,363	46,400	1.24	F
Sycamore St	Mesa Linda St	US 395	C	2U	12,500		1,000	0.08	A		2U	12,500	16,443	16,400	1.32	F
Sycamore St	US 395	Pana Rd	N				-	-	-	C	2U	12,500	18,992	19,000	1.52	F
Sycamore St	Verbena Rd	Monte Vista Rd	N				-	-	-	C	2U	12,500	10,519	10,500	0.84	D
Village Dr	Mojave Dr	Calgo Ln	A	4U	25,000	13,060	13,100	0.52	A		4U	25,000	23,596	23,600	0.94	E
Village Dr	Calgo Ln	Tawney Ridge Ln	A	4U	25,000	10,940	10,900	0.44	A		4U	25,000	20,332	20,300	0.81	D
Village Dr	Amargosa Rd	Clovis St	A	4U	25,000	11,520	11,500	0.46	A		4U	25,000	26,130	26,100	1.05	F
Village Dr	Clovis St	Rancho Rd	A	4U	25,000		9,600	0.38	A		4U	25,000	21,698	21,700	0.87	D
Village Dr	Rancho Rd	Air Base Rd	A	4U	25,000		9,100	0.37	A		4U	25,000	23,130	23,100	0.93	E
Yates Rd	Arrowhead Dr	Mariposa Rd	C	2U	12,500	2,940	2,900	0.24	A		2U	12,500	11,669	11,700	0.93	E
State Facilities																
US-395	Cactus Rd	Mojave Dr	C	2U	12,500	23,630	23,600	1.89	F	SA	6D	56,000	39,532	39,500	0.71	C
US-395	Mojave Dr	Hook blvd	C	2U	12,500		17,100	1.37	F	SA	6D	56,000	45,683	45,700	0.82	D

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ROADWAYS EXPECTED WITH A SERVICE LEVEL (LOS) OF D OR HIGHER IN GENERAL PLAN BUILDOUT (2035) SCENARIO

Roadway	From	To	Exist. Class.	Lanes	Capacity	2005					2035					
						Count	ADT	V/C	LOS	Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
US-395	Hook blvd	Seneca Rd	C	2U	12,500		17,100	1.37	F	SA	6D	56,000	46,987	47,000	0.84	D
US-395	Seneca Rd	Palmdale Rd	C	2U	12,500	27,310	27,300	2.18	F	SA	6D	56,000	32,556	32,600	0.58	A
US-395	Palmdale Rd	Dos Palmas Rd	C	2U	12,500		18,700	1.49	F	SA	6D	56,000	37,307	52,800	0.67	B
US-395	Dos Palmas Rd	Luna Rd	C	2U	12,500		18,200	1.45	F	SA	6D	56,000	30,241	48,000	0.54	A
US-395	Luna Rd	La Mesa Rd	C	2U	12,500		17,500	1.40	F	SA	6D	56,000	33,154	52,800	0.59	A
US-395	La Mesa Rd	Olivine Rd	C	2U	12,500		17,500	1.40	F	SA	6D	56,000	34,802	55,200	0.62	B
US-395	Olivine Rd	Bear Valley Rd	C	2U	12,500	28,450	28,500	2.28	F	SA	6D	56,000	52,448	56,000	0.94	E
US-395	Bear Valley Rd	Sycamore St	A	4U	25,000		19,500	0.78	C	SA	6D	56,000	58,924	58,900	1.05	F
US-395	Sycamore St	Eucalyptus St	A	4U	25,000		19,900	0.80	C	SA	6D	56,000	49,732	49,700	0.89	D
US-395	Eucalyptus St	Mesa St	A	4U	25,000		20,300	0.81	D	SA	6D	56,000	76,788	76,800	1.37	F
US-395	Mesa St	California Aqueduct	A	4U	25,000	24,310	24,300	0.97	E	SA	6D	56,000	83,128	83,100	1.48	F
I-15 SB	High Desert Corridor	Stoddard Wells Rd		2F	37,000	29,000	29,000	0.78	C		2F	37,000	80,664	80,700	2.18	F

Table B

PLANNING AREA ROADWAY SEGMENT LEVEL OF SERVICE

ROADWAYS EXPECTED WITH A SERVICE LEVEL (LOS) OF D OR HIGHER IN GENERAL PLAN BUILDOUT (2035) SCENARIO

Roadway	From	To	Exist. Class.	2005							2035					
				Lanes	Capacity	Count	ADT	V/C	LOS	Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
I-15 NB	High Desert Corridor	Stoddard Wells Rd		2F	37,000	29,000	29,000	0.78	C		2F	37,000	82,685	82,700	2.23	F
I-15 SB	Stoddard Wells Rd	National Trails Hwy		2F	37,000	30,000	30,000	0.81	D		2F	37,000	98,783	98,800	2.67	F
I-15 NB	Stoddard Wells Rd	National Trails Hwy		2F	37,000	30,000	30,000	0.81	D		2F	37,000	98,930	98,900	2.67	F
I-15 SB	National Trails Hwy	Mojave Dr		3F	60,500	36,500	36,500	0.60	A		3F	60,500	100,019	100,000	1.65	F
I-15 NB	National Trails Hwy	Mojave Dr		3F	60,500	36,500	36,500	0.60	A		3F	60,500	100,059	100,100	1.65	F
I-15 SB	Mojave Dr	Roy Rogers Dr / La Paz Dr		3F	60,500	42,500	42,500	0.70	B		3F	60,500	108,710	108,700	1.80	F
I-15 NB	Mojave Dr	Roy Rogers Dr / La Paz Dr		3F	60,500	42,500	42,500	0.70	B		3F	60,500	106,083	106,100	1.75	F
I-15 SB	Roy Rogers Dr / La Paz Dr	Palmdale Rd		3F	60,500	43,500	43,500	0.72	C		3F	60,500	107,500	107,500	1.78	F
I-15 NB	Roy Rogers Dr / La Paz Dr	Palmdale Rd		3F	60,500	43,500	43,500	0.72	C		3F	60,500	105,136	105,100	1.74	F
I-15 SB	Palmdale Rd	La Mesa Rd / Nisqualli Rd		3F	60,500	43,000	43,000	0.71	C		3F	60,500	93,408	93,400	1.54	F

Table B

PLANNING AREA ROADWAY SEGMENT LEVEL OF SERVICE

ROADWAYS EXPECTED WITH A SERVICE LEVEL (LOS) OF D OR HIGHER IN GENERAL PLAN BUILDOUT (2035) SCENARIO

Roadway	From	To	2005								2035					
			Exist. Class.	Lanes	Capacity	Count	ADT	V/C	LOS	Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
I-15 NB	Palmdale Rd	La Mesa Rd / Nisqualli Rd		3F	60,500	43,000	43,000	0.71	C		3F	60,500	97,993	98,000	1.62	F
I-15 SB	La Mesa Rd / Nisqualli Rd	Bear Valley Rd		3F	60,500	43,000	43,000	0.71	C		3F	60,500	99,245	99,200	1.64	F
I-15 NB	La Mesa Rd / Nisqualli Rd	Bear Valley Rd		3F	60,500	43,000	43,000	0.71	C		3F	60,500	101,231	101,200	1.67	F
I-15 SB	Bear Valley Rd	Eucalyptus St		3F	60,500	50,500	50,500	0.83	D		3F	60,500	95,071	95,100	1.57	F
I-15 NB	Bear Valley Rd	Eucalyptus St		3F	60,500	50,500	50,500	0.83	D		3F	60,500	103,126	103,100	1.70	F
I-15 SB	Eucalyptus St	Mojave St		3F	60,500	50,500	50,500	0.83	D		3F	60,500	110,653	110,700	1.83	F
I-15 NB	Eucalyptus St	Mojave St		3F	60,500	50,500	50,500	0.83	D		3F	60,500	107,389	107,400	1.78	F
Ramps																
I-15 NB on-ramp from Stoddard Wells Rd				Direct	12,000	780	800	0.07	A		Direct	12,000	3,577	3,600	0.30	A
I-15 NB off-ramp to Stoddard				Direct	12,000	1,300	1,300	0.11	A		Direct	12,000	19,342	19,300	1.61	F

Table B

PLANNING AREA ROADWAY SEGMENT LEVEL OF SERVICE

ROADWAYS EXPECTED WITH A SERVICE LEVEL (LOS) OF D OR HIGHER IN GENERAL PLAN BUILDOUT (2035) SCENARIO

Roadway	From	To	2005								2035					
			Exist. Class.	Lanes	Capacity	Count	ADT	V/C	LOS	Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
Wells Rd																
I-15 SB on-ramp from Stoddard Wells Rd				Direct	12,000	1,950	2,000	0.16	A		Direct	12,000	21,859	21,900	1.82	F
I-15 SB off-ramp to Stoddard Wells Rd				Direct	12,000	1,000	1,000	0.08	A		Direct	12,000	3,791	3,800	0.32	A
I-15 NB on-ramp from E St				Direct	12,000	370	400	0.03	A		Loop	12,000	1,668	1,700	0.14	A
I-15 NB off-ramp to E St				Loop	8,000	1,140	1,100	0.14	A		Loop	8,000	1,337	1,300	0.17	A
I-15 SB on-ramp from E St				Loop	8,000	1,330	1,300	0.17	A		Loop	8,000	1,538	1,500	0.19	A
I-15 SB off-ramp to E St				Direct	12,000	310	300	0.03	A		Direct	12,000	1,255	1,300	0.10	A
I-15 NB on-ramp from National Trails Hwy				Loop	8,000	1,900	1,900	0.24	A		Loop	8,000	3,446	3,400	0.43	A
I-15 NB off-ramp to National Trails				Direct	12,000	12,550	12,500	1.05	F		Direct	12,000	13,801	13,800	1.15	F

Table B

PLANNING AREA ROADWAY SEGMENT LEVEL OF SERVICE

ROADWAYS EXPECTED WITH A SERVICE LEVEL (LOS) OF D OR HIGHER IN GENERAL PLAN BUILDOUT (2035) SCENARIO

Roadway	From	To	2005								2035					
			Exist. Class.	Lanes	Capacity	Count	ADT	V/C	LOS	Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
Hwy																
I-15 SB on-ramp from National Trails Hwy				Direct	12,000	14,240	14,200	1.19	F		Direct	12,000	15,665	15,700	1.31	F
I-15 SB off-ramp to National Trails Hwy				Loop	8,000	1,910	1,900	0.24	A		Loop	8,000	4,489	4,500	0.56	A
I-15 NB on-ramp from Mojave Dr				Direct	12,000	2,980	3,000	0.25	A		Direct	12,000	10,351	10,400	0.86	D
I-15 NB off-ramp to Mojave Dr				Direct	12,000	4,400	4,400	0.37	A		Direct	12,000	11,796	11,800	0.98	E
I-15 SB on-ramp from Mojave Dr				Direct	12,000	5,400	5,400	0.45	A		Direct	12,000	13,161	13,200	1.10	F
I-15 SB off-ramp to Mojave Dr				Direct	12,000	2,800	2,800	0.23	A		Direct	12,000	7,876	7,900	0.66	B
I-15 NB on-ramps from Roy Rogers Dr				Loop	8,000	3,860	3,900	0.48	A		Loop	8,000	5,583	5,600	0.70	B

Table B

PLANNING AREA ROADWAY SEGMENT LEVEL OF SERVICE

ROADWAYS EXPECTED WITH A SERVICE LEVEL (LOS) OF D OR HIGHER IN GENERAL PLAN BUILDOUT (2035) SCENARIO

Roadway	From	To	2005								2035					
			Exist. Class.	Lanes	Capacity	Count	ADT	V/C	LOS	Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
I-15 NB off-ramps to Roy Rogers Dr				Direct	12,000	6,540	6,500	0.54	A		Direct	12,000	7,190	7,200	0.60	A
I-15 SB on-ramps from Roy Rogers Dr				Direct	12,000	5,300	5,300	0.44	A		Direct	12,000	6,187	6,200	0.52	A
I-15 SB off-ramps to Roy Rogers Dr				Loop	8,000	4,850	4,900	0.61	B		Loop	8,000	7,948	7,900	0.99	E
I-15 NB Direct on-ramp from 7th St				Direct	12,000	3,420	3,400	0.29	A		Direct	12,000	14,776	14,800	1.23	F
I-15 NB Loop on-ramp from EB Palmdale Rd				Loop	8,000	4,530	4,500	0.57	A		Loop	8,000	9,294	9,300	1.16	F
I-15 SB Loop on-ramp from WB 7th St				Loop	8,000	4,830	4,800	0.60	A		Loop	8,000	16,548	16,500	2.07	F
I-15 SB Direct on-ramp from Palmdale Rd				Direct	12,000	3,850	3,900	0.32	A		Direct	12,000	4,235	4,200	0.35	A
I-15 SB off-ramp to Palmdale Rd				Direct	12,000	4,830	4,800	0.40	A		Direct	12,000	16,548	16,500	1.38	F

Table B

PLANNING AREA ROADWAY SEGMENT LEVEL OF SERVICE

ROADWAYS EXPECTED WITH A SERVICE LEVEL (LOS) OF D OR HIGHER IN GENERAL PLAN BUILDOUT (2035) SCENARIO

Roadway	From	To	2005								2035					
			Exist. Class.	Lanes	Capacity	Count	ADT	V/C	LOS	Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
I-15 NB off-ramp to Mariposa Rd				Direct	12,000	6,420	6,400	0.54	A		Direct	12,000	13,137	13,100	1.09	F
I-15 NB on-ramp from Nisqualli Rd				N			-	-	-		Direct	12,000	18,526	18,500	1.54	F
I-15 NB off-ramp to Nisqualli Rd				N			-	-	-		Direct	12,000	24,524	24,500	2.04	F
I-15 SB on-ramp from Amargosa Rd				N			-	-	-		Direct	12,000	22,401	22,400	1.87	F
I-15 SB off-ramp to Amargosa Rd				N			-	-	-		Direct	12,000	19,325	19,300	1.61	F
I-15 NB on-ramp from Bear Valley Rd				Direct	12,000	8,950	8,900	0.75	C		Direct	12,000	14,812	14,800	1.23	F
I-15 NB off-ramp to Bear Valley Rd				Direct	12,000	16,900	16,900	1.41	F		Direct	12,000	17,154	17,200	1.43	F
I-15 SB off-ramp to Bear Valley Rd				Direct	12,000	10,240	10,200	0.85	D		Direct	12,000	19,205	19,200	1.60	F

Table B

PLANNING AREA ROADWAY SEGMENT LEVEL OF SERVICE

ROADWAYS EXPECTED WITH A SERVICE LEVEL (LOS) OF D OR HIGHER IN GENERAL PLAN BUILDOUT (2035) SCENARIO

Roadway	From	To	2005								2035					
			Exist. Class.	Lanes	Capacity	Count	ADT	V/C	LOS	Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
I-15 SB on-ramp from WB Bear Valley Rd				Loop	8,000	10,090	10,100	1.26	F		Loop	8,000	11,099	11,100	1.39	F
I-15 SB on-ramp from EB Bear Valley Rd				Direct	12,000	6,410	6,400	0.53	A		Direct	12,000	7,048	7,000	0.59	A
I-15 NB on-ramp from Eucalyptus St				N			-	-	-		Direct	12,000	16,192	16,200	1.35	F
I-15 NB off-ramp to Eucalyptus St				N			-	-	-		Direct	12,000	20,455	20,500	1.70	F
I-15 SB on-ramp from Eucalyptus St				N			-	-	-		Direct	12,000	15,582	15,600	1.30	F
I-15 NB on-ramp from Mojave St				N			-	-	-		Direct	12,000	6,442	6,400	0.54	A
I-15 NB off-ramp to Mojave St				N			-	-	-		Direct	12,000	16,758	16,800	1.40	F
I-15 SB on-ramp from Mojave St				N			-	-	-		Direct	12,000	20,642	20,600	1.72	F

Table B

PLANNING AREA ROADWAY SEGMENT LEVEL OF SERVICE

ROADWAYS EXPECTED WITH A SERVICE LEVEL (LOS) OF D OR HIGHER IN GENERAL PLAN BUILDOUT (2035) SCENARIO

Roadway	From	To	2005								2035					
			Exist. Class.	Lanes	Capacity	Count	ADT	V/C	LOS	Change	Lanes	Capacity	Forecast ADT	Forecast ADT	V/C	LOS
I-15 SB off-ramp to Mojave St				N			-	-	-		Direct	12,000	15,787	15,800	1.32	F

APPENDIX B
INTERSECTION
LEVEL OF SERVICE ANALYSIS

Morning (A.M.) and evening (P.M.) peak hour intersection traffic counts were used to determine average vehicle delay and the level of service at each intersection. For signalized intersections, A.M. and P.M. peak hour LOS was determined by the City adopted Webster Based Signal Timing Evaluation Routine (WEBSTER) method. For unsignalized intersections, SYNCHRO was used to determine A.M. and P.M. peak hour LOS. Manual turning movement traffic counts were conducted during both A.M. and P.M. peak hours at a total of 167 intersections.

1.1 Level of Service Definitions

LOS is a qualitative measure of the effect of several factors, including speed and travel time, traffic interruptions, freedom to maneuver, safety, and driving comfort and convenience. Levels of service are designated by grades of A' (excellent, free flow) through 'F' (failure, jammed conditions).

The following tables summarizes the LOS definitions for signalized and unsignalized intersections, based on the *Transportation Research Board's Special Report 209, Highway Capacity Manual, 2000*. The Highway Capacity Manual (HCM) methodology calculates the average delay per vehicle at an intersection and assigns a level of service designation based upon the delay. The average delay is calculated based on the usable roadway capacities, traffic demands for each intersection movement, available green time and red time for each movement, and other factors such as pedestrian activity (walk times). The LOS definitions for unsignalized intersections are also based on average vehicle delay.

Level of Service Definition for Signalized Intersections

LOS	Control Delay Per Vehicle (seconds)	Description
A	< 10.0	Very low control delay. Occurs when progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.
B	> 10.0 and < 20.0	Generally occurs with good progression, short cycle lengths, or both. More vehicles stop than with LOS "A," causing higher levels of average delay.
C	> 20.0 and < 35.0	These higher delays may result from fair progression, longer cycle lengths, or both. Individual cycle failures ¹ may begin to appear at this level. The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping.
D	> 35.0 and < 55.0	The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths or high v/c ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.
E	> 55.0 and < 80.0	These high delay values generally indicate poor progression, long cycle lengths and high v/c ratios. Individual cycle failures are frequent occurrences.
F	> 80.0	This level, considered to be unacceptable to most drivers, often occurs with over saturation, that is, when arrival flow rates exceed the capacity of the intersection. It may also occur at high v/c ratios below 1.0 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.

Source: Highway Capacity Manual, Transportation Research Board, Special Report No. 209, Washington, D.C., 2000.

¹ Cycle failure occurs when a given green phase does not serve queued vehicles, and overflow occurs.

Level of Service Definitions for Unsignalized Intersections

LOS	Average Vehicle Delay (in seconds)
A	< 10.0
B	> 10.0 and < 15.0
C	> 15.0 and < 25.0
D	> 25.0 and < 35.0
E	> 35.0 and < 50.0
F	> 50.0

Source: Transportation Research Board, Highway Capacity Manual, Special Report 209, 2000.

1.2 Existing Intersection Peak Hour Levels of Service

A total of 167 intersections in or near the City of Victorville were evaluated. A few of the intersections lie outside of the City limits, in Adelanto. A number of the intersections are shared with another public agency. Peak hour turning movement counts for these intersections were collected between 7:00 A.M. and 9:00 A.M. and between 4:00 P.M. and 6:00 P.M. The following table summarizes the existing A.M. and P.M. peak hour levels of service for each intersection.

Existing Intersection Peak Hour Service Levels

ID	Map ID	North/South Roadway	East/West Roadway	Intersection Control	AM		PM	
					DELAY (sec/veh)	LOS	DELAY (sec/veh)	LOS
1-1	80	Fish Hatchery Rd	Bear Valley Rd	Unsignalized	13.9	B	173.1	F
1-2	112	Jacaranda Ave	Bear Valley Rd	Signalized	31.0	C	61.0	E
1-3	141	Spring Valley Pkwy	Bear Valley Rd	Signalized	14.0	B	12.0	B
1-4	95	I Ave / Tamarisk Rd	Bear Valley Rd	Signalized	23.0	C	20.0	C
1-5	138	Ridgecrest Rd	Bear Valley Rd	Signalized	60.0	E	77.0	E
1-6	111	Industrial Blvd	Bear Valley Rd	Signalized	20.0	C	24.0	C
1-7	94	Hesperia Rd	Bear Valley Rd	Signalized	24.0	C	31.0	C
1-8	1	2nd Ave	Bear Valley Rd	Signalized	17.0	B	19.0	B
1-9	5	3rd Ave	Bear Valley Rd	Unsignalized	0.1	A	1.1	A
1-10	9	5th Ave	Bear Valley Rd	Signalized	33.0	C	55.0	E
1-	13	7th Ave	Bear Valley Rd	Signalized	44.0	D	24.0	C

11								
1-12	26	11th Ave	Bear Valley Rd	Signalized	11.0	B	12.0	B
1-13	57	Balsam Rd	Bear Valley Rd	Signalized	14.0	B	23.0	C
1-14	68	Cottonwood Ave	Bear Valley Rd	Signalized	22.0	C	27.0	C
1-15	121	Mariposa Rd	Bear Valley Rd	Signalized	29.0	C	52.0	D
1-16	109	I-15 NB Ramps	Bear Valley Rd	Signalized	20.0	C	29.0	C
1-17	110	I-15 SB Ramps	Bear Valley Rd	Signalized	3.0	A	8.0	A
1-18	43	Amargosa Rd	Bear Valley Rd	Signalized	21.0	C	35.0	D
1-19	117	Mall Blvd / Petaluma Rd	Bear Valley Rd	Signalized	15.0	B	24.0	C
1-20	70	Dunia Rd	Bear Valley Rd	Signalized	3.0	A	8.0	A
1-21	129	Pacoima Rd	Bear Valley Rd	Signalized	11.0	B	10.0	B
1-22	52	Amethyst Rd	Bear Valley Rd	Signalized	26.0	C	29.0	C
1-23	67	Cobalt Rd	Bear Valley Rd	Unsignalized	1.5	A	1.9	A
1-24	145	Topaz Rd	Bear Valley Rd	Unsignalized	7.0	A	6.0	A
1-25	71	Eagle Ranch Pkwy	Bear Valley Rd	Unsignalized	9.1	A	15.2	C
2-1	91	Hesperia Rd	Nisqualli Rd	Signalized	22.0	C	33.0	C
2-2	4	3rd Ave	Nisqualli Rd	Unsignalized	16.1	C	83.5	F
2-3	12	7th Ave / Arrowhead Dr	Nisqualli Rd	Unsignalized	50.5	F	98.6	F
2-4	25	11th Ave	Nisqualli Rd	Unsignalized	3.8	A	3.6	A
2-5	56	Balsam Rd	Nisqualli Rd	Unsignalized	12.2	B	19.8	C
2-6	119	Mariposa Rd	Nisqualli Rd	Signalized	14.0	B	18.0	B
3-1	40	Amargosa Rd	La Mesa Rd	Signalized	11.0	B	11.0	B
3-2	79	El Evado Rd	La Mesa Rd	Unsignalized	9.7	A	10.8	B
3-3	127	Pacoima Rd	La Mesa Rd	Unsignalized	9.5	A	5.8	A
3-4	50	Amethyst Rd	La Mesa Rd	Signalized	21.0	C	20.0	C

3-5	144	Topaz Rd	La Mesa Rd	Unsignalized	9.2	A	8.2	A
3-6	123	Mesa Linda Ave	La Mesa Rd	Unsignalized	7.0	A	7.6	A
4-1	90	Hesperia Rd	Ottawa St	Unsignalized	0.3	A	0.4	A
4-2	3	3rd Ave	Ottawa St	Unsignalized	10.5	B	12.1	B
5-1	39	Amargosa Rd	Luna Rd	Unsignalized	2.7	A	1.8	A
5-2	78	El Evado Rd	Luna Rd	Unsignalized	9.6	A	7.0	A
5-3	126	Pacoima Rd	Luna Rd	Unsignalized	3.3	A	3.2	A
5-4	49	Amethyst Rd	Luna Rd	Signalized	23.0	C	21.0	C
5-5	65	Cobalt Rd	Luna Rd	Unsignalized	11.6	B	10.1	B

 Deficient Intersection

Table **Error! No text of specified style in document.** 4 Existing Intersection Peak Hour Level of Service (continued)

ID	Map ID	North/South Roadway	East/West Roadway	Intersection Control	AM		PM	
					DELAY (sec/veh)	LOS	DELAY (sec/veh)	LOS
5-6	143	Topaz Rd	Luna Rd	Unsignalized	3.5	A	2.1	A
5-7	122	Mesa Linda Ave	Luna Rd	Unsignalized	6.8	A	3.9	A
6-1	89	Hesperia Rd	Green Blvd Tree	Signalized	11.0	B	16.0	B
6-2	2	3rd Ave / Rodeo Dr	Green Blvd Tree	Signalized	24.0	C	28.0	C
6-3	167	Yates Rd	Green Blvd Tree	Unsignalized	1.6	A	18.0	C
6-4	54	Arrowhead Dr	Green Blvd Tree	Signalized	15.0	B	14.0	B
6-5	60	Burning Tree Dr	Green Blvd Tree	Signalized	22.7	C	85.6	F
7-1	55	Arrowhead Dr	Yates Rd	Unsignalized	9.8	A	1.1	A
7-2	118	Mariposa Rd	Yates Rd	Unsignalized	2.5	A	18.7	C
8-1	38	Amargosa Rd	Dos Palmas Rd	Signalized	12.0	B	13.0	B
8-2	77	El Evado Rd (County)	Dos Palmas Rd	Unsignalized	1.7	A	1.0	A
8-3	48	Amethyst Rd	Dos Palmas Rd	Unsignalized	8.5	A	2.6	A
8-4	64	Cobalt Rd	Dos Palmas Rd	Unsignalized	62.3	F	9.7	A
9-1	14	7th St	D St	Signalized	20.0	C	18.0	B
9-2	15	7th St	B St	Signalized	7.0	A	13.0	B
9-3	16	7th St	Forrest Ave	Signalized	13.0	B	10.0	B
9-4	17	7th St	Mojave Dr	Signalized	18.0	B	18.0	B
9-5	18	7th St	Tatum Rd	Unsignalized	1.3	A	1.2	A
9-6	19	7th St	Victor St	Signalized	14.0	B	18.0	B
9-7	20	7th St	Desert Knoll Dr	Signalized	6.0	A	11.0	B
9-8	21	7th St	La Paz Dr	Signalized	20.0	C	22.0	C
9-9	22	7th St	Lorene Dr	Signalized	11.0	B	14.0	B
9-10	23	7th St	E. Sage St	Signalized	5.0	A	7.0	A
9-11	24	7th St	Green Blvd Tree	Signalized	32.0	C	61.0	E

10-1	107	I-15 NB On Ramp / Mariposa Rd	Palmdale Rd (SR-18)	Signalized	16.0	B	38.0	D
10-2	108	I-15 SB Ramps	Palmdale Rd (SR-18)	Signalized	83.9	F	96.2	F
10-3	130	Park Ave	Palmdale Rd (SR-18)	Signalized	18.0	B	57.0	E
10-4	114	Kentwood Blvd	Palmdale Rd (SR-18)	Signalized	14.0	B	40.0	D
10-5	37	Amargosa Rd	Palmdale Rd (SR-18)	Signalized	27.0	C	37.0	D
10-6	59	Borego Rd	Palmdale Rd (SR-18)	Unsignalized	0.8	A	4.5	A
10-7	76	El Evado Rd	Palmdale Rd (SR-18)	Signalized	18.0	B	20.0	C
10-8	47	Amethyst Rd	Palmdale Rd (SR-18)	Unsignalized	3.9	A	6.7	A
10-9	63	Cobalt Rd	Palmdale Rd (SR-18)	Signalized	35.0	D	17.0	B
10-10	58	Bellflower St	Palmdale Rd (SR-18)	Unsignalized	9.6	A	5.0	A
10-11	159	Verbena Rd	Palmdale Rd (SR-18)	Unsignalized	16.8	C	3.6	A
z11-1	86	Hesperia Rd	Seneca Rd	Signalized	18.0	B	18.0	B
11-2	139	Rodeo Dr	Seneca Rd	Unsignalized	9.0	A	10.2	B
11-3	116	Mesa Dr	La Paz Dr / Seneca Rd	Signalized	28.0	C	32.0	C
11-4	62	Civic Dr	Seneca Rd	Unsignalized	5.7	A	5.1	A
11-5	35	Amargosa Rd	Seneca Rd	Signalized	20.0	C	21.0	C
11-6	75	El Evado Rd	Seneca Rd	Unsignalized	4.7	A	5.6	A
11-7	46	Amethyst Rd	Seneca Rd	Unsignalized	2.5	A	2.4	A
12-1	158	Valley Center Dr	La Paz Dr	Signalized	23.0	C	29.0	C
12-2	105	I-15 NB Ramps / La Paz Dr	Roy Rogers Dr / La Paz Dr	Signalized	30.0	C	34.0	C

Deficient Intersection

Table **Error! No text of specified style in document.** 4 Existing Intersection Peak Hour Level of Service (continued)

ID	Map ID	North/South Roadway	East/West Roadway	Intersection Control	AM		PM	
					DELAY (sec/veh)	LOS	DELAY (sec/veh)	LOS
13-1	106	I-15 SB Ramps	Roy Rogers Dr	Signalized	10.0	B	10.0	B
13-2	61	Civic Dr	Roy Rogers Dr	Signalized	32.0	C	35.0	D
14-1	34	Amargosa Rd	Hook Blvd / Roy Rogers Dr	Signalized	23.0	C	28.0	C
14-2	53	Arlette Dr	Hook Blvd	Unsignalized	4.0	A	4.4	A
14-3	74	El Evado Rd	Hook Blvd	Signalized	24.0	C	28.0	C
14-4	135	Reno Loop Rd (West)	Hook Blvd	Unsignalized	4.5	A	3.6	A
14-5	134	Reno Loop Rd (East)	Hook Blvd	Unsignalized	4.8	A	4.2	A
14-6	45	Amethyst Rd	Hook Blvd	Unsignalized	5.2	A	5.4	A
15-1	11	6th St	Mojave Dr	Unsignalized	11.3	B	12.9	B
15-2	69	Del Rey Dr	Mojave Dr	Signalized	19.0	B	14.0	B
15-3	115	La Paz Dr	Mojave Dr	Signalized	22.0	C	29.0	C
15-4	103	I-15 NB Ramps	Mojave Dr	Unsignalized	1596.5	F	1412.3	F
15-5	104	I-15 SB Ramps	Mojave Dr	Unsignalized	3.9	A	368.2	F
15-6	165	Village Dr	Mojave Dr	Signalized	21.0	C	22.0	C
15-7	33	Amargosa Rd	Mojave Dr	Signalized	20.0	C	22.0	C
15-8	73	El Evado Rd	Mojave Dr	Signalized	20.0	C	23.0	C
15-9	72	East Trail	Mojave Dr	Unsignalized	4.3	A	0.5	A
15-10	166	West Trail	Mojave Dr	Unsignalized	0.4	A	0.4	A

15-11	44	Amethyst Rd	Mojave Dr	Unsignalized	1.8	A	1.5	A
16-1	125	National Trails Hwy	Air Expwy	Signalized	11.0	B	8.0	A
16-2	160	Village Dr	Air Expwy	Signalized	8.0	A	7.0	A
16-3	132	Phantom East St	Air Expwy	Signalized	5.0	A	6.0	A
16-4	81	George Blvd	Air Expwy	Signalized	19.0	B	17.0	B
16-5	133	Phantom West St	Air Expwy	Signalized	6.0	A	8.0	A
17-1	150	US 395	Cactus Rd	Signalized	11.0	B	9.0	A
17-2	151	US 395	Mojave Dr	Signalized	26.0	C	31.0	C
17-3	152	US 395	Seneca Rd	Unsignalized	26.3	D	4.2	A
17-4	153	US 395	Palmdale Rd (SR-18)	Signalized	27.0	C	27.0	C
17-5	154	US 395	Dos Palmas Rd	Unsignalized	0.3	A	0.1	A
17-6	155	US 395	Luna Rd	Signalized	16.0	B	15.0	B
17-7	157	US 395	Bear Valley Rd	Signalized	26.0	C	24.0	C
17-8	156	US 395	Sycamore St	Unsignalized	1.6	A	0.7	A
18-1	146	Topaz Rd	Sycamore St	Unsignalized	1.4	A	1.7	A
18-2	147	Topaz Rd	Eucalyptus St	Unsignalized	0.4	A	4.3	A
19-1	66	Cobalt Rd	Northstar Ave	Unsignalized	6.9	A	6.5	A
20-1	51	Amethyst Rd	Northstar Ave	Unsignalized	11.5	B	18.5	C
21-1	128	Pacoima Rd	Northstar Ave	Unsignalized	8.6	A	9.1	A
22-1	31	Amargosa Rd	Village Dr	Unsignalized	3.7	A	3.5	A
22-2	32	Amargosa Rd	Tawney Ridge Ln	Unsignalized	1.9	A	1.6	A

22-3	36	Amargosa Rd	Civic Dr	Unsignalized	1.4	A	2.2	A
22-4	41	Amargosa Rd	Kings Ranch Rd	Unsignalized	713.0	B	14.0	B
22-5	42	Amargosa Rd	Mall Exit	Signalized	12.0	B	11.0	B
23-1	120	Mariposa Rd	Cottonwood Ave	Signalized	8.0	A	11.0	B
24-1	82	Hesperia Rd / 9th St	D St	Unsignalized	59.4	F	616.1	F

Deficient Intersection

Table **Error! No text of specified style in document.** 4 Existing Intersection Peak Hour Level of Service (continued)

ID	Map ID	North/South Roadway	East/West Roadway	Intersection Control	AM		PM	
					DELAY (sec/veh)	LOS	DELAY (sec/veh)	LOS
24-2	83	Hesperia Rd / 9th St	B St	Unsignalized	1.2	A	1.8	A
24-3	84	Hesperia Rd	Mojave Dr / Verde St	Unsignalized	16.2	C	21.1	C
24-4	85	Hesperia Rd	Center St	Unsignalized	1.0	A	1.1	A
24-5	87	Hesperia Rd	Crestview Dr	Signalized	11.0	B	7.0	A
24-6	88	Hesperia Rd	Chalon Rd / Cherryhill Dr	Signalized	14.0	B	10.0	B
24-7	92	Hesperia Rd	Silica Dr	Signalized	39.0	D	66.0	E
24-8	93	Hesperia Rd	Jasmine St	Signalized	13.0	B	14.0	B
25-1	27	11th St	D St	Unsignalized	2.0	A	37.4	E
25-2	8	4th Ave	D St	Signalized	2.0	A	6.0	A
25-3	7	3rd St	D St	Unsignalized	16.0	B	12.0	B
25-4	99	I-15 NB Ramps	D St	Signalized	6.0	A	6.0	A
25-5	100	I-15 SB Ramps	National Trails Hwy / D St	Signalized	15.0	B	15.0	B
25-6	124	National Trails Hwy	Turner Rd	Unsignalized	1.4	A	0.9	A
26-1	131	Phantom East St	Perimeter Rd	Unsignalized	2.0	A	2.5	A
27-1	161	Village Dr	Rancho Rd	Unsignalized	0.3	A	0.3	A
27-2	162	Village Dr	Clovis St	Unsignalized	2.2	A	1.5	A
27-3	163	Village Dr	Puesta Del Sol Dr	Unsignalized	3.1	A	1.2	A
27-4	164	Village Dr	Tawney Ridge Ln	Unsignalized	3.2	A	2.8	A

28-1	97	I-15 SB Off Ramp	Stoddard Wells Rd	Unsignalized	2.4	A	2.2	A
28-2	98	I-15 SB On Ramp	Stoddard Wells Rd	Unsignalized	8.2	A	8.1	A
28-3	96	I-15 NB Ramps	Stoddard Wells Rd	Unsignalized	7.7	A	9.3	A
28-4	142	Stoddard Wells Rd	Happy Trails Hwy (SR-18)	Signalized	7.0	A	29.0	C
29-1	102	I-15 SB Ramps	E St	Unsignalized	2.2	A	4.1	A
29-2	101	I-15 NB Ramps	E St	Unsignalized	5.1	A	3.4	A
30-1	10	6th St	B St	Unsignalized	3.6	A	6.4	A
30-2	6	3rd St / Forrest Ave	Forrest Ave / 4th St	Unsignalized	4.6	A	5.8	A
31-1	136	Ridgecrest Rd	Pebble Beach Dr	Signalized	12.0	B	9.0	A
31-2	137	Ridgecrest Rd	Pahute Rd	Signalized	21.8	C	1.7	A
32-1	140	Rodeo Dr	Hughes Rd	Unsignalized	8.9	A	26.1	D
32-2	113	Kentwood Blvd	Civic Dr	Unsignalized	7.2	A	6.8	A

Deficient Intersection

Signalized analysis was performed using WEBSTER

Unsignalized analysis was performed using SYNCHRO

While a majority of intersections within the City of Victorville currently operate at LOS D or better, based on the traffic analysis summarized in **Table 3.5** and illustrated in **Figure 3.2**, a total of six intersections operate at an unacceptable threshold during the A.M. peak hour and 15 are deficient in the P.M. peak hour. Listed below are the intersections that operate inadequately in the City of Victorville.

A.M. Peak Hour

LOS E

Ridgecrest Road at Bear Valley Road

LOS F

7th Avenue / Arrowhead Drive at Nisqualli Road

Cobalt Road at Dos Palmas Road

I-15 SB Ramps at Palmdale Road (SR-18) (Caltrans)

I-15 NB Ramps at Mojave Drive (Caltrans)
Hesperia Road / 9th Street at D Street (Caltrans)

P.M. Peak Hour

LOS E

Jacaranda Avenue at Bear Valley Road
Ridgecrest Road at Bear Valley Road
5th Avenue at Bear Valley Road
7th Street at Green Tree Boulevard
Park Avenue at Palmdale Road (SR-18)
Hesperia Road at Silica Drive
11th Street at D Street (SR-18)

LOS F

Fish Hatchery Road at Bear Valley Road
3rd Avenue at Nisqualli Road
7th Avenue / Arrowhead Drive at Nisqualli Road
Burning Tree Drive at Green Tree Boulevard
I-15 SB Ramps at Palmdale Road (SR-18) (Caltrans)
I-15 NB Ramps at Mojave Drive (Caltrans)
I-15 SB Ramps at Mojave Drive (Caltrans)
Hesperia Road / 9th Street at D Street (SR-18) (Caltrans)

As can be seen from the list, the following six intersections currently operate at deficient levels during both peak hours:

Ridgecrest Road at Bear Valley Road
7th Avenue / Arrowhead Drive at Nisqualli Road
I-15 SB Ramps at Palmdale Road (SR-18) (Caltrans)
I-15 NB Ramps at Mojave Drive (Caltrans)
Hesperia Road / 9th Street at D Street (SR-18) (Caltrans)

In addition to the currently deficient intersections, there are three intersections in the A.M. peak hour and three in the P.M. peak hour that are 'border line', performing at LOS D. These intersections, listed below have a very high chance of becoming deficient in the future:

LOS D

A.M. Peak Hour

7th Street at Green Tree Boulevard
Hesperia Road at Silica Drive
US-395 at Seneca Road

P.M. Peak Hour

5th Avenue at Bar Valley Road
Amargosa Road at Palmdale Road (SR-18)
Amargosa Road at Bear Valley Road
Civic Drive at Roy Rogers Drive
1-15 NB Ramp / Mariposa Road at Palmdale (SR-18)
Kentwood Boulevard at Palmdale Road (SR-18)
Mariposa Road at Bear Valley Road
Rodeo Drive at Hughes Drive

NOISE IMPACT ANALYSIS
GENERAL PLAN UPDATE
CITY OF VICTORVILLE, CALIFORNIA

Prepared for:
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Date:

August 13, 2008

Project No.: P08-041 N

NOISE SETTING BACKGROUND

Sound is mechanical energy transmitted by pressure waves in a compressible medium such as air. Noise is generally defined as unwanted sound. Sound is characterized by various parameters that describe the physical properties of sound waves. These properties include the rate of oscillation (frequency), the distance between successive troughs or crests, the speed of propagation, and the pressure level or energy content of a given sound wave. In particular, the sound pressure level has become the most common descriptor used to characterize the loudness of an ambient sound level.

The unit of sound pressure ratioed to the faintest sound detectable to a young person with good acuity hearing is called a decibel (dB). Sound or noise can vary in intensity by over one million times within the range of human hearing. A logarithmic loudness scale similar to the Richter Scale for earthquake magnitude is therefore used to keep sound intensity numbers at a convenient and manageable level. The human ear is not equally sensitive to all sound frequencies within the entire spectrum. Noise levels at maximum human sensitivity from around 500 to 2,000 cycles per second are factored more heavily into sound descriptions in a process called “A-weighting,” written as “dBA.”

Leq is a time-averaged sound level; a single-number value that expresses the time-varying sound level for the specified period as though it were a constant sound level with the same total sound energy as the time-varying level. Its unit is the decibel (dB). The most common averaging period for Leq is hourly.

Because community receptors are more sensitive to unwanted noise intrusion during more sensitive evening and nighttime hours, state law requires that an artificial dBA increment be added to quiet time noise levels. The 24-hour noise descriptor with a specified evening and nocturnal penalty is called the Community Noise Equivalent Level (CNEL). CNEL's are a weighted average of hourly Leq's. The CNEL calculation adds a +5 dB “penalty” to Leq levels from 7 p.m. to 10 p.m., and +10 dB from 10 p.m. to 7 a.m. to account for the greater noise sensitivity during those hours.

VICTORVILLE NOISE STANDARDS FOR LAND USE COMPATIBILITY

The City of Victorville considers noise compatibility standards in evaluating land use projects. A proposed land use must be shown to be compatible with the ambient noise environment, particularly for noise sources over which direct City control is preempted by other agencies. Such sources include vehicle traffic on public streets, aircraft or trains. Since the City cannot regulate the noise level from the source, it exercises its land use decision authority to insure that noise/land use incompatibility is minimized.

The City of Victorville considers noise exposure for single or multi family residential development to be “normally acceptable” if the maximum exterior noise level is 60 dB CNEL or less. Exterior noise levels at residential occupancies of up to 65 dB CNEL are allowed if exterior levels have been substantially mitigated and interior noise exposures meet the interior noise standard of 45 db CNEL. Exposures up to 70 dB CNEL for residential uses are considered conditionally acceptable if all measures to reduce such exposure have been taken but would be considered as significantly noise-impacted. Noise levels above 70 dB CNEL are considered normally unacceptable except in unusual circumstances.

New residential developments located adjacent to roadways experiencing traffic noise in excess of these standards can utilize a variety of mitigation measures to ensure compatibility. Such mitigation measures include erection of noise walls or earthen berm to reduce traffic noise upon exterior yards, while insulation and or construction upgrades (upgraded dual paned windows and doors, etc.) may be used to reduce noise impacts upon the interior of the dwellings.

An interior CNEL of 45 dBA is mandated by the State of California Noise Insulation Standards (CCR, Title 24, Part 6, Section T25-28) for multiple family dwellings, hotel and motel rooms. In 1988, the State Building Standards Commission expanded that standard to include all habitable rooms in residential use, including single-family dwelling units. Typical noise attenuation within older residential structures with standard construction practices and single paned closed windows is about 20 dB. Upgraded noise attenuation with closed, double-paned windows in modern frame and stucco construction is closer to 30 dB. Therefore, an exterior noise exposure of 65 dBA CNEL is compatible with an interior noise level of 45 dB CNEL for residential dwellings in Victorville. With modern construction practice, exterior levels exceeding 65 dB CNEL can be accommodated while meeting interior noise standards, so long as window closure is an option.

Because retail/commercial uses are not occupied on a 24-hour basis, the exterior noise exposure standard for less sensitive land uses generally not stringent. Unless commercial projects include noise-sensitive uses such as outdoor dining, noise exposure is generally not considered a commercial facility siting constraint for typical project area noise exposures. The City of Victorville noise compatibility guidelines recommends 65 dB CNEL as “normally acceptable” and 75 dB CNEL as a “conditionally acceptable” exterior noise exposure for commercial uses. Table 1 shows the noise/land use compatibility guideline for the City of Victorville, as contained in the Noise Element of the City of Victorville General Plan.

**Table 1
Victorville Land Use Compatibility Standards**

Land Use Categories	Community Noise Exposure Ldn or CNEL, dB							Interpretation
	55	60	65	70	75	80+		
Residential - Low Density, Single Family, Duplex, Multi- family	1	1						1 NORMALLY ACCEPTABLE Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
			2	2				
					3		4 4	
Residential - Mobile Home	1	1						2 CONDITIONALLY ACCEPTABLE New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.
			2					
				3	3		4 4	
Transient Lodging - Motels, Hotels	1	1						3 NORMALLY UNACCEPTABLE New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
			2	2				
					3	3	4	
Schools, Libraries, Churches, Hospitals, Nursing Homes	1	1						4 CLEARLY UNACCEPTABLE New construction or development should generally not be undertaken.
			2					
				3	3		4 4	
Auditoriums, Concert Halls, Amphitheatres	2	2						Source: <u>Guidelines for the Preparation of Content of the Noise Element of the General Plan, 1986, Governor's Office of Planning and Research.</u>
			3	3				
					4	4	4	
Sports Arena, Outdoor Spectator Sports	2	2	2	2				Source: <u>Guidelines for the Preparation of Content of the Noise Element of the General Plan, 1986, Governor's Office of Planning and Research.</u>
					3	3	3	
Playgrounds, Neighborhood Parks	1	1	1					Source: <u>Guidelines for the Preparation of Content of the Noise Element of the General Plan, 1986, Governor's Office of Planning and Research.</u>
				2				
					3		4 4	
Golf Courses, Riding Stables, Water Recreation, Cemeteries	1	1	1					Source: <u>Guidelines for the Preparation of Content of the Noise Element of the General Plan, 1986, Governor's Office of Planning and Research.</u>
				2	2			
						4	4	
Office Buildings, Business Commercial and Professional	1	1	1					Source: <u>Guidelines for the Preparation of Content of the Noise Element of the General Plan, 1986, Governor's Office of Planning and Research.</u>
				2	2			
						3	3	
Industrial, Manufacturing, Utilities	1	1	1	1				Source: <u>Guidelines for the Preparation of Content of the Noise Element of the General Plan, 1986, Governor's Office of Planning and Research.</u>
					2	2	2	
Agriculture	1	1	1	1	1	1	1	

BASELINE NOISE LEVELS

Short term on-site noise measurements were made in order to document existing baseline levels throughout the Victorville area. These help to serve as a basis for projecting future noise exposure from a project upon the surrounding community. Noise monitoring was conducted on Thursday, September 27, 2007 between 8:15 a.m. and 5:20 p.m. at twenty representative Victorville locations. Measurement locations are shown in Figure 1 and summarized in Table 1.

Monitoring experience shows that 24-hour weighted CNEL's can be reasonably well estimated from daytime noise readings. CNEL's are approximately equal to daytime Leq plus 1-2 dB. Except near high volume roadways, existing area noise levels are primarily in the high 40's to high 50's. Such Leq's would translate into CNELs less than 60 dB, consistent with residential compatibility guidelines.

The few monitoring locations with noise levels in the 60 or 70 dB range were near major roadways, near the Southern California Logistics Airport (SCLA), or at a busy park with baseball practice in progress.

AIRPORT NOISE

The City of Victorville has adopted a community plan element in the City's general plan that deals specifically with SCLA. Aircraft noise is an important component of determining land use compatibility with airport operations. Aircraft activity noise contours have been calculated based upon long range SCLA utilization projections. Jet carrier/air taxi operations were forecast to increase from 1,080 landing and take-offs per year (approximately 3 per day) in the 2003 to 132,780 (approximately 365 per day) in the long-range future (2006 Airport Master Plan). An airport noise level of 65 dB CNEL is considered the upper level of compatibility with residential uses.

Presently, the 65 dB CNEL contour extends slightly beyond the airport property line into an undeveloped area to the south. The 65 dB CNEL contour remains within the airport property line in all other directions.

If the master plan activity level were ever reached, the zone of airport noise constraint would be substantially expanded. The 65 dB CNEL contour would extend approximately three miles south of the airport property to Mojave Drive. It would extend 2.5 miles northward to beyond Bryman Road. Because the contour location is linked closely to the Runway 17/35 orientation, the east-west extent of the 65 dB CNEL is much smaller. If the forecast activity level were ever realized, a small portion of the City south of Hopland Street, the area north of the airport, and a limited portion of the northwest corner of the Northern Sphere would be considered incompatible with potential residential development.

Despite the possible future expansion of the 65 dB CNEL contour, it would still represent a lesser noise constraint than did the former operation of George AFB as a military airport. The

community plan element shows the following acreage affected by the 65 dB Ldn (very similar to CNEL) contour:

1983 –	George AFB –	29,400 acres
2013 –	Civilian Reuse –	3,800 acres
2020 –	Operations Forecast –	5,490 acres

Should airport activity growth not be as dramatic or as rapid as projected in the master plan, the extent of any development related noise constraint, and/or the appearance of such a constraint, will be less in size or occur further into the future.

**Table 1
Measured Noise Levels (dBA)**

Site No.	Leq	Lmax	Lmin	L10*	L33*	L50*	L90*	Time of Day
1	58.5	75.5	43.5	62.0	50.5	46.5	44.5	08:15-08:30
2	49.3	56.5	44.5	51.5	49.0	48.0	46.0	08:46-09:01
3	57.7	69.0	45.5	61.5	58.0	53.5	47.5	09:12-09:27
4	48.4	66.5	39.0	49.5	44.0	42.5	40.0	09:42-09:57
5	48.6	59.0	40.5	52.0	48.0	46.0	42.0	10:10-10:25
6	52.4	67.0	36.5	56.5	46.0	41.5	38.0	10:37-10:52
7	53.8	69.5	41.0	56.5	48.0	46.0	43.0	11:00-11:15
8	59.5	69.0	42.5	63.0	59.0	57.5	52.0	11:23-11:38
9	49.8	64.5	37.5	54.0	47.5	45.0	40.0	11:50-12:05
10	56.1	73.0	42.5	58.5	54.5	52.5	46.0	12:24-12:39
11	59.8	67.5	53.5	62.0	60.0	58.5	56.0	13:02-13:17
12	50.8	65.5	46.0	52.5	50.5	49.5	47.5	13:30-13:45
13	53.6	64.5	48.0	55.5	53.0	52.0	49.5	13:58-14:13
14 ¹	62.4	83.5	49.5	63.5	58.0	56.5	52.5	14:27-14:42
15 ²	73.4	81.5	54.0	76.5	74.0	72.5	61.5	14:57-15:13
16 ³	63.2	80.5	46.0	59.0	53.0	51.0	48.0	15:22-15:37
17	56.8	69.5	45.0	59.0	56.0	54.0	49.0	15:55-16:10
18	52.9	66.0	45.5	55.0	51.5	50.5	47.5	16:16-16:31
19	57.1	74.0	50.0	58.5	56.0	55.5	53.0	16:45-17:00
20	55.3	59.0	41.5	58.0	54.5	52.5	47.0	17:06-17:21

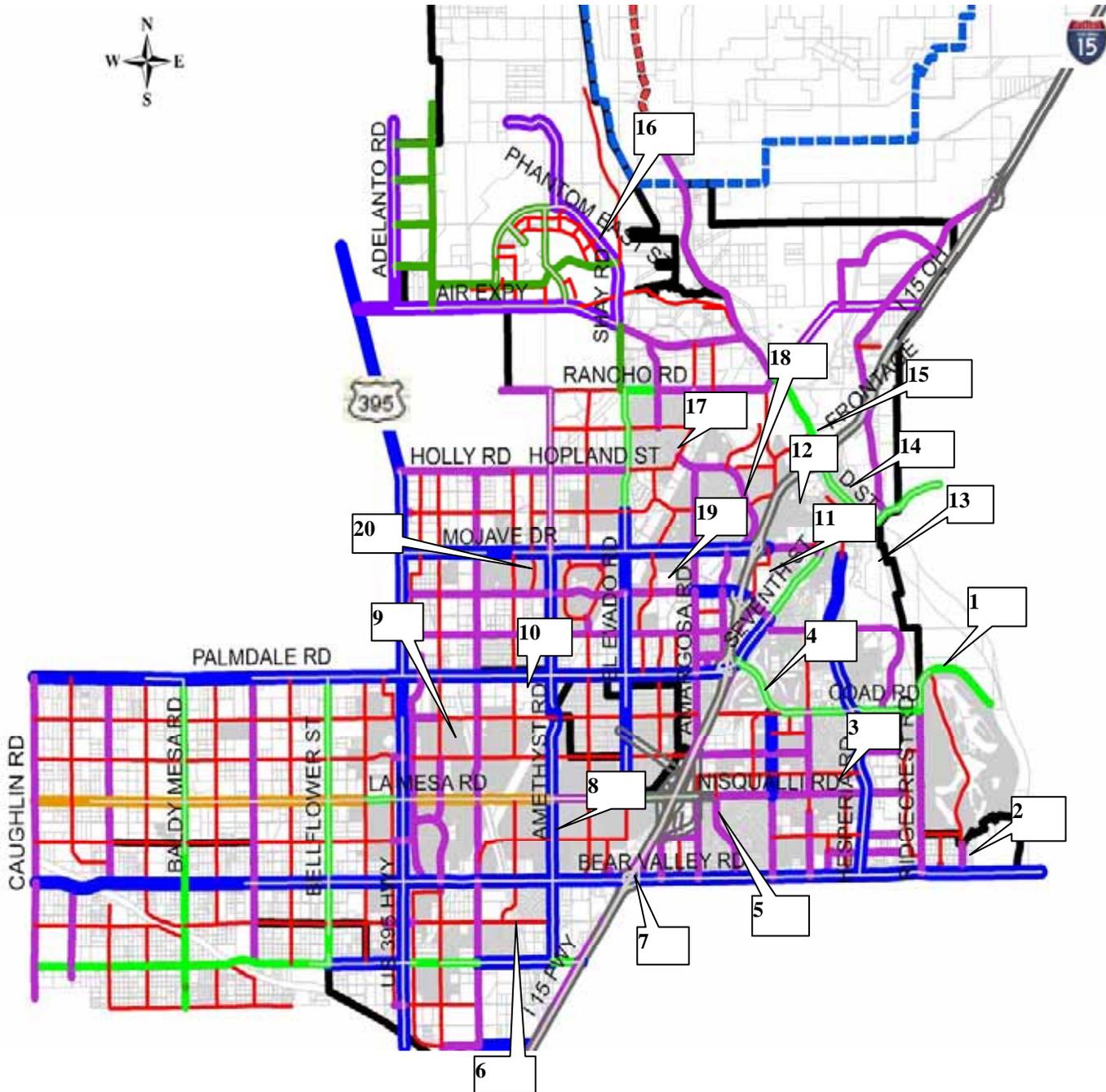
¹ At park with softball game in progress

² Approximately 20 yards to Route 66 centerline

³ Near airport with practice exercises

* Noise levels observed on 10, 33, 50 or 90 percent of readings.

**Figure 2
Noise Meter Locations**



(narrative location description included in the appendix)

VEHICULAR NOISE IMPACTS

Long-term noise concerns from the land use intensification in Victorville are primarily based on vehicular operations on project area roadways. These concerns were addressed using the California specific vehicle noise curves (CALVENO) in the federal roadway noise model (the FHWA Highway Traffic Noise Prediction Model, FHWA-RD-77-108). The model calculates the Leq noise level for a reference set of input conditions, and then makes a series of adjustments for site-specific traffic volumes, distances, speeds, or noise barriers.

Table 2 summarizes the range of 24-hour CNEL level at 50 feet from the roadway centerline along area roadway segments by future roadway classification. A full display of the data by roadway category and segment is found in the appendix. The noise analysis utilizes data from the project traffic analysis, prepared for this project. Two traffic scenarios were evaluated; existing conditions and future conditions (year 2030). Variable traffic speeds were used for each specific roadway as follows:

Local Roadway	–	25 mph
Collectors	–	30 mph
Secondary Arterial	–	35 mph
Residential Arterial	–	35 mph
Arterial	–	40 mph
Major Arterial	–	45 mph
Super Arterial	–	50 mph

Table 2 shows that local roads are not forecast to carry enough traffic to cause any significant noise impact outside the roadway right-of-way. The maximum extent of the 65 dB CNEL contour of 49 feet would occur along Seneca Road between Mesa Linda Avenue and US-395.

Several collector roadways are forecast to carry enough traffic as to cause the 65 dB CNEL contour to extend well beyond the roadway right-of-way. The maximum extent of the 65 dB CNEL contour would be 93 feet from the roadway centerline on the segment of El Evado Road between Palmdale and Dos Palmas Roads. The traffic noise level at the right-of-way edge would be 71 dB CNEL. The noise attenuation of a typical subdivision perimeter wall will reduce traffic noise by 6 dB. Structural attenuation with closed dual-paned windows will reduce noise by up to 30 dB. With the application of standard mitigation, traffic noise along any collector roadways can be reduced to an acceptable exterior (65 dB CNEL) and interior (45 dB CNEL) level.

Peak traffic noise levels at 50 feet from the centerline of secondary or residential arterials may be as high as 72 dB CNEL with a 65 dB CNEL contour distance of 138 feet from the centerline. The maximum noise exposure for this roadway classification would occur along 7th Street between “D” and “C” Streets. The maximum noise level at the edge of right-of-way would be 73 dB CNEL. A perimeter wall of up to 8 feet in height (or wall and small berm combination) would be needed to achieve 65 dB CNEL in usable outdoor space. Indoor levels can be achieved with normal mitigation. Reasonably available noise mitigation can meet City standards for noise-sensitive uses along residential or secondary arterials.

Arterial roadways could have peak noise levels of 75 dB CNEL at the edge of right-of-way along

La Mesa Road between Amorgosa and El Evado Roads. Most arterials, however, have noise levels at the edge of right-of-way in the low 70 dB CNEL range. Along most arterial roadways, noise-sensitive uses can be protected with standard noise mitigation. Along the most heavily traveled arterials, increased set-back or placement of less noise sensitive uses to buffer more sensitive uses may be necessary.

Major arterials could have traffic noise levels as high as 76 dB CNEL at the edge of the right-of-way. Without any intervening obstruction, the 65 dB CNEL contour could extend to 286 feet from the centerline. Along the most heavily future noise-impacted major arterials, a combination of land use control and noise mitigation measures would be required for siting noise-sensitive uses in close proximity to major arterials.

Super arterial roadways would have traffic noise levels ranging from 71-77 dB CNEL at the edge of the right-of-way. Noise levels in the low 70 dB CNEL range can be accommodated in siting noise sensitive uses near super arterials. Maximum noise exposure locations would require site design features (locating usable outdoor space within shielded areas) and upgraded structural features (premium windows and extra insulation) to meet general plan noise standards.

Table 2
Future Traffic Noise Impact Analysis
(dBA CNEL at 50 feet from centerline and distance from centerline to 65 dB CNEL contour)

Roadway Classification	Range	Range
Local	54-65	ROW-49'
Collector	51-69	ROW-93'
Secondary & Res. Arterial	61-72	ROW-138'
Arterial	63-74	ROW-189'
Major Arterial	62-76	ROW-286'
Unclassified	72-78	152'-380'

ROW= Contour is within right-of-way (less than 50 feet)

APPENDIX

Noise Meter Location Description

Traffic Noise Levels by Street Designation

Noise Meter Locations

Meter	Location
1	Mojave Narrows Regional Park - Near Entrance on Ridgecrest Dr
2	Victor Valley College - Quad Area Next to Art Building
3	Northwest Corner - Intersection First & Silica - Next to Bible Baptist Church / Across Street from Lomitas Elementary
4	9th Fairway / Green Tree Golf Course - Across From 14157 Burning Tree Lane
5	Empty Lot / Across Street from 15328 Sitting Bull Rd - Near Intersection: Balsam & Nisqualli Roads
6	Empty Lot / Sycamore Street - Across Street from Hollyvale Elementary / Hollyvale Park
7	SE Corner- Intersection Del Amo Dr & Del Amo Way - In Front of 14385 Del Amo Dr
8	Liberty Park - Sand / Swing Set Area / Park Abuts Liberty Elementary
9	Mesa Linda Park - Picnic Table Area / Park Lies Between Mesa Linda Jr High & Morgan-Kincaid Prep
10	SE Corner - Intersection Cobalt & Bonanza Roads - Next to Silverado High & Cobalt Middle Schools
11	San Bernardino County Fairgrounds - Entrance Gate "E"
12	Avalon Park - Picnic Table Area
13	Victor Valley Community Hospital - Near the Water Tank
14	Eva Dell Park - East End of Basketball Court
15	Emma Jeans Holland Burger Café / Truckstop - 17143 National Trails Hwy (Rte 66), _Front Door / 20 Yards to Roadway Centerline
16	Former George Air Force Base - Near Control Tower / Base Operation Office
17	Empty Lot / SE Corner - Intersection Orrick Ave & Clovis St - Next to Recently Completed House
18	Village Park - Sand / Swing Set Area
19	Hook Park - Community Center
20	Intersection - Brianhead Ct & Cobalt Rd - Single Family Residence

Traffic Noise Levels by Street Designation

**Future Local Roadways
Traffic Noise Impact Analysis
dB CNEL at 50 feet from centerline
Distance to 65 dB CNEL in Feet**

Roadway	Segment		2005 CNEL	Distance to 65 dB	2030 CNEL	Distance to 65 dB
5th Ave	Silica Dr	Bear Valley Rd	55	11	55	10
11th St	B St	Verde St	58	16	59	20
Cobalt Rd	Hopland St	Mojave Dr	ND	n/a	63	36
Cobalt Rd	Mojave Dr	Hook Blvd	ND	n/a	65	48
Cobalt Rd	Hook Blvd	Seneca Rd	ND	n/a	63	39
Del Rey Dr	Forrest Ave	Mojave Dr	57	15	57	15
Del Rey Dr	Mojave Dr	7th St	56	12	61	27
E St	Willow St	I-15 NB Ramps	54	10	58	17
Forrest St	3rd Ave	Moore Sr	54	9	54	10
Luna Rd	Mesa Linda St	US 395	59	21	64	41
Rodeo Dr	Victor St	Seneca Rd	59	21	61	29
Seneca Rd	Cobalt Rd	Topaz Rd	ND	N/a	65	47
Seneca Rd	Topaz Rd	Mesa Linda Ave	ND	N/a	65	49
Seneca Rd	Mesa Linda Ave	US 395	ND	N/a	65	49
Verde St	11th St	Hesperia Rd	59	19	60	22
Verde St	Hesperia Rd	Mojave St	60	25	61	26

**Future Collectors
Traffic Noise Impact Analysis
dB CNEL at 50 feet from centerline
Distance to 65 dB CNEL in Feet**

Roadway	Segment		2005 CNEL	Distance to 65 dB	2030 CNEL	Distance to 65 dB
Hesperia Rd	D St	B St	63	37	64	44
Hesperia Rd	B St	Forrest Ave	65	53	66	57
Hesperia Rd	Forrest Ave	Rio Vista St	65	53	68	79
Hesperia Rd	Rio Vista St	Verde St	65	53	68	80
Mariposa Rd	I-15 NB Off-ramp	Kingswood Dr	67	67	67	71
Mariposa Rd	Kingswood Dr	Yates Rd	67	68	67	73
Mariposa Rd	Yates Rd	Nisqualli Rd	67	67	68	81
Pacoima Rd	Luna Rd	La Mesa Rd	59	20	63	40
Spring Valley Pkwy	Driftwood Dr	Country Club Dr	ND	N/a	65	49
Spring Valley Pkwy	Country Club Dr	Pahute Rd	62	31	63	36
Spring Valley Pkwy	Pahute Rd	Bear Valley Rd	65	51	67	72
1st Ave	Green Tree Blvd	Ottawa St	ND	N/a	65	47
1st Ave	Ottawa St	Winona St	ND	n/a	57	15
1st Ave	Winona St	Nisqualli Rd	ND	N/a	57	16
1st Ave	Nisqualli Rd	Silica Rd	62	30	62	32
1st Ave	Silica Rd	Jasmine St	57	16	58	17
2nd Ave	Nisqualli Rd	Silica Rd	ND	N/a	57	14
6th St	D St	C St	52	7	62	31
6th St	C St	B St	55	11	63	35
6th St	B St	A St	54	9	63	35
6th St	A St	Union St	60	23	59	21
6th St	Union St	Mojave Dr	60	24	61	27
11th Ave	Winona St	Nisqualli Rd	57	16	58	17
11th St	D St	B St	58	18	60	24
Arlette Dr	Joshua St	Hook Blvd	58	18	59	20
Ashley Glen Dr	Mojave Dr	Joshua St	ND	N/a	59	21
Ashley Glen Dr	Joshua St	Hook Blvd	57	16	62	32
Avalon Ave	Fresno Dr	A St	56	12	56	13
Balsam Rd	Winona St	Nisqualli Rd	ND	N/a	60	23
Brucite Rd	Hopland St	Tawney Ridge Ln	ND	N/a	55	10
Brucite Rd	Tawney Ridge Ln	Mojave Dr	ND	N/a	52	7
Brucite Rd	Mojave Dr	Hook Blvd	ND	N/a	62	30
Burning Tree Dr	Pebble Beach Dr	Green Tree Blvd	59	19	62	31
Cahuenga Rd	Palmdale Rd	Dos Palmas Rd	44	2	65	49
Cahuenga Rd	Dos Palmas Rd	Luna Rd	51	6	62	30
Cantina Dr	La Mesa Rd	Eagle Ranch Pkwy	ND	N/a	65	53
Cantina Dr	Eagle Ranch Pkwy	Bear Valley Rd	58	18	65	54
Cantina Dr	Holly Rd	Mojave Rd	ND	N/a	63	36
Cantina Dr	Mojave Rd	Seneca Rd	ND	N/a	65	47
Cantina Dr	Seneca Rd	Palmdale Rd	ND	N/a	67	64
Civic Dr	Mojave Dr	Roy Rogers Dr	53	8	62	34
Clovis St	Amargosa Rd	Village Dr	54	9	55	11
Clovis St	Village Dr	El Evado Rd	57	14	61	26

Roadway	Segment		2005 CNEL	Distance to 65 dB	2030 CNEL	Distance to 65 dB
Clovis St	El Evado Rd	Cordova Rd	ND	N/a	51	6
Clovis St	Cordova Rd	Amethyst Rd	ND	N/a	54	10
Cobalt Rd	Seneca Rd	Palmdale Rd	54	9	61	28
Cobalt Rd	Palmdale Rd	Dos Palmas Rd	61	27	64	44
Cobalt Rd	Dos Palmas Rd	Luna Rd	59	20	64	44
Cobalt Rd	La Mesa Rd	Northstar Ave	58	17	62	33
Cobalt Rd	Northstar Ave	Bear Valley Rd	57	15	61	26
Cobalt Rd	Bear Valley Rd	Sycamore St	60	25	61	26
Cobalt Rd	Sycamore St	Eucalyptus St	ND	N/a	60	24
Condor Rd	Tawney Ridge Ln	Mojave Dr	56	13	59	20
Cordova Rd	Rancho Rd	Clovis St	ND	N/a	55	11
Cordova Rd	Clovis St	Hopland St	ND	N/a	57	14
Cordova Rd	Hopland St	Tawney Ridge Ln	ND	N/a	56	13
Cordova Rd	Tawney Ridge Ln	Mojave Dr	ND	N/a	53	8
Cottonwood Ave	Mariposa Rd	Bear Valley Rd	63	38	65	53
Cypress Ave	Yates Rd	Ottawa St	ND	N/a	55	11
Cypress Ave	Ottawa St	Nisqualli Rd	ND	N/a	58	18
Cypress Ave	Nisqualli Rd	9th Ave	55	11	59	21
Cypress Ave	9th Ave	11th St	52	7	56	12
Cypress Ave	11th St	Bear Valley Rd	44	2	54	10
Dos Palmas Rd	Park Ave	Amargosa Rd	ND	N/a	58	17
Dos Palmas Rd	Amargosa Rd	Cahuenga Rd	ND	N/a	61	26
Dos Palmas Rd	Cahuenga Rd	El Evado Rd	ND	N/a	63	35
Dos Palmas Rd	El Evado Rd	Pacoima Rd	ND	N/a	65	52
Dos Palmas Rd	Pacoima Rd	Amethyst Rd	ND	N/a	65	53
Dos Palmas Rd	Amethyst Rd	Cobalt Rd	ND	N/a	62	33

Collectors (continued)
Traffic Noise Impact Analysis
dB CNEL at 50 feet from centerline
Distance to 65 dB CNEL in Feet

Roadway	Segment		2005 CNEL	Distance to 65 dB	2030 CNEL	Distance to 65 dB
Dos Palmas Rd	Cobalt Rd	Topaz Rd	ND	N/a	63	39
Dos Palmas Rd	Topaz Rd	Mesa Linda St	ND	N/a	65	51
Dos Palmas Rd	Mesa Linda St	US-395	ND	N/a	64	46
Dos Palmas Rd	US-395	Bellflower St	ND	N/a	66	58
Dos Palmas Rd	Bellflower St	Monte Vista Rd	ND	N/a	65	50
Dos Palmas Rd	Monte Vista Rd	Braceo St	ND	N/a	65	47
Dos Palmas Rd	Braceo St	Baldy Mesa Rd	ND	N/a	61	27
El Evado Rd	Palmdale Rd	Dos Palmas Rd	64	45	69	93
Francesca Rd	Spring Valley Pkwy	Tamarisk Rd	ND	N/a	64	42
Francesca Rd	Tamarisk Rd	Ridgecrest Rd	ND	N/a	63	39
Hopland St	Amethyst Rd	El Evado Rd	ND	N/a	64	42
Hopland St	El Evado Rd	Llanada Ave	53	8	63	35
Hook Blvd	Amethyst Rd	Brucite Rd	52	7	65	52
Hook Blvd	Brucite Rd	Cobalt Rd	ND	N/a	67	65
Hughes Rd	La Paz Dr	Rodeo Dr	55	11	60	22
Hughes Rd	Rodeo Dr	Hesperia Rd	57	14	57	15
Jeraldo Dr	Mojave Dr	Joshua St	53	8	53	8
Kentwood Blvd	Hook Blvd	Seneca Rd	ND	N/a	60	24
La Paz Dr	Forrest Ave	Mojave Dr	61	28	62	30
La Paz Dr	Mojave Dr	Redondo Dr	62	33	64	43
La Paz Dr	Redondo Dr	Plaza Dr	64	41	64	43
La Paz Dr	Seneca Rd	Lorene Dr	60	23	65	48
La Paz Dr	Lorene Dr	Hughes Rd	60	22	63	40
La Paz Dr	Hughes Rd	Pebble Beach Dr	57	14	61	26
Lindero St	7th Ave	9th Ave	ND	N/a	58	17
Lindero St	9th Ave	11th St	ND	N/a	56	13
Lindero St	11th St	Cypress Ave	ND	N/a	56	13
Lindero St	Cypress Ave	Balsam Rd	ND	N/a	59	19
Llanada Ave	Amargosa Rd	Village Dr	58	18	59	20
Llanada Ave	Village Dr	Hopland St	54	10	60	23
Locust Ave	Pahute Rd	Bear Valley Rd	ND	N/a	64	43
Luna Rd	Amargosa Rd	Cahuenga Rd	56	13	62	33
Luna Rd	Cahuenga Rd	El Evado Rd	60	22	62	31
Luna Rd	El Evado Rd	Pacoima Rd	61	28	62	31
Luna Rd	Pacoima Rd	Amethyst Rd	61	27	62	31
Luna Rd	Amethyst Rd	Cobalt Rd	62	31	65	50
Luna Rd	Cobalt Rd	Topaz Rd	62	30	65	47
Luna Rd	Topaz Rd	Mesa Linda St	57	16	64	45
Luna Rd	US-395	Mesa View Dr	ND	N/a	66	58
Luna Rd	Mesa View Dr	Bellflower St	ND	N/a	64	45
Luna Rd	Bellflower St	Monte Vista St	ND	N/a	65	51
Luna Rd	Monte Vista St	Braceo St	ND	N/a	65	47
Luna Rd	Braceo St	Baldy Mesa Rd	ND	N/a	66	56
Mesa St	Amargosa Rd	Topaz Rd	ND	N/a	64	42
Mesa St	Topaz Rd	Eagle Ranch Pkwy	ND	N/a	63	38

Mesa St	Eagle Ranch Pkwy	US-395	ND	N/a	60	24
Mesa St	US-395	Pena Ave	ND	N/a	65	49
Mesa Linda St	Mojave Dr	Hook Blvd	ND	N/a	61	28
Mesa Linda St	Dos Palmas Rd	Luna Rd	ND	N/a	62	30
Mesa Linda St	Luna Rd	La Mesa Rd	ND	N/a	61	27

Future Collectors (Continued)
Traffic Noise Impact Analysis
dB CNEL at 50 feet from centerline
Distance to 65 dB CNEL in Feet

Roadway	Segment		2005 CNEL	Distance to 65 dB	2030 CNEL	Distance to 65 dB
Mesa Linda St	Holly Rd	Cactus Rd	ND	N/a	57	14
Mesa Linda St	Cactus Rd	Hook Blvd	ND	N/a	61	27
Mesa Linda St	Hook Blvd	Seneca Rd	ND	N/a	62	33
Mesa Linda St	Seneca Rd	Palmdale Rd	ND	N/a	64	43
Mesa Linda St	Palmdale Rd	Bear Valley Rd	ND	N/a	61	26
Mesa Linda St	Bear Valley Rd	Sequoia St	ND	N/a	66	59
Mesa Linda St	Sequoia St	Sycamore St	ND	N/a	63	38
Mesa Linda St	Sycamore St	Eucalyptus St	ND	N/a	65	50
Mesa Linda St	Eucalyptus St	Verano St	ND	N/a	65	50
Mesa Linda St	Verano St	Mesa St	ND	N/a	61	28
Mesa View Dr	La Mesa St	Olivine Rd	ND	N/a	59	19
Mesa View Dr	Olivine Rd	Bear Valley Rd	ND	N/a	58	17
Mesa View Dr	Bear Valley Rd	Sycamore St	ND	N/a	63	39
Mesa View Dr	Sycamore St	Eucalyptus St	ND	N/a	63	37
Mojave Dr	Victor St	7th St	ND	N/a	61	27
National Trails Hwy	n/o Turner Rd	Turner Rd	60	25	61	27
National Trails Hwy	Turner Rd	Air Expwy	64	46	65	49
National Trails Hwy	Air Expwy	Rancho Rd	65	51	67	68
National Trails Hwy	Rancho Rd	I-15 SB Ramps	66	56	68	81
Northstar Ave	Pacoima Rd	Amethyst Rd	59	20	61	27
Northstar Ave	Amethyst Rd	Cobalt Rd	58	18	60	22
Northstar Ave	Cobalt Rd	High Desert Rd	ND	N/a	58	17
Olivine Rd	Cantina Dr	US-395	ND	N/a	67	73
Olivine Rd	US-395	Pena Rd	ND	N/a	61	26
Olivine Rd	Pena Rd	Mesa View Dr	ND	N/a	59	21
Olivine Rd	Mesa View Dr	Bellflower St	ND	N/a	58	18
Olivine Rd	Bellflower St	Monte Vista Rd	ND	N/a	60	23
Olivine Rd	Monte Vista Rd	Baldy Mesa Rd	ND	N/a	62	30
Olivine Rd	Baldy Mesa Rd	Beaver Ave	ND	N/a	66	57
Ottawa St	Hesperia Rd	1st Ave	50	5	67	66
Ottawa St	1 st Ave	3 rd Ave	51	6	66	63
Ottawa St	3 rd Ave	Arrowhead Dr	ND	N/a	67	67
Ottawa St	Arrowhead Dr	Cypress Ave	ND	N/a	66	58
Ottawa St	Cypress Ave	Mariposa Rd	ND	N/a	66	60
Pacoima Rd	Dos Palmas Rd	Luna Rd	ND	N/a	60	23
Pacoima Rd	La Mesa Rd	Northstar Ave	60	23	65	51
Pacoima Rd	Northstar Ave	Bear Valley Rd	60	22	63	38
Pacoima Rd	Seneca Rd	Palmdale Rd	ND	N/a	58	18
Pacoima Rd	Palmdale Rd	Dos Palmas Rd	ND	N/a	60	25
Pahute Rd	Spring Valley Pkwy	Tamarisk Rd	ND	n/a	66	58
Pahute Rd	Tamarisk Rd	Ridgecrest Rd	ND	N/a	66	58
Pahute Rd	Cottonwood Ave	Balsam Rd	ND	N/a	65	47

Pebble Beach Dr	La Paz Dr	Rodeo Dr	54	9	58	18
Pena Ave	Bear Valley Rd	Sycamore St	ND	N/a	63	35
Pena Ave	Sycamore St	Eucalyptus	ND	N/a	62	31
Redrock Rd	Topaz Rd	Eagle Ranch Pkwy	58	18	63	35
Reno Loop East	E Trail	Hook blvd	59	21	60	23
Reno Loop East	Hook blvd	S Trail	55	10	61	27
Reno Loop West	W Trail	Hook blvd	57	16	60	24
Reno Loop West	Hook blvd	S Trail	54	9	54	9
Rodeo Dr	Seneca Rd	Lorene Dr	62	33	64	44
Rodeo Dr	Lorene Dr	Hughes Rd	63	34	64	46
Rodeo Dr	Hughes Rd	Pebble Beach Dr	63	35	65	49
Rodeo Dr	Pebble Beach Dr	Green Tree Blvd	60	23	63	38

Future Collectors (continued)
Traffic Noise Impact Analysis
dB CNEL at 50 feet from centerline
Distance to 65 dB CNEL in Feet

Roadway	Segment		2005 CNEL	Distance to 65 dB	2030 CNEL	Distance to 65 dB
Seneca Rd	Amargosa Rd	Borego Rd	60	24	65	47
Seneca Rd	Borego Rd	Cahuenga Rd	60	22	66	59
Seneca Rd	Cahuenga Rd	El Evado Rd	58	18	67	63
Seneca Rd	El Evado Rd	S Trail	59	19	66	63
Seneca Rd	S Trail	Amethyst Rd	47	3	67	65
Seneca Rd	Amethyst Rd	Cobalt Rd	54	9	66	60
Silica Rd	Hesperia Rd	2nd Ave	59	20	63	37
Silica Rd	2 nd Ave	3 rd Ave	Nd	N/a	63	40
Silica Rd	3rd Ave	7th Ave	ND	N/a	62	30
Smoketree Rd	Topaz Rd	Mesa Linda St	ND	N/a	66	60
Sycamore St	Amethyst Rd	Cobalt Rd	ND	N/a	62	32
Sycamore St	Cobalt Rd	Topaz Rd	57	16	62	34
Sycamore St	Topaz Rd	Mesa Linda St	53	8	62	33
Sycamore St	Mesa Linda St	US 395	54	9	66	60
Sycamore St	Amargosa Rd	Amethyst Rd	ND	N/a	60	24
Sycamore St	US-395	Penas Rd	ND	N/a	67	66
Sycamore St	Penas Rd	Mesa View Dr	ND	N/a	64	41
Sycamore St	Mesa View Dr	Bellflower St	ND	N/a	64	43
Sycamore St	Bellflower St	Verbena Rd	ND	N/a	62	34
Sycamore St	Verbena Rd	Monte Vista Rd	ND	N/a	64	44
Tawney Ridge L	Puesta Del Sol Dr	Sueno Ln	49	4	60	23
Tawney Ridge L	Sueno Ln	Village Dr	59	19	60	22
Tawney Ridge L	Village Dr	Condor Rd	54	9	58	18
Tawney Ridge L	Condor Rd	Amargosa Rd	49	4	58	18
Tawney Ridge L	Amargosa Rd	Ferndale Rd	ND	N/a	62	30
Tawney Ridge L	Ferndale Rd	Cahuenga Rd	ND	N/a	61	27
Tawney Ridge L	Cahuenga Rd	El Evado Rd	ND	N/a	58	17
Tawney Ridge L	El Evado Rd	Cordova Rd	ND	N/a	58	18
Tawney Ridge L	Cordova Rd	Amethyst Rd	ND	N/a	57	16
Tawney Ridge L	Amethyst Rd	Cobalt Rd	ND	N/a	61	29
Tawney Ridge L	Cobalt Rd	Topaz Rd	ND	N/a	56	13
Tawney Ridge L	Topaz Rd	Mesa Linda Ave	ND	N/a	62	31
Tawney Ridge L	Mesa Linda Ave	US-395	ND	N/a	63	35
Turner Rd	National Trails Hwy	Air Expressway	ND	N/a	54	9
Verbena Rd	Palmdale Rd	Dos Palmas Rd	ND	N/a	60	23
Verbena Rd	Dos Palmas Rd	Luna Rd	ND	N/a	61	26
Verbena Rd	Luna Rd	Olivine Rd	ND	N/a	59	19
Verbena Rd	Olivine Rd	Bear Valley Rd	ND	N/a	58	17
Verbena Rd	Bear Valley Rd	Sycamore St	ND	N/a	58	16
Victor St	Mojave Dr	Rodeo Dr	54	10	57	16
Victor St	Rodeo Dr	Corta Dr	58	18	62	32
Victor St	Corta Dr	7th St	59	21	63	36
West Trail	Mojave Dr	Reno Loop Rd	54	10	58	17
Yates Rd	Arrowhead Dr	Mariposa Rd	59	19	65	48

**Future Residential & Secondary Arterials
Traffic Noise Impact Analysis
dB CNEL at 50 feet from centerline
Distance to 65 dB CNEL in Feet**

Segment			2005 CNEL	Distance to 65 dB	2030 CNEL	Distance to 65 dB
7 th St	D St	C St	68	75	72	138
7 th St	C St	B St	68	81	71	135
7 th St	B St	A St	69	87	71	133
7 th St	A St	Forrest Ave	69	88	71	121
11 th Ave	Nisqualli Rd	Cypress Ave	56	13	61	28
11 th Ave	Cypress Ave	Lindero St	58	17	62	30
11 th Ave	Lindero St	Bear Valley Rd	59	19	61	26
La Mesa Rd	Mesa Linda St	Cantina Dr	ND	N/a	67	70
La Mesa Rd	Cantina Dr	US-395	ND	N/a	69	90
La Mesa Rd	US-395	Pana Rd	ND	N/a	69	96
La Mesa Rd	Pana Rd	Mesa View Dr	ND	N/a	69	93
La Mesa Rd	Mesa View Dr	Bellflower St	ND	N/a	69	92
La Mesa Rd	Bellflower St	Verbena Rd	ND	N/a	70	104
La Mesa Rd	Verbena Rd	Monte Vista Rd	ND	N/a	69	93
La Mesa Rd	Monte Vista Rd	Braceo St	ND	N/a	65	51
La Mesa Rd	Braceo St	Baldy Mesa Rd	ND	N/a	66	60
La Mesa Rd	Baldy Mesa Rd	White Rd	ND	N/a	64	42

**Future Arterials
Traffic Noise Impact Analysis
dB CNEL at 50 feet from centerline
Distance to 65 dB CNEL in Feet**

Roadway	Segment		2005 CNEL	Distance to 65 dB	2030 CNEL	Distance to 65 dB
3 rd Ave	Nisqualli Rd	Silica Dr	58	16	66	57
3 rd Ave	Silica Dr	Bear Valley Rd	ND	N/a	64	45
7th Ave	Lindero St	Bear Valley Rd	67	73	71	118
Roy Rogers Dr	I-15 SB Ramps	Civic Dr	71	135	73	169
Roy Rogers Dr	Civic Dr	Amargosa Rd	69	96	72	154
2nd Ave	Silica Rd	Bear Valley Rd	65	50	65	50
Air Base Rd	National Trails Hwy	Gas Line Rd	67	68	68	85
Air Base Rd	Gas Line Rd	Village Dr	67	65	68	83
Air Base Rd	Village Dr	Phantom East St	69	98	72	145
Cantina Dr	Palmdale Rd	Dos Palmas Rd	ND	N/a	71	129
Cantina Dr	Dos Palmas Rd	Luna Rd	ND	N/a	71	132
Cantina Dr	Luna Rd	La Mesa Rd	ND	N/a	72	141
Civic Dr	Roy Rogers Dr	Seneca Rd	64	44	66	60
Civic Dr	Seneca Rd	Park Ave	63	37	64	40
Civic Dr	Park Ave	Amargosa Rd	51	6	67	69
Jasmine St	Industrial Blvd	Hesperia Rd	67	65	67	70
Jasmine St	Hesperia Rd	1st Ave	64	46	65	49
Jasmine St	1st Ave	2nd Ave	63	38	64	41
La Mesa Rd	Amargosa Rd	El Evado Rd	65	50	74	189
La Mesa Rd	El Evado Rd	Petaluma Rd	65	54	71	117
La Mesa Rd	Petaluma Rd	Pacoima Rd	65	53	71	117
La Mesa Rd	Pacoima Rd	Triple Tree Tr	66	56	71	123
La Mesa Rd	Triple Tree Tr	Amethyst Rd	66	55	71	123
La Mesa Rd	Amethyst Rd	Cobalt Rd	60	25	70	115
La Paz Dr	7th St	Seneca Rd	66	62	71	122
Mesa Linda St	La Mesa Rd	Eagle Ranch Pkwy	60	24	66	56
Mojave Dr	7th St	6th St	67	70	68	76
Mojave Dr	6th St	Del Rey Dr	68	84	69	92
Mojave Dr	Del Rey Dr	La Paz Dr	69	91	72	138
Nisqualli Rd	Hesperia Rd	1 st Ave	67	72	69	97
Nisqualli Rd	1 st Ave	3 rd Ave	67	69	68	80
Nisqualli Rd	3 rd Ave	Arrowhead Dr	66	61	69	91
Nisqualli Rd	Arrowhead Dr	Cypress Ave	67	64	70	108
Nisqualli Rd	Cypress Ave	11 th Ave	66	63	71	117
Nisqualli Rd	11 th Ave	Balsam Rd	67	68	71	127
Nisqualli Rd	Balsam Rd	Mariposa Rd	68	75	73	162
Nisqualli Rd	11th Ave	Mariposa Rd	67	69	71	127

Future Arterials (continued)
Traffic Noise Impact Analysis
dB CNEL at 50 feet from centerline
Distance to 65 dB CNEL in Feet

Roadway	Segment		2005 CNEL	Distance to 65 dB	2030 CNEL	Distance to 65 dB
Seneca Rd	Industrial Blvd	Hesperia Rd	ND	N/a	63	34
Seneca Rd	Hesperia Rd	Rodeo Dr	66	54	70	105
Seneca Rd	Rodeo Dr	La Paz Dr	65	49	70	111
Village Dr	Mojave Dr	Calgo Ln	68	77	70	114
Village Dr	Calgo Ln	Tawney Ridge Ln	67	68	70	103
Village Dr	Tawney Ridge Ln	Puesta Del Sol Dr	65	54	69	89
Village Dr	Puesta Del Sol Dr	Amargosa Rd	66	54	70	102
Village Dr	Amargosa Rd	Clovis St	67	70	71	121
Village Dr	Clovis St	Rancho Rd	66	62	70	107
Village Dr	Rancho Rd	Air Base Rd	66	60	70	112
Amargosa Rd	Village Dr	Tawney Ridge Ln	65	49	68	74
Amargosa Rd	Tawney Ridge Ln	Mojave Dr	66	57	69	90
Amargosa Rd	Mojave Dr	Roy Rogers Dr	69	86	70	103
Amargosa Rd	Roy Rogers Dr	Seneca Rd	67	68	70	110
Amargosa Rd	Seneca Rd	Civic Dr	66	62	71	124
Amargosa Rd	Civic Dr	Palmdale Rd	66	63	70	101
Amargosa Rd	Palmdale Rd	Dos Palmas Rd	69	89	70	107
Amargosa Rd	Dos Palmas Rd	Luna Rd	68	76	70	103
Amargosa Rd	Luna Rd	La Mesa Rd	67	66	70	113
Amargosa Rd	La Mesa Rd	King Ranch Rd	69	94	70	115
Amargosa Rd	King Ranch Rd	Bear Valley Rd	70	100	70	113
Amargosa Rd	Bear Valley Rd	Christa Way	67	72	71	121
Amargosa Ra	Christa Way	California Aqueduct	64	45	69	90
Eagle Ranch Pkw	Redrock Rd	Bear Valley Rd	63	34	65	53
Holly Rd	US-395	Mesa Linda Ave	ND	N/a	69	88
Holly Rd	Mesa Linda Ave	Topaz Rd	ND	N/a	68	84
Hook Blvd	Amargosa Rd	Arlette Dr	69	93	70	115
Hook Blvd	Arlette Dr	Ashley Glen Dr	67	70	71	124
Hook Blvd	Ashley Glen Dr	El Evado Rd	69	92	71	118
Hook Blvd	El Evado Rd	Reno Loop Rd East	66	56	69	87
Hook Blvd	Reno Loop Rd East	Reno Loop Rd West	65	47	69	97
Hook Blvd	Reno Loop Rd West	Amethyst Rd	61	26	69	93
Hopland St	Topaz Rd	Cobalt Rd	ND	N/a	70	102
Hopland St	Cobalt Rd	Amethyst Rd	ND	N/a	70	101
Industrial Blvd	Silica Rd	Bear Valley Rd	70	108	71	117
Industrial Blvd	Seneca Rd	Green Tree Blvd	ND	N/a	63	39
Kentwood Blvd	Civic Dr	Palmdale Rd	67	6	69	88
La Mesa Rd	Cobalt Rd	Topaz Rd	64	41	70	113
La Mesa Rd	Topaz Rd	Blair St	64	40	70	115
La Mesa Rd	Blair St	Mesa Linda St	61	27	70	106
La Paz Dr	Plaza Dr	Roy Rogers Dr	66	60	67	64
La Paz Dr	I-15 NB Ramps	Valley Center Dr	71	135	73	167
La Paz Dr	Valley Center Dr	7th St	67	64	73	166

Future Arterials (continued)
Traffic Noise Impact Analysis
dB CNEL at 50 feet from centerline
Distance to 65 dB CNEL in Feet

Roadway	Segment		2005 CNEL	Distance to 65 dB	2030 CNEL	Distance to 65 dB
Mall Blvd	Petaluma Rd	Bear Valley Rd	68	76	68	80
Mariposa Rd	Nisqualli Rd	Bear Valley Rd	69	87	69	94
Mojave Dr	Amargosa Rd	Jeraldo Dr	66	61	71	117
Mojave Dr	Jeraldo Dr	Ashley Glen Dr	66	55	71	119
Mojave Dr	Ashley Glen Dr	El Evado Rd	65	51	71	123
Mojave Dr	El Evado Rd	East Trail	66	55	71	130
Mojave Dr	East Trail	Rocky Knoll Way	64	44	71	125
Mojave Dr	Rocky Knoll Way	West Trail	64	44	71	123
Mojave Dr	West Trail	Amethyst Rd	68	74	72	157
Mojave Dr	Amethyst Rd	Brucite Rd	67	70	72	153
Mojave Dr	Brucite Rd	Cobalt Rd	64	44	72	138
Mojave Dr	Cobalt Rd	Topaz Rd	64	45	71	129
Mojave Dr	Topaz Rd	Mesa Linda Ave	64	45	71	131
Monte Vista Rd	Palmdale Rd	Dos Palmas Rd	ND	N/a	65	51
Monte Vista Rd	Dos Palmas Rd	Luna Rd	ND	N/a	67	64
Monte Vista Rd	Luna Rd	La Mesa Rd	ND	N/a	63	37
Monte Vista Rd	La Mesa Rd	Olivine Rd	ND	N/a	68	75
Monte Vista Rd	Olivine Rd	Bear Valley Rd	ND	N/a	67	73
Monte Vista Rd	Bear Valley Rd	Sycamore St	ND	N/a	67	64
Rancho Rd	El Evado Rd	Amethyst	ND	N/a	66	56
Ridgecrest Rd	Green Tree Blvd	Pahute Rd	65	49	71	134
Ridgecrest Rd	Pahute Rd	Bear Valley Rd	67	70	68	85
Seneca Rd	Civic Dr	Amargosa Rd	60	25	61	27
Silica Rd	Industrial Blvd	Hesperia Rd	62	30	68	79
Smoketree Rd	Amargosa Rd	Topaz Rd	ND	N/a	73	164
Stoddard Wells Rd	Dante St	I-15 SB Ramps	62	30	73	178
Stoddard Wells Rd	I-15 NB Ramps	Happy Trails Hwy	58	18	69	100
Topaz Rd	Holly Rd	Cactus Rd	ND	N/a	67	70
Topaz Rd	Cactus Rd	Mojave Dr	ND	N/a	69	93
Topaz Rd	Mojave Dr	Hook Blvd	ND	N/a	68	76
Topaz Rd	Hook Blvd	Seneca Rd	ND	N/a	69	86
Topaz Rd	Seneca Rd	Palmdale Rd	ND	N/a	68	80
Topaz Rd	Palmdale Rd	Dos Palmas Rd	ND	N/a	69	86
Topaz Rd	Dos Palmas Rd	Luna Rd	ND	N/a	68	82
Topaz Rd	Luna Rd	La Mesa Rd	60	22	67	66
Topaz Rd	La Mesa Rd	Redrock Rd	62	33	68	77
Topaz Rd	Redrock Rd	San Miguel St	63	38	68	84
Topaz Rd	San Miguel St	Bear Valley Rd	63	38	69	89
Topaz Rd	Bear Valley Rd	Sycamore St	ND	N/a	69	93
Topaz Rd	Sycamore St	Eucalyptus St	ND	N/a	70	101
Topaz Rd	Eucalyptus St	Verano St	ND	N/a	69	93
Topaz Rd	Verano St	Smoketree Rd	ND	N/a	70	116

**Future Major Arterials
Traffic Noise Impact Analysis
dB CNEL at 50 feet from centerline
Distance to 65 dB CNEL in Feet**

Roadway	Segment		2005 CNEL	Distance to 65 dB	2030 CNEL	Distance to 65 dB
3 rd Ave	Green Tree Blvd	Ottawa St	66	58	66	63
3 rd Ave	Ottawa St	Nisqualli Rd	66	57	66	60
7th St	Forrest Ave	Center St	71	122	73	179
7th St	Center St	Union St	71	133	73	161
7th St	Union St	Mojave Dr	72	148	73	166
7th St	Mojave Dr	Victor St	71	122	72	151
7th St	Victor St	Plaza Dr	72	140	73	159
7th St	Plaza Dr	La Paz Dr	71	134	73	169
7th St	La Paz Dr	Lorene Dr	71	121	73	176
7th St	Lorene Dr	Green Tree Blvd	71	128	75	221
7th St	Mojave Dr	Palmdale Rd / Green Tree Blvd	72	141	75	221
7 th Ave	Yates Rd	Ottawa St	68	84	73	160
7 th Ave	Ottawa St	Nisqualli Rd	68	80	73	166
7 th Ave	Misquali Rd	Silica Dr	69	88	72	148
7 th Ave	Silica Dr	Lindero St	69	96	72	145
Adelanto Rd	La Paz Ave	Chamberlaine Way	48	4	69	91
Adelanto Rd	Chamberlaine Way	Bartlett Ave	48	4	68	84
Amethyst Rd	Rancho Rd	Hopland St	ND	N/a	70	117
Amethyst Rd	Hopland St	Mojave Dr	ND	N/a	71	120
Amethyst Rd	Mojave Dr	Quail Cove Pl	61	26	74	186
Amethyst Rd	Quail Cove Pl	Hook Blvd	61	27	74	190
Amethyst Rd	Hook Blvd	Woodpecker Rd	62	33	74	203
Amethyst Rd	Woodpecker Rd	Seneca Rd	62	34	74	204
Amethyst Rd	Seneca Rd	Begonia St	62	30	74	208
Amethyst Rd	Begonia St	Palmdale Rd	62	31	74	199
Amethyst Rd	La Mesa Rd	Northstar Ave	69	94	74	199
Amethyst Rd	Northstar Ave	Glengarry Dr	70	104	74	201
Amethyst Rd	Glengarry Dr	Bear Valley Rd	70	109	74	208
Amethyst Rd	Bear Valley Rd	Sycamore St	ND	N/a	74	200
Amethyst Rd	Sycamore St	Eucalyptus St	ND	N/a	74	193
Baldy Mesa Rd	Palmdale Rd	Luna Rd	50	6	72	156
Baldy Mesa Rd	Luna Rd	La Mesa Rd	50	6	73	159
Baldy Mesa Rd	La Mesa Rd	Bear Valley Rd	50	6	72	154
Baldy Mesa Rd	Bear Valley Rd	5 th St	60	24	72	136
Baldy Mesa Rd	5 th St	Goss Rd	60	24	72	138
Balsam Rd	Nisqualli Rd	Bear Valley Rd	67	67	70	108
Bear Valley Rd	Fish Hatchery Rd	Jacaranda Ave	75	218	76	283
Bear Valley Rd	Jacaranda Ave	Peach Ave	73	180	76	278
Bear Valley Rd	Peach Ave	Industrial Blvd	76	275	76	286
Bear Valley Rd	Industrial Blvd	Hesperia Rd	76	257	76	293
Bellflower Rd	Palmdale Rd	Luna Rd	ND	N/a	72	156
Bellflower Rd	Luna Rd	La Mesa Rd	ND	N/a	73	162
Bellflower Rd	La Mesa Rd	Bear Valley Rd	ND	N/a	73	173
Bellflower Rd	Bear Valley Rd	Sycamore St	ND	N/a	74	189
D St	11th St	Hesperia Rd	74	213	75	234

D St	Hesperia Rd	7th St	74	202	74	202
D St	7th St	6th St	73	160	75	217
D St	6th St	Forrest Ave	72	155	74	208
D St	Forrest Ave	3rd St	72	156	74	210
D St	3rd St	2nd St	72	157	74	211
D St	Sherman Way	I-15 NB Ramps	74	189	74	213
Eagle Ranch Pkwy	Cantina Dr	Mesa Linda St	ND	N/a	65	48
Eagle Ranch Pkwy	Mesa Linda St	Redrock Rd	61	27	66	59
El Evado Rd	Air Base Rd	Rancho Rd	ND	N/a	73	174
El Evado Rd	Rancho Rd	Clovis St	ND	N/a	72	145
El Evado Rd	Clovis St	Hopland St	61	25	72	154
El Evado Rd	Hopland St	Tawney Ridge Ln	62	32	72	154
El Evado Rd	Tawney Ridge Ln	Mojave Dr	64	43	74	192
El Evado Rd	Mojave Dr	Hook Blvd	65	54	74	215
El Evado Rd	Hook Blvd	Seneca Rd	69	97	74	188
El Evado Rd	Seneca Rd	Begonia St	69	94	74	198
El Evado Rd	Begonia St	Palmdale Rd	70	107	74	207
El Evado Rd	Dos Palmas Rd	Luna Rd	68	79	73	166
El Evado Rd	Luna Rd	Manzano Rd	67	68	73	179
El Evado Rd	Manzano Rd	La Mesa Rd	67	6	73	179
El Evado Rd	La Mesa Rd	Northstar Ave	65	47	65	49
Eucalyptus St	Amargosa Rd	Amethyst Rd	ND	N/a	77	311
Eucalyptus St	Amethyst Rd	Cobalt Rd	ND	N/a	74	204
Eucalyptus St	Cobalt Rd	Topaz Rd	ND	N/a	74	207
Eucalyptus St	Topaz Rd	Mesa Linda St	ND	N/a	74	194
Eucalyptus St	Mesa Linda St	Cantina Dr	ND	N/a	73	175
Eucalyptus St	Cantina Dr	US-395	ND	N/a	73	163
Eucalyptus St	US-395	Pena Ave	ND	N/a	76	259
Eucalyptus St	Pena Ave	Mesa View Dr	ND	N/a	76	252
Eucalyptus St	Mesa View Dr	Bellflower St	ND	N/a	75	233

Future Major Arterials (continued)
Traffic Noise Impact Analysis
dB CNEL at 50 feet from centerline
Distance to 65 dB CNEL in Feet

Roadway	Segment		2005 CNEL	Distance to 65 dB	2030 CNEL	Distance to 65 dB
George Blvd	Phantom St	Nevada Ave	53	7	63	36
George Blvd	Nevada Ave	Air Expressway	60	22	68	79
Green Tree Blvd	7 th St	St Andrews Dr	72	144	74	214
Green Tree Blvd	St Andrews Dr	Burning Tree Dr	72	151	74	211
Green Tree Blvd	Burning Tree Dr	Yates Rd	72	145	75	218
Green Tree Blvd	Yates Rd	Rodeo Dr	70	110	73	162
Green Tree Blvd	Rodeo Dr	Hesperia Rd	69	91	73	181
Green Tree Blvd	Hesperia Rd	Industrial Blvd	ND	N/a	75	239
Green Tree Blvd	Industrial Blvd	Ridgecrest Dr	ND	N/a	75	251
Hesperia Rd	Verde St	Center St	70	113	72	150
Hesperia Rd	Center St	Seneca Rd	71	118	73	184
Hesperia Rd	Seneca Rd	Hughes Rd	72	142	75	244
Hesperia Rd	Ottawa St	Winona St	73	178	74	206
Hesperia Rd	Winona St	Nisqualli Rd	74	186	74	200
Nevada Ave	Phantom West St	George Blvd	ND	N/a	62	33
Rancho Rd	Ranch Rd	Gas Line Rd	ND	N/a	65	54
Rancho Rd	Gas Line Dr	Village Dr	ND	N/a	65	49
Rancho Rd	Village Rd	El Evado Rd	ND	N/a	67	72

**Future Super Arterials
Traffic Noise Impact Analysis
dB CNEL at 50 feet from centerline
Distance to 65 dB CNEL in Feet**

Roadway	Segment		2005 CNEL	Distance to 65 dB	2030 CNEL	Distance to 65 dB
Bear Valley Rd	Hesperia Rd	2 nd Ave	76	284	77	301
Bear Valley Rd	2 nd Ave	3 rd Ave	76	254	77	300
Bear Valley Rd	3 rd Ave	7 th Ave	75	243	77	304
Bear Valley Rd	7 th Ave	11 th Ave	75	247	77	296
Bear Valley Rd	11 th Ave	Balsam Rd	75	240	77	300
Bear Valley Rd	Balsam Rd	Locust Ave	75	238	77	323
Bear Valley Rd	Locust Ave	Cottonwood Ave	76	290	77	325
Bear Valley Rd	Mariposa Rd	I-15 NB Ramps	78	350	78	386
Bear Valley Rd	I-15 SB Ramps	Amargosa Rd	76	283	78	342
Bear Valley Rd	Amargosa Rd	Amethyst Rd	76	252	78	356
Bear Valley Rd	Topaz Rd	Eagle Ranch Pkwy	72	141	77	302
Bear Valley Rd	Eagle Ranch Pkwy	Cantina Dr	71	133	76	285
Bear Valley Rd	Cantina Dr	US-395	71	135	75	219
Bear Valley Rd	US-395	Mesa View Dr	68	78	76	266
Bear Valley Rd	Mesa View Dr	Bellflower St	64	43	76	259
Bear Valley Rd	Bellflower St	Monte Vista Rd	64	42	75	236
Bear Valley Rd	Monte Vista Rd	Baldy Mesa Rd	64	41	75	216
Bear Valley Rd	Baldy Mesa Rd	White Rd	59	21	75	227
Hesperia Rd	Hughes Rd	Green Tree Blvd	74	187	76	286
Hesperia Rd	Green Tree Blvd	Ottawa St	74	194	75	243
Hesperia Rd	Nisqualli Rd	Silica Rd	75	239	76	270
Hesperia Rd	Silica Rd	Jasmine St	75	231	74	192
Hesperia Rd	Jasmine St	Bear Valley Rd	73	180	74	191
La Paz Dr	I-15 NB Ramps	Valley Center Dr	74	195	75	241
Mojave Dr	La Paz Dr	I-15 NB Ramps	73	162	74	215
Mojave Dr	I-15 SB Ramps	Village Dr	74	187	76	293
Mojave Dr	Village Dr	Amargosa Rd	69	92	75	238
Mojave Dr	West Trail	Amethyst Rd	70	107	74	188
Mojave Dr	Amethyst Rd	Brucite Rd	70	100	73	183
Mojave Dr	Mesa Linda Ave	US-395	70	112	74	185
Palmdale Rd	Green Tree Blvd	Mariposa Rd	75	241	78	363
Palmdale Rd	I-15 SB Ramps	Amargosa Rd	76	288	78	375
Palmdale Rd	Amargosa Rd	Cahuenga Rd	74	208	77	311
Palmdale Rd	Cahuenga Rd	El Evado Rd	73	169	77	302
Palmdale Rd	El Evado Rd	Pacoima Rd	71	119	76	275
Palmdale Rd	Pacoima Rd	Amethyst Rd	73	179	76	256

Future Super Arterials (continued)
Traffic Noise Impact Analysis
dB CNEL at 50 feet from centerline
Distance to 65 dB CNEL in Feet

Roadway	Segment		2005 CNEL	Distance to 65 dB	2030 CNEL	Distance to 65 dB
Palmdale Rd	Amethyst Rd	Cobalt Rd	71	121	75	240
Palmdale Rd	Cobalt Rd	Topaz Rd	70	115	75	251
Palmdale Rd	Topaz Rd	Mesa Linda Ave	70	115	76	264
Palmdale Rd	Mesa Linda Ave	Cantina Dr	70	115	75	227
Palmdale Rd	Cantina Dr	US-395	72	142	74	201
Palmdale Rd	US-395	Pana Rd	71	127	75	233
Palmdale Rd	Pana Rd	Mesa View Dr	69	96	75	233
Palmdale Rd	Mesa View Dr	Bellflower St	69	94	75	223
Palmdale Rd	Bellflower St	Verbena Rd	68	86	74	211
Palmdale Rd	Verbena Rd	Monte Vista Rd	67	72	74	211
Palmdale Rd	Monte Vista Rd	Baldy Mesa Rd	69	99	74	190
Palmdale Rd	Baldy Mesa Rd	White Rd	68	74	75	249
Perimeter Rd	N/o Phantom St	Phantom East St	ND	N/a	74	187
Phantom East St	Shay Rd	Turner Rd	57	16	77	313
Phantom East St	Turner Rd	Air Expressway	59	21	77	334
Phantom West	George Blvd	Sabre Blvd	63	38	72	153
Phantom West	Sabre Blvd	Mustang St	63	38	72	152
Phantom West	Mustang St	Air Expressway	63	36	72	152
Roy Rodgers St	I-15 SB Ramps	Civic Dr	74	195	75	244
Roy Rodgers St	Civic Dr	Amargosa Rd	72	138	75	222
US-395	Cactus Rd	Mojave Dr	73	164	75	231
US-395	Mojave Dr	Hook Blvd	71	132	76	255
US-395	Hook Blvd	Seneca Rd	71	132	76	260
US-395	Seneca Rd	Palmdale Rd	73	181	74	204
US-395	Palmdale Rd	Dos Palmas Rd	72	141	76	281
US-395	Dos Palmas Rd	Luna Rd	72	138	76	264
US-395	Luna Rd	La Mesa Rd	71	134	76	281
US-395	La Mesa Rd	Olivine Rd	71	134	76	289
US-395	Olivine Rd	Bear Valley Rd	74	186	76	279
US-395	Bear Valley Rd	Sycamore St	72	145	77	302
US-395	Sycamore St	Eucalyptus St	72	147	76	270
US-395	Eucalyptus St	Mesa St	72	148	78	361
US-395	Mesa St	California Aqueduct	73	167	78	380