3.0 ENVIRONMENTAL IMPACT ANALYSIS

This section provides more detailed information on existing conditions relative to each environmental topic addressed in this section, programmatic-level impact analyses and conclusions, and mitigation measures. Existing conditions discussions define the environmental conditions that currently exist on and near the project site, while impacts are defined as the potential effects of implementing the existing Area Plan on the existing environment. Wherever a project impact is identified as being significant, mitigation measures are recommended that would reduce the level of impact. Technical topics addressed in this environmental impact report (EIR) section were defined by the County of Los Angeles during the scoping process and from comments received on the Notice of Preparation (see **Appendix 1.0** for copies of these documents and the comments received). The purpose of this section is to inform readers of the type and magnitude of the environmental impact and how such impacts would affect the existing environment.

The County's Area Plan EIR addresses the potential impacts of implementing the County's proposed Area Plan policies. Program EIRs do not necessarily address the site-specific impacts that each of the subsequent individual development projects will have. The California Environmental Quality Act (CEQA) requires each of those subsequent development projects to be evaluated for their particular site-specific impacts. Air quality, global climate change, and water services are analyzed on a regional basis for the OVOV Planning Area. Noise and transportation/circulation also have a more regional analysis. The remaining sections, other than cumulative impacts, focus on potential impacts within the County's OVOV Planning Area.

Each section also includes a "Plan to Plan" analysis comparing the existing Area Plan to the Proposed OVOV Plan. While not required by CEQA, it provides the public with a brief comparison of the two Plans, which has been a concern voiced by the public throughout the preparation of the Area Plan and the EIR.

Documents referred to, referenced or cited are incorporated by reference and are available for review at the County of Los Angeles, Department of Regional Planning, 320 West Temple Street, Los Angeles, California 90012.

3.1 LAND USE

EXECUTIVE SUMMARY

This section presents information on the existing and proposed land uses for the County's Planning Area and evaluates the consistency of the proposed Area Plan with applicable land use plans, policies, and regulations. Additionally, this section evaluates potential conflicts with an applicable habitat conservation plan or community conservation plans. The County's Planning Area consists of unincorporated land within the One Valley One Vision (OVOV) Planning Area boundaries. The City's Planning Area consists of its incorporated boundaries and adopted Sphere of Influence (SOI). Both the County and City Planning Areas comprise the OVOV Planning Area.

The proposed Area Plan incorporates policies that would ensure that buildout of the County's Planning Area does not physically divide an existing community. The proposed Area Plan would encourage the development of Transit Oriented Development (TOD) thereby promoting compact, walkable communities centered around high quality train and transit systems, thereby reducing residents' dependence on the automobile. The proposed Land Use Map would ensure that large acreages of open space are properly buffered from residential, commercial, and industrial land uses, but, would provide access to these areas for the community to enjoy. Potential impacts on land uses would be less than significant.

The Southern California Association of Governments (SCAG) is the regional planning authority for the Southern California Region. The proposed Area Plan and Land Use Map would be consistent with SCAG's Regional Transportation Plan Policies and Compass/Growth Visioning Principles, and ensure that habitat conservation plans and natural community conservation plans are not impacted within the County's Planning Area. The proposed Area Plan's policies protect and designate areas of natural environmental importance such as the Santa Clara River floodplain, local Significant Ecological Areas (SEA), and rivers, streams, and associated tributaries throughout the County's Planning Area as Open Space or Non-Urban Land Use designations. Therefore, the County's proposed Area Plan would not conflict with any applicable land use plans, policies, or regulations and impacts would be less than significant.

METHODOLOGY

Changes between existing land uses and proposed land uses were evaluated by comparing the existing and proposed Area Plan land use acreages and by comparing the existing and proposed Land Use Policy Maps. The policy consistency analysis evaluates regional plans and policies applicable to the proposed

Area Plan. At the regional level, the regulatory framework applicable to the County's proposed Area Plan includes the SCAG Regional Comprehensive Plan and Guide (RCPG) and SCAG's Regional Transportation Plan. At the local level, the regulatory framework includes the Los Angeles County Code; the Green Building Program (consisting of the Green Building, Low Impact Development, and Drought Tolerant Landscaping Ordinances), which directs the development of greener communities within unincorporated Los Angeles County; and, the Hillside Management Ordinance, which provides development standards for hillside areas within unincorporated Los Angeles County. Additionally, this section discusses whether or not the proposed Area Plan would divide an existing neighborhood, community, or other land uses, or result in secondary impacts on surrounding land uses.

EXISTING SETTING

Existing Land Uses

Existing land uses are described for the County's Planning Area as defined in the 1990 Santa Clarita Valley Area Plan. Existing land uses are shown on **Figure 3.1-1, Existing County Area Plan Land Use Policy Map. Figure 3.1-1** defines 21 land uses and six subdivisions. The majority of the land within the County's Planning Area has not been developed. Open space land is predominant in the County's Planning Area. Within the OVOV Planning Area, the proposed County Planning Area boundaries are the same boundaries as the existing County Planning Area boundaries.

Existing Land Use Categories

Residential

Residential land uses are those areas that primarily have housing. This category includes dwelling units developed at various densities and with varying housing types, including single-family detached, single-family attached (condominiums), multiple-family (apartments), mobile-home parks, and senior housing. Special residential uses include live-work units and group living facilities.

Single-family detached units are individual freestanding houses, usually surrounded by a yard. Multi-family attached units are townhouses, flats, or duplexes in which several residences are physically connected to each other, with some private space (yard or patio) devoted to each unit. Multiple-family housing contains more than one dwelling unit in a single structure, with residents sharing services such as laundry facilities and outdoor space. This type of housing ranges from duplexes (two units) to very large complexes containing hundreds of units. Senior housing refers to residential development specifically designed for persons of retirement age, with complimentary services and amenities. Mobile homes refer to occupancy by a single family or household and are a residential use.

LEGEND:

Total Acres: 277,907.5

- *N1 Non-Urban 1 (0.5 du/ac)*
- *N2 Non-Urban 2 (0.5 to 1.0 du/ac)*
- *U1 Urban 1 (1.1 to 3.3 du/ac)*
- *U2 Urban 2 (3.4 to 6.6 du/ac)*
- *U3 Urban 3 (6.7 to 15.0 du/ac)*
- *U4 Urban 4 (15.1 to 40.0 du/ac)*
- *C Commercial*
  RR Resort Recreational
- *M Industry*
- *P Public Service Facilities*
  AP Airport
- *O Open Space*
  O/BLM Open Space (Bureau of Land Management)
  O-P Open Space Parks
- *O-NF National Forest*
- *O-W Water Body*
- *HM Hillside Management*
- *W Floodway/Floodplain*
- *TC Transportation Corridor*
- *SP Specific Plan*
- *SEA Significant Ecological Area*

NOTES:

This policy map depicts generalized land use classifications, each of which is intended to describe the dominant use characteristics within the area covered. The location of planning boundaries is as accurate as can be portrayed at this scale. The information on this map represents an interpretation of the adopted Land Use Policy Map from the 1980 General Plan, including subsequent amendments. This interpretation reflects both mapped and written policies of the General Plan (including community and area plans). Updated information regarding public parks, school sites, freeways, rail/transit lines, and other ownership-specific boundaries have been incorporated into this map.

The actual use and intensity of development that may be allowed on private property within any given land classification is determined by a review of this policy map, other mapped and written policies of the General Plan, and the underlying zoning classification. For a professional evaluation of what uses may be allowed in a given land use classification, please contact the Land Development Coordinating Center of the Department of Regional Planning at (213) 974-6411.

Legend:

- OVOV Planning Area
- City of Santa Clarita Boundary
- City Sphere of Influence

12K 6K 0 12K

APPROXIMATE SCALE IN FEET

SOURCE: Los Angeles County Department of Regional Planning, Los Angeles County General Plan, Santa Clarita Valley Area Plan - May 2005

FIGURE **3.1-1**

Existing County Area Plan Land Use Policy Map

The following residential land classifications are included on the existing land use map: Non-Urban 1 (N1) (0.5 dwelling units per acre, or du/ac); Non-Urban 2 (N2) (0.5 to 1.0 du/ac); Urban 1 (U 1) (1.1 to 3.3 du/ac); Urban 2 (U 2) (3.4 to 6.6 du/ac); Urban 3 (U 3) 6.7 to 15.0 du/ac; and Urban 4 (U4) 15.1 to 40.0 du/ac.

Commercial

Commercial development includes retail and offices providing goods and services to the general public, and wholesale and service uses provided to businesses. Commercial uses also include food services, personal services, automobile services, entertainment and hospitality services, and regional commercial uses such as big-box retailers and auto malls. The following commercial land classifications are included on the existing land use map: Commercial (C); and Resort Recreational (RR).

As described in the existing County Area Plan, Community Commercial generally serves several adjoining neighborhoods. Supermarkets, drug stores, small clothing stores and gift shops, hardware stores, shoes stores, jewelry stores, specialty shops, ice cream parlors, candy stores, coffee shops, small restaurants, donut shops, branch banks, and small retail and supporting outlets found in large shopping centers typify what may be located within a community commercial center. Regional Commercial is also described in the existing County Area Plan as a center that would serve a market area of many square miles and a population of 150,000 to 250,000 persons. Included in this commercial land use type would be several major department stores and supporting clothing and service stores, an automobile center, hotel/motels, and other similar facilities. Finally, Resort Recreation is described as commercial facilities and light industrial uses, such as recreational vehicle storage and boat repair, oriented to the recreation activities or travelling needs of the public. These include public or private facilities such as Magic Mountain and Castaic Recreation Area.

Industry

This designation provides for light, medium, and heavy industrial uses with service commercial. Although the existing Land Use Policy Map does not distinguish intensity and type of industry, it implies that the industrial uses be clean, non-polluting, with no offensive odors, and that it is visually attractive. Emphasis is placed on developing designated sites to industrial park standards. The following industrial land classification is included: Industry (M).

Public Service Facilities

Public service facilities include land for existing elementary and high schools, proposed elementary and high schools, hospitals, fire and police stations, airports, and civic facilities. The following public service facilities land use classifications are included: Public Service Facilities (P) and Airport (AP).

Open Space

Open Space areas are considered to be lands under public or private ownership that are essentially free of structures and roads and maintained in an open or natural state. These areas are primarily managed for recreation purposes, the protection of natural resources, and/or for purposes of safeguarding public health and safety. In the existing Area Plan, open space land uses are separated into three major categories:

- **Public:** This designation is recommended to be under public ownership and includes parks, public golf courses, driving ranges, camps, picnic areas, boating areas, amusement parks, dune buggy parks, and those lands that remain undeveloped under the Flood Plain, SEA, and Hillside Management Policies.

- **Private:** Privately owned land designated primarily for recreation uses, such as golf courses, driving ranges, camps, picnic areas, boating areas, amusement parks, dune buggy parks, and those lands that remain undeveloped under the Flood Plain, SEA, and Hillside Management Policies.

- **Angeles and Los Padres National Forest:** These areas include private in-holdings within the forest boundaries that are designated for non-urban uses at a maximum density of 1 unit per 5 acres except within established residential communities where higher densities presently exist. Within these established residential communities, future development may occur at non-urban, and in some instances, low urban densities consistent with the existing character of the area. Commercial uses to support groups within the forest lands may be permitted. In all cases, development proposals are subject to applicable hillside management and flood protection performance standards and criteria. All proposed private and public development projects within the National Forest boundaries are reviewed by both the Regional Planning Commission and the U.S. Forestry Service for compliance with applicable land use and resource management plans.

The following Open Space land use classifications are included on the existing Land Use Policy Map: Open Space (O); Bureau of Land Management (O-BLM); Open Space Parks (O-P); National Forest (O-NF); and Water Body (O-W).

Special Management Areas

The existing Area Plan includes land use designations for Special Management Areas. Many environmental and man-imposed factors impact the ultimate use of land due to their unique

characteristics. Development without adherence to special precautions in areas where these factors exist could result in loss of or severe damage to, life and property, or seriously alter and degrade the natural environment. For these reasons, a series of special land use classifications have been identified on the existing Land Use Policy Map and special standards have been developed in these areas. Special Management Areas include Hillside Management (HM); Floodway/Floodplain (W); and SEA.

- **Non-Urban Hillside Areas:** Hillside Management Areas (HM) those areas classified as "Non-Urban" and where the slope of the land typically exceeds 25 percent. Within these areas, it is intended that future development will occur in the most suitable and least environmentally sensitive areas, and will be designed with a scale and intensity that is compatible with the natural resource values and character of that particular area. Additionally, approval of residential development proposals is based upon the ability to mitigate natural hazards and provide for compatible hillside design.

- **Floodplain Management Areas:** These areas include floodways and floodplains identified by the Department of Public Works or the U.S. Army Corps of Engineers. Within the floodway, or watercourse itself, only certain industrial (such as sand and gravel), agricultural, open space, light recreational and groundwater recharge uses can be facilitated. In surrounding floodplains, residential, commercial, or industrial uses can be developed providing appropriate flood protective measures are taken, subject to approval by the Department of Public Works. Such protective measures would require that the bottom elevation of the structure, or first floor, be at least 1 foot above the level of the design flood. Any development of design features that would increase the level of the design flood by more than 1 foot would be offset by approved stream improvements.

- **Significant Ecological Areas: Significant Ecological Areas** (SEAs) are ecologically important or fragile land and water areas that are valuable as plant or animal communities. SEAs have been designated for one or more of the following:

    - A habitat for rare and endangered species of plants and animals;

    - A restricted natural community, which is scarce on a regional basis;

    - A habitat of restricted distribution in the County;

    - A breeding or nesting ground, an unusual biotic community;

    - A site with critical wildlife and fish value, and/or;

    - A relatively undisturbed habitat.

Future additions and deletions to identified SEAs may be appropriate based on updated, more detailed biotic surveys. Within these land use designations, preservation techniques may include County land use regulations, density transfers, clustering, transfer of development rights, open space easements, deed restrictions, private land gifts and/or public acquisition. Specific protective mechanisms of an SEA are determined through a Conditional Use Permit process that requires individual site level analysis based

on the resource present. Specific biotic surveys are required for review by the County Significant Ecological Area Technical Advisory Committee (SEATAC) as part of the environmental review process.

Existing Land Uses within the County's Planning Area

Table 3.1-1, Existing Land Uses within the County's Planning Area, summarizes the approximate acreages of the land use categories discussed above. Approximately 7 percent of the land is developed (18,038 acres). Developed land includes all land use designations with the exception of Open Space/Vacant land use designations. Residential uses account for approximately 2.9 percent or 7,395 acres of the County's Planning Area total acreage. These residential areas are located in the communities of Castaic, Fair Oaks, and Agua Dulce and in small areas along the Interstate 5 corridor southwest of the Santa Clara River.[1] The following communities are located within the County Planning Area, and are further described in **Section 2.0, Project Description,** and the proposed Area Plan Land Use Element.[2] The following communities include:

- **Castaic:** An unincorporated community located southwest of Castaic Lake Recreational Area, Castaic provides new residential development surrounded by freeway-oriented commercial uses along Castaic/Parker and Lake Hughes Road. The community still provides important services and facilities to the trucking industry traveling north and south along Interstate 5, and there is a need to ensure that long-term parking and servicing of big rigs does not adversely impacts area residents.

- **Val Verde:** Located 3 miles west of Interstate 5, Val Verde is developed primarily with single-family homes in a rural setting, surrounded by chaparral-covered hillsides and scattered canyon oaks. The community is located near the intersection of San Martinez and Chiquita Canyon Roads in the hills north of State Route 126.

- **Agua Dulce:** Located in the Sierra Pelona Valley north of Canyon Country, Agua Dulce is in the northeast corner of the County Planning Area. The Antelope Valley Freeway (State Route 14) is located to the south, providing access to the community via Agua Dulce Canyon Road and Escondido Canyon Road.

- **West Ranch (Stevenson Ranch, Sunset Pointe, Westridge and Pico Canyon):** Stevenson Ranch is located west of Interstate 5 and north of Pico Canyon Road, and is a master-planned community developed in phases under a plan approved by Los Angeles County. Westridge is a residential community that includes elementary, junior high, and high school sites located adjacent to Stevenson Ranch. Sunset Pointe is a residential community located south of Stevenson Ranch and Pico Canyon is a rural residential area located west of The Old Road.

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1 Los Angeles County Department of Regional Planning, *Santa Clarita Valley Area Plan*, Land Use Element, (February 16, 1984).

2 Los Angeles County Department of Regional Planning, *Draft Santa Clarita Valley Area Plan*, Chapter 2, "Land Use Element," (2008), 80.

Commercial/office and industrial uses encompass approximately 0.26 percent (677 acres) and approximately 1.3 percent (3,421 acres) of the County's Planning Area total acreage, respectively. Commercial uses are located on the western side of Interstate 5, just south of the Santa Clara River, and south along the Interstate 5 corridor. Additionally, commercial uses are located on the western and eastern side of Interstate 5 near the community of Castaic. Industrial areas are located near the convergence of the Santa Clara River and Castaic Creek, and in small areas to the west of Interstate 5 corridor throughout the County's Planning Area.

Table 3.1-1
Existing Land Uses within the County's Planning Area

Land Use	County Planning Area (acres)	Percent of County Planning Area
Residential	**7,395**	**2.87**
Single-Family	2,915	
Multi-Family	203	
Mobile Homes and Trailer Parks	69	
Mixed Residential	0	
Rural Residential	4,208	
Commercial/Office	**677**	**0.26**
Retail and Commercial	313	
General Office	34	
Other Commercial	330	
Industrial	**3,421**	**1.33**
Industrial & Light Industrial	468	
Heavy Industrial	132	
Oil and Gas Extraction	2,719	
Wholesaling and Warehousing	102	
Public Services	**556**	**0.22**
Public Facilities	169	
Special Use Facilities	227	
Educational Institution	161	

Land Use	County Planning Area (acres)	Percent of County Planning Area
Transportation, Communication, and Utilities	**5,459**	**2.12**
Transportation	1,147	
Mixed Transportation	0	
Communication Facilities	5	
Utility Facilities	4,307	
Maintenance Yards	71	
Other Land Uses	**530**	**0.21**
Mixed Commercial and Industrial	0	
Under Construction	509	
Mixed Urban	0	
Military	21	
Open Space and Vacant	**239,980**	**93.01**
Agriculture	2,764	
Open Space and Recreation	4,221	
Vacant Undifferentiated (includes Angeles National Forest and State Park)	230,033	
Water and Water Storage	2,963	
Total	**258,018**	**100.00**

Source: City of Santa Clarita and County of Los Angeles, January 2009.

Approximately 2.1 percent or 5,459 acres of the County's Planning Area total acreage is represented by transportation, communication, and utility corridors.

Open Space/Vacant Lands account for approximately 93 percent of the County's Planning Area total acreage or 239,980 acres. Under the Open Space/Vacant Land designation, the sub-designation of open space and recreation uses account for approximately 1.6 percent (4,221 acres) and the sub-designation vacant undifferentiated lands represents approximately 90 percent (230,033 acres) of the County's Planning Area total acreage.

Specific Plans

A Specific Plan is a document, adopted by ordinance or by resolution, that provides policies, implementation measures, and detailed land use, site development, and infrastructure plans for a single

project or planned community. The California Government Code (Section 65450) permits the use of Specific Plans to regulate site development, including permitted uses, density, building size, building placement, the provision of open space, landscaping, roadway configuration, and utilities. Specific Plans are predominantly used in the development of multi-use planned communities. Since the development guidelines established in a Specific Plan focus on the unique needs and characteristics of a specific area, Specific Plans allow for greater flexibility than conventional zoning.

Portions of the County's Planning Area are included in Specific Plans that have already received land use approval. As shown in **Table 3.1-2, Approved Specific Plans**, three Specific Plans have been approved. The approved Specific Plans range in size from 308 acres to approximately 11,963 acres.[3]

Table 3.1-2
Approved Specific Plans

Specific Plan	Location	Acres	Units	Description
Fair Oaks Ranch	Between Sierra Highway and State Route 14, near Via Princessa	308	5,400	Plans for single and multi-family housing and not commercial uses.
Northlake	Two miles north of Castaic	1,780	3,623	Plans for single- and multi-family housing, open space, school sites, and a golf course.
Newhall Ranch	One mile west of Interstate 5, west to the Ventura County Line	11,963	20,885	Plans for four different villages with their own theme. Includes dwelling units, mixed-use development, open space, two special resource management areas, commercial uses, business park, visitor commercial uses, neighborhood parks, golf courses, lake, trails, fire station, library branch, school sites, water and sewer infrastructure

Note: sq. ft. = square feet.
Source: Los Angeles County Department of Regional Planning, 2008 Preliminary Draft Santa Clarita Valley Area Plan, Chapter 2 Land Use Element, (2008), pg. 30.

Fair Oaks Ranch

The Fair Oaks Ranch Specific Plan is a residential development located between Sierra Highway and State Route 14, near Via Princessa. The project includes 4,763 multi-family units and 637 single-family

3 Los Angeles County Department of Regional Planning, *2008 Preliminary Draft Santa Clarita Valley Area Plan*, Chapter 2, "Land Use Element," (2008), 30.

units on approximately 308 acres, and is nearly built out. The project is bisected by the Antelope Valley Freeway and contains no commercial uses. Therefore, there is an opportunity to create a service center for Fair Oaks Ranch in the vicinity of the project.

Northlake

The Northlake Specific Plan was approved for 3,623 residential units, both single-family and multi-family, on 1,330 acres located 2 miles north of Castaic. The plan also calls for 450 acres of open space, school sites, and a golf course; however, the project proponents have requested revisions to the proposed project amenities that are under review by Los Angeles County. When developed, this project would be considered a part of the Castaic Village community.[4]

Newhall Ranch

Los Angeles County adopted the Newhall Ranch Specific Plan on May 27, 2003. The planning area encompasses 11,963 acres and extends approximately 5 miles from east to west, and 5.5 miles from north to south, from about 1 mile west of Interstate 5 to the Ventura County Line, both north and south of State Route 126. The southerly portion of the site contains steep terrain and high plateaus of the Santa Susana Mountains; over 6,000 acres of the planning area would remain in open space, including two special resources management areas. The adopted plan would allow construction of 20,885 dwelling units, 629 acres of mixed-use development, 67 acres of commercial, 249 acres of business park, and 37 acres of visitor commercial uses. Neighborhood parks, a 15-acre lake, public trails, an 18-hole golf course, fire stations, a branch library, and school sites are also planned, along with water and sewer infrastructure. The Specific Plan states the project's intent is to provide a high-quality master-planned environment, which offers homes, shopping, employment, and recreational opportunities. Development of the project is expected to occur over a 25-year time frame.

A key design feature of the Newhall Ranch Specific Plan is its emphasis on the creation of interrelated villages, separated by significant open space areas and natural landforms. The plan avoids "leap-frog" development into the Santa Susana foothills and instead accommodates projected growth in areas adjacent to existing and planned infrastructure, urban services, transportation routes, and employment centers. Villages proposed by the Newhall Ranch Specific Plan include Landmark Village, Mission Village, Homestead Village, and Potrero Village.

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4 Los Angeles County Department of Regional Planning, *2008 Preliminary Draft Santa Clarita Valley Area Plan*, Chapter 2, "Land Use Element," (2008), 30.

Natural landmarks and topographical features define each village within the Specific Plan. According to the Specific Plan, dividing the large project into villages allows for the creation of convenient village centers and gives future residents optimal access to commercial, recreational, and public facilities. In addition, this design gives future residents access to nature by providing undeveloped open space accessible by trails from each village. Land uses were located to accommodate and preserve major natural landforms and significant environmental features, such as the river corridor, ridgelines, hillsides, creeks, bluffs, and oak woodlands. Each village and its central activity area would be allowed to develop a unique sense of identity, inspired by the natural feature of the site. The village concept was designed to provide residents with a greater sense of identity with their community. Through its design and planned development pattern, the Newhall Ranch Specific Plan reinforces the theme for the Santa Clarita Valley as a Valley of Villages.[5]

Future Specific Plans

Nothing in the proposed Area Plan is interpreted to preclude future review of any application for a Specific Plan. If and when a Specific Plan project is submitted for review and approval, the project would be evaluated based on its own merits and conformance with the applicable policies of the proposed Area Plan.

REGULATORY FRAMEWORK

Regional

SCAG Regional Comprehensive Plan and Guide[6]

The 2008 Regional Comprehensive Plan (RCP) is a guidance document prepared by the SCAG. Preparation of the RCP is mandated by SCAG's Regional Council pursuant to a directive in the agency's 2002 Strategic Plan to develop a holistic, strategic plan for defining and solving SCAG's interrelated housing, traffic, water, air quality, and other regional challenges. The RCP responds to the challenges facing Southern California, as identified in SCAG's annual State of the Region "report card." The RCP is a collaborative effort, incorporating extensive outreach and input from the RCP Task Force, SCAG's policy committees, subregions, local governments, and other key stakeholders.

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5 Los Angeles County Department of Regional Planning, 2008 Preliminary Draft Santa Clarita Valley Area Plan, Chapter 2 Land Use Element, (2008), pg. 30.

6 Southern California Association of Governments (SCAG), *2008 Regional Comprehensive Plan*, Executive Summary, 2–3.

The Compass Blueprint Growth Vision, produced by SCAG and supported by a regional consensus, is a response to the land use and transportation challenges facing Southern California today and in the future. The Compass Blueprint Growth Vision is driven by four key principles, including: mobility, livability, prosperity, and sustainability. While the RCP is based on the growth management framework of SCAG's Compass Blueprint Growth Vision, it further promotes environmental policies that help to "green" the Southern California region and recommends key roles and responsibilities for public and private sector stakeholders, inviting them to implement reasonable policies that are within their control.

RCP Relationship to Compass Blueprint and the Regional Transportation Plan

SCAG has prepared the 2008 Regional Transportation Plan (RTP), in addition to the RCP. The RTP is a federal- and state-mandated 20-year transportation plan that envisions the future multi-modal transportation system for the region. In compliance with state and federal requirements, SCAG prepares the Regional Transportation Improvement Program (RTIP) to implement projects and programs listed in the RTP. Updated every other year, the RTIP contains a capital listing of all transportation projects proposed for the region over a six-year period.

The integrated RCP complements both SCAG's Compass Blueprint Growth Vision and the RTP. For example, the RCP expands upon Federal requirements (contained in the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users, or SAFETEA-LU) to improve coordination of transportation plans and reinforce mitigation measures needed to address the RTP's environmental impacts. The RCP incorporates recommendations from the 2008 RTP and also clarifies the need for further action in the future to achieve the RCP's goals.

Local Agency Formation Commission

The mission of the Local Agency Formation Commission (LAFCO) of Los Angeles County is to encourage the orderly formation, reorganization, and development of local governmental agencies for the distribution of efficient and appropriate public services that are essential to the social, fiscal, and economic well-being of the state.

Local

Los Angeles County Santa Clarita Valley Area Plan

The Santa Clarita Valley Area Plan, in conjunction with the other chapters and elements of the Los Angeles County General Plan, is a coordinated statement of the County's public policy that provides the

Regional Planning Commission and Board of Supervisors with a framework for making critical public decisions relating to the Santa Clarita Valley and guides them in efforts to improve the quality of life in the Santa Clarita Valley.[7]

Los Angeles County Code

The Los Angeles County Code applies within the County's Planning Area and contains 32 sections (Titles), addressing a variety of issues ranging from consumer protection to public health. Title 22 of the County Code provides direction for proper development and ensures consistency with local zoning.

Hillside Management

To preserve the natural beauty of hillsides in the unincorporated County, areas where the slope is 25 percent or greater are subject to regulations and design guidelines that limit hillside development based on slope, soil, natural drainage channels and seismic and fire hazards. These regulations and design guidelines, including the Hillside Management Ordinance and its Conditional Use Permit (CUP) requirement, ensure that development occurs in a more sensitive manner, respectful of biological resources and the natural topography. Design guidelines for projects in Hillside Management Areas include the following:

- Minimize grading and removal of native vegetation.
- Preserve distinctive natural features and existing topographical forms.
- Preserve prominent skyline ride silhouettes; locate roads and structures below skyline ridges.
- Design circulation routes that incorporate existing contours; undulating road patterns, cul-de-sacs, split roadways, and varying grades.
- Incorporate hiking, bicycle, walking, and equestrian trails where appropriate; integrate trails and open space with existing networks.
- Vary lot sizes, setbacks, and building orientation and elevations to ensure views and avoid monotony.
- Preserve steep hillsides by clustering buildings and using other innovative site design approaches.
- Use flag lot design where essential to reduce grading.

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7 Los Angeles County Department of Regional Planning, *Santa Clarita Valley Area Plan*, Adopted by the Board of Supervisors February 16, 1984. Comprehensively Updated December 6, 1990, I Introduction.

- Preserve significant trees and habitats, natural watercourses, wildlife corridors, and distinctive natural features/
- Consider the project's appearance from higher, lower, or adjacent roads or development.
- Place water tanks and other unsightly forms below ridgelines and in a bermed and naturally landscaped area.

Green Building Program Ordinances (Title 12, Title 21)

On November 18, 2008, the Los Angeles County Board of Supervisors approved adoption of the Green Building Program (consisting of the Green Building, Low Impact Development, and Drought Tolerant Landscaping Ordinances) into the Los Angeles County Code. The Green Building Program establishes new development standards for projects constructed after January 1, 2009. The standards relate to energy conservation, outdoor and indoor water conservation, resource conservation, and tree planting. Compliance with the Green Building Program is achieved through adherence to County standards, or standards created by recognized third-party green building organizations. Green building practices are intended to conserve water, conserve energy, conserve natural resources, divert waste from landfills, minimize impacts to existing infrastructure, and promote a healthier environment.

THRESHOLDS OF SIGNIFICANCE

The following thresholds for determining the significance of impacts related to land use and planning are contained in the environmental checklist form contained in Appendix G of the most recent update of the *California Environmental Quality Act (CEQA) Guidelines*. Impacts on land use and planning are considered significant if the proposed Area Plan would:

- Physically divide an established community;
- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the General Plan, Specific Plan, Local Coastal Program, or Zoning Ordinance) adopted for the purpose of avoiding or mitigating an environmental effect; or
- Conflict with any applicable habitat conservation plan or natural community conservation plan.

IMPACT ANALYSIS

Impact 3.1-1 **Future development permitted by the proposed County Area Plan may physically divide an established community.**

Proposed and Existing Land Uses

As shown on **Figure 3.1-2, Proposed Land Use Policy Map**, land use designations such as Open Space (OS-PR, OS-C, and OS-W), National Forest (OS-NF), and Bureau of Land Management (OS-BLM) dominate the northwestern, northern, northeastern, and southeastern portions of the County's Planning Area. Land use designations such as Rural Land 1 (RL1), Rural Land 2 (RL2), Rural Land 5 (RL5), Rural Land 10 (RL10), and Rural Land 20 (RL20), are located in the western portion of the County's Planning Area, and typically just northwest and northeast of the City's adopted Sphere of Influence (SOI). These land use designations ensure a transition from the heavily urbanized areas of the County's Planning Area to the generally unpopulated rural areas. Land uses such as Residential 2 (H2), Residential 5 (H5), Residential 18 (H18) and Residential 30 (H30) are located to the west of Interstate 5, northwest of the City's adopted SOI, and in the communities of Castaic and Val Verde. The majority of land use designations—such as General Commercial (CG), Major Commercial (CM), Light Industrial (IL), Industrial Office (IO), and Community Serving (P-CS)—are located west of Interstate 5, northwest of the City of Santa Clarita boundaries and in small areas along Interstate 5 near the community of Castaic.

A description of the proposed land use designations is provided below:[8]

- **Rural Land 20 (RL20):** The Rural Land 20 designation identifies lands in the planning area that are distinguished by significant environmental features and extreme development constraints. Lands in this designation are largely undeveloped and consist of rolling hillside areas, steep slopes, and remote mountain lands with limited or no access.

  Allowable uses in this designation include single-family homes at a maximum density of 1 dwelling unit per 20 acres, agriculture, equestrian uses, private recreation, and public and institutional facilities serving the local area. Specific allowable uses and development standards shall be determined by the underlying zoning designation.

  Density-controlled development (clustering) is permitted in this designation in accordance with the provisions of the Zoning Ordinance, provided that all residential lots meet the minimum lot size

8 Los Angeles County Department of Regional Planning, *Revised Draft Santa Clarita Valley Area Plan*, Chapter 2, "Land Use," (2010).

requirements of a Community Standards District, where applicable. Individual homes and other structures should be designed in consideration of topographic and environmental constraints.

- **Rural Land 10 (RL10):** The Rural Land 10 designation identifies lands in the planning area that include environmental features and are not appropriate for intense development requiring urban services. Lands in this category are largely undeveloped and consist of rolling hillside areas, slopes, and mountain lands with limited access.

  Allowable uses in this designation include single-family homes at a maximum density of 1 dwelling unit per 10 acres, agriculture, equestrian uses, private recreation, and public and institutional facilities serving the local area. Specific allowable uses and development standards shall be determined by the underlying zoning designation.

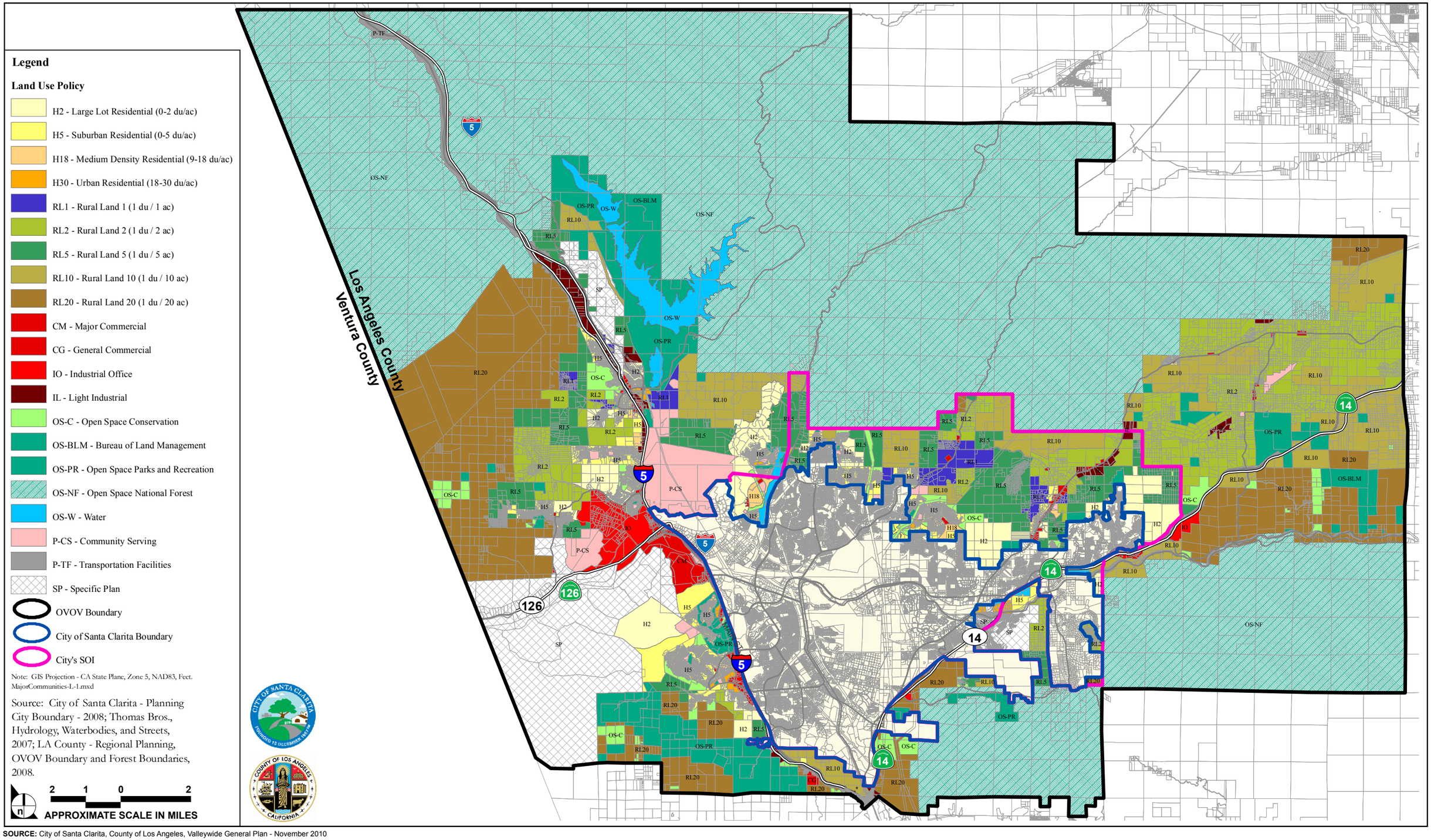
  Density-controlled development (clustering) is permitted in this designation in accordance with the provisions of the Zoning Ordinance, provided that all residential lots meet the minimum lot size requirements of a Community Standards District, where applicable. Individual homes and other structures should be designed in consideration of topographic and environmental constraints.

- **Rural Land 5 (RL5):** The Rural Land 5 designation identifies lands in the planning area that include environmental features and are not appropriate for intense development requiring urban services. Lands in this category are largely undeveloped and consist of rolling hillside areas with limited access.

  Allowable uses in this designation include single-family homes at a maximum density of 1 dwelling unit per 5 acres, agriculture, equestrian uses, private recreation, and public and institutional facilities serving the local area. Specific allowable uses and development standards shall be determined by the underlying zoning designation.

  Density-controlled development (clustering) is permitted in this designation in accordance with the provisions of the Zoning Ordinance, provided that all residential lots meet the minimum lot size requirements of a Community Standards District, where applicable. Individual homes and other structures should be designed in consideration of topographic and environmental constraints.

- **Rural Land 2 (RL2):** The Rural Land 2 designation provides for the maintenance and expansion of rural communities in the planning area that are distinguished by large lot sizes (generally 2 acres or greater), agricultural and equestrian uses, and an absence of urban services.



SOURCE: City of Santa Clarita, County of Los Angeles, Valleywide General Plan - November 2010

FIGURE **3.1-2**

Proposed Land Use Policy Map

M:\GIS_Data\112-023_One_Valley_One_Vision\MXD\Planning\3.1-2_Proposed_Area_Plan_LandUse_Policy_Map.mxd

Allowable uses in this designation include single-family homes at a maximum density of 1 dwelling unit per 2 acres, agriculture, equestrian uses, private recreation, and public and institutional facilities serving the local area. Specific allowable uses and development standards shall be determined by the underlying zoning designation.

Supportive commercial uses serving the local area, such as grocery stores, restaurants, personal services, and retail sale of specialty goods for rural residents, such as feed and tack stores, may be allowed in "activity areas" within this designation without a Plan Amendment, but may require a zone change and/or other approvals. Such "activity centers" must be at least 1 mile from any commercial land use designation and must not exceed 5 acres in size.

Density-controlled development (clustering) is permitted in this designation in accordance with the provisions of the Zoning Ordinance, provided that all residential lots meet the minimum lot size requirements of a Community Standards District, where applicable. Individual homes and other structures should be designed in consideration of topographic and environmental constraints.

- **Rural Land 1 (RL1):** The Rural Land 1 designation provides for the maintenance and expansion of rural communities in the County Planning Area that are distinguished by large lot sizes (generally 1 acre or greater), agricultural and equestrian uses, and the absence of urban service.

  Allowable uses in this designation include single-family homes at a maximum density of 1 dwelling unit per 1 acre, agriculture, equestrian uses, private recreation, and public and institutional facilities serving the local area. Specific allowable uses and development standards shall be determined by the underlying zoning designation.

  Supportive commercial uses serving the local area, such as grocery stores, restaurants, personal services, and retail sale of specialty goods for rural residents, such as feed and tack stores, may be allowed in "activity areas" within this designation without a Plan Amendment, but may require a zone change and/or other approvals. Such "activity centers" must be at least 1 mile from any commercial land use designation and must not exceed 5 acres in size.

  Density-controlled development (clustering) is permitted in this designation in accordance with the provisions of the Zoning Ordinance, provided that all residential lots meet the minimum lot size requirements of a Community Standards District, where applicable. Individual homes and other structures should be designed in consideration of topographic and environmental constraints.

- **Residential 2 (H2):** The Residential 2 designation provides for residential neighborhoods at densities that require urban services. Many of these neighborhoods provide a transition between higher-

density urban development and rural communities throughout the planning area, and designation of this district is appropriate in such rural/urban interface areas.

Allowable uses in this designation include single-family homes and other residential uses at a maximum density of two dwelling units per 1 acre. Specific allowable uses and development standards shall be determined by the underlying zoning designation.

Supportive commercial and institutional uses serving the local area, such as stores, restaurants, personal services, limited medical services, and retail sale of specialty goods for neighborhood residents, may be allowed in a proposed development project within this designation without a Plan Amendment, but may require a zone change and/or other approvals.

Density-controlled development (clustering), in accordance with the provisions of the Zoning Ordinance, is encouraged on lands with significant environmental and/or topographical features or resources, in order to preserve open space for protection of these natural features or resources, to provide recreational amenities, or to act as a buffer to surrounding rural communities, provided that all residential lots meet the minimum lot size requirements of a Community Standards District, where applicable.

- **Residential 5 (H5):** The Residential 5 designation provides for residential neighborhoods that typify much of the planning area. Allowable uses in this designation include single-family homes and other residential uses at a maximum density of 5 dwelling units per 1 acre. Specific allowable uses and development standards shall be determined by the underlying zoning designation.

  Supportive commercial and institutional uses serving the local area, such as stores, restaurants, personal services, limited medical services, and retail sale of specialty goods for neighborhood residents, may be allowed in a proposed development project within this designation without a Plan Amendment, but may require a zone change and/or other approvals.

  Density-controlled development (clustering), in accordance with the provisions of the Zoning Ordinance, is encouraged on lands with significant environmental and/or topographical features or resources, in order to preserve open space for protection of these natural features or resources, or to provide recreational amenities, provided that all residential lots meet the minimum lot size requirements of a Community Standards District, where applicable.

  The Residential 5 designation has been applied to residential areas that existed prior to the effective date of the Area Plan and are surrounded by Rural Land designations, in order to recognize these existing areas as conforming to the Area Plan. However, the Residential 5 designation in these areas should not be interpreted as setting a precedent for expanding urban development into adjacent

Rural Land designations, because these areas are not served with adequate levels of urban infrastructure to accommodate greater densities or intensities of use. These areas are described below and shown on Figure L-2 of the Area Plan.

- Sleepy Valley, a small community in the northeastern portion of the planning area adjacent to the Angeles National Forest, generally located along Sierra Highway between Oak Street and Steele Avenue;

- Val Verde, a small community in the western portion of the planning area adjacent to Newhall Ranch and the Valencia Commerce Center, generally located along San Martinez Road and Chiquito Canyon Road; and,

- Tract 25965, a small subdivision in the southern portion of the planning area adjacent to the Angeles National Forest, generally located at the intersection of Placerita Canyon Road and Running Horse Road.

- **Residential 18 (H18):** The Residential 18 designation provides for mixed residential neighborhoods of detached and attached dwellings. Allowable uses in this designation include detached and attached single-family homes, duplexes, multiple family dwellings, and other residential uses at a maximum density of 18 dwelling units per 1 acre. Specific allowable uses and development standards shall be determined by the underlying zoning designation.

  Supportive commercial and institutional uses serving the local area, such as stores, restaurants, personal services, limited medical services, and retail sale of specialty goods for neighborhood residents, may be allowed in a proposed development project within this designation without a Plan Amendment, but may require a zone change and/or other approvals. Live-work units may also be allowed, subject to the requirements of the underlying zoning designation.

- **Residential 30 (H30):** The Residential 30 designation provides for medium to high density apartment and condominium complexes in areas easily accessible to transportation, employment, retail, and other urban services. Allowable uses in this designation include multiple family dwellings at a minimum density of 18 dwelling units per 1 acre and a maximum density of 30 dwelling units per 1 acre. Specific allowable uses and development standards shall be determined by the underlying zoning designation.

  Supportive commercial and institutional uses serving the local area, such as stores, restaurants, personal services, limited medical services, and retail sale of specialty goods for neighborhood residents, may be allowed in a proposed development project within this designation without a Plan Amendment, but may require a zone change and/or other approvals. Live-work units may also be allowed, subject to the requirements of the underlying zoning designation.

- **Major Commercial (CM):** The Major Commercial designation identifies major commercial districts in the planning area and is intended to promote the development of regional focal points for

commercial, entertainment, and cultural uses serving the general public and drawing from a large market area. Allowable uses in this designation include regional shopping centers; retail sale of automobiles and recreational vehicles, furniture, and home improvement goods; theatres and other large-scale entertainment uses; corporate offices and financial institutions; day care centers; and hotels, restaurants, and other hospitality services. Allowable uses shall have a maximum Floor Area Ratio (FAR) of 2.0. Specific allowable uses and development standards shall be determined by the underlying zoning designation.

Multiple family dwellings (including live-work units) may be permitted in this designation, subject to the requirements of the underlying zoning designation, provided that the approval of multiple family dwellings in this designation does not adversely impact job creation or economic development in the planning area. Multiple family dwellings shall have a minimum density of 18 dwelling units per 1 acre and a maximum density of 50 dwelling units per 1 acre.

Mixed use developments, incorporating multiple family dwellings (including live-work units) and commercial uses, may also be permitted in this designation, subject to the requirements of the underlying zoning designation. Multiple family dwellings in mixed use developments shall have a minimum density of 18 dwelling units per 1 acre and a maximum density of 50 dwelling units per 1 acre, and commercial uses in mixed use developments shall have a maximum Floor Area Ratio (FAR) of 2.0.

- **General Commercial (CG):** The General Commercial designation provides for small neighborhood commercial districts that serve the short-term needs of residents in the immediate area. Allowable uses in this designation include supermarkets; drug stores; restaurants; personal services; repair services; light automotive services; day care centers; and other shops and services for neighborhood residents. Allowable uses shall have a maximum Floor Area Ratio (FAR) of 1.0. Specific allowable uses and development standards shall be determined by the underlying zoning designation.

  Multiple family dwellings (including live-work units) may be permitted in this designation, subject to the requirements of the underlying zoning designation, provided that the approval of multiple family dwellings in this designation does not adversely impact job creation or economic development in the planning area. Multiple family dwellings shall have a minimum density of 6 dwelling units per 1 acre and a maximum density of 18 dwelling units per 1 acre.

  Mixed use developments, incorporating multiple family dwellings (including live-work units) and commercial uses, may also be permitted in this designation, subject to the requirements of the underlying zoning designation. Multiple family dwellings in mixed use developments shall have a minimum density of 6 dwelling units per 1 acre and a maximum density of 18 dwelling units per 1

acre, and commercial uses in mixed use developments shall have a maximum Floor Area Ratio (FAR) of 1.0.

- **Industrial Office (IO):** The Industrial Office designation provides for mixed employment districts in areas accessible to transportation and visible from freeways and major arterials and is intended to promote the development of master-planned environments with a high quality of design and construction. Allowable uses in this designation include offices; medical services; research and development; light assembly and fabrication; warehousing and distribution; and supportive commercial uses. Allowable uses shall have a maximum Floor Area Ratio (FAR) of 2.0. Specific allowable uses and development standards shall be determined by the underlying zoning designation.

- **Light Industrial (IL):** The Light Industrial designation provides for industrial districts in areas with adequate access, infrastructure, and services and is intended to accommodate the most intensive types of industrial uses allowed in the planning area. Allowable uses in this designation include storage and distribution of goods; vehicle storage; contractor's storage facilities; batch plants; heavy equipment repair and sales; wholesale sales; heavy vehicle repair; and supportive commercial uses. Allowable uses shall have a maximum Floor Area Ratio (FAR) of 1.0. Specific allowable uses and development standards shall be determined by the underlying zoning designation.

- **Parks and Recreation (OS-PR):** The Parks and Recreation designation identifies open space lands in the planning area that are used for public and private parks and golf courses. Specific allowable uses, maximum intensity standards, and development standards shall be determined by the underlying zoning designation.

- **Conservation (OS-C):** The Conservation designation identifies open space lands in the planning area that are preserved as open space or used for passive recreation. Allowable uses in this designation include conservancy lands; nature preserves; wildlife habitats; limited agriculture; drainage or slope easements; and utility right-of-ways. Specific allowable uses, maximum intensity standards, and development standards shall be determined by the underlying zoning designation.

- **Water (OS-W):** The Water designation identifies open space lands in the planning area that are water courses, including lakes, rivers, and creeks.

- **National Forest (OS-NF):** The National Forest designation identifies lands in the planning area within the Angeles and Los Padres National Forests. For lands owned by the United States Forest Service, specific allowable uses, maximum intensity standards, and development standards shall be determined by the underlying zoning designation.

  For privately owned lands within the National Forest (in-holdings), allowable uses in this designation include single-family homes at a maximum density of 1 dwelling unit per 5 acres, agriculture, equestrian uses, private recreation, and public and institutional facilities serving the local area. Specific allowable uses and development standards are determined by the underlying zoning designation. Density-controlled development (clustering) is permitted in this designation in

accordance with the provisions of the Zoning Ordinance, provided that all residential lots meet the minimum lot size requirements of a Community Standards District, where applicable. Individual homes and other structures should be designed in consideration of topographic and environmental constraints.

- **Bureau of Land Management (OS-BLM):** The Bureau of Land Management designation includes lands in the planning area owned by the United States Bureau of Land Management. Specific allowable uses, maximum intensity standards, and development standards shall be determined by the underlying zoning designation.

- **Specific Plan (SP):** The Specific Plan designation identifies lands in the planning area governed by an adopted Specific Plan. Specific allowable uses, maximum intensity standards, and development standards shall be determined by the adopted Specific Plan.

- **Community Serving (P-CS):** The Community Serving designation identifies lands in the planning area that are used for various types of public and community serving facilities owned and operated by public agencies, special districts, non-profit organizations, and other entities. Allowable uses include civic and governmental offices; public works yards; public or private schools; libraries; day care centers; hospitals and supporting medical facilities; museums; fire stations; police stations; landfills; prisons; and airports. Allowable uses shall have a maximum Floor Area Ratio (FAR) of 0.5. Specific allowable uses, maximum intensity standards, and development standards shall be determined by the underlying zoning designation.

- **Transportation Facilities (P-TF):** The Transportation Facilities designation identifies major transportation facilities in the planning area, including freeways and railroad lines.

Table 3.1-3, Proposed Area Plan Land Use Designations and Acres, shows the acreage of land uses that the proposed Area Plan land use policy map would designate within the County's Planning Area.

Table 3.1-4, Compared Existing and Proposed Land Use Designations, summarizes the approximate changes in acreage between existing and proposed land use categories for Rural Land, Urban Residential, Commercial, Industrial, Community Serving, Transportation Facilities, Other Land Uses, Open Space, and Specific Plan land uses. Rural Land use designations would decrease by 8,913 acres. Urban Residential land uses would increase by 7,607 acres. Commercial and Industrial land uses would increase by 628 and 1,740 acres respectively. Public and Community Service land uses would increase by 160 acres. Transportation Corridor land uses would increase by 171 acres. Open Space would increase by 3,579 acres, and Specific Plan land uses would increase by 58 acres.

Table 3.1-3
Proposed Area Plan Land Use Designations and Acres

Land Use Designation	County's Planning Area Acreage[1]	County's Planning Area Percent
Rural Land 20 (RL20)	25,631.01	9.25
Rural Land 10 (RL10)	13,849.61	5.00
Rural Land 5 (RL5)	10,359.28	3.74
Rural Land 2 (RL2)	16,214.18	5.85
Rural Land 1 (RL1)	1,871.95	0.68
Residential 2 (H2)	6,617.80	2.39
Residential 5 (H5)	6,239.96	2.25
Residential 18 (H18)	674.56	0.24
Residential 30 (H30)	345.25	0.12
Major Commercial (CM)	1,140.57	0.41
General Commercial (CG)	540.63	0.20
Industrial Office (IO)	1,900.42	0.69
Light Industrial (IL)	1,250.86	0.45
Parks and Recreation (OS-PR), Conservation (OS-C), and Water (OS-W)	15,596.32	5.63
National Forest (OS-NF)	149,747.35	54.07
Bureau of Land Management (OS-BLM)	3,427.19	1.24
Specific Plan (SP)	14,341	5.18
Community Serving (P-CS)	3,853.11	1.40
Transportation Facilities (P-TF)	3,355.66	1.21
Total	**276,956.71**	**100.00**

Source: Project Description, Table 2.0-2.
Notes: [1] The County acres include the unincorporated County land and the City SOI within the OVOV Planning Area. Approximately 18,901.48 acres of land comprise the City's SOI.

Table 3.1-4
Compared Existing and Proposed Land Use Designations

Land Use Categories	Existing Area Plan Land Use Categories	Existing County Land Use Acres	Proposed Area Plan Land Use Categories	Proposed County Land Use Acres[1]	Change in Acres (existing to proposed)
Rural Land	Sum of acreages in N1, N2, and HM designations	76,839	Sum of acreages in RL1, RL2, RL5, RL10, and RL20 designations	68,11467,926	-8,913
Urban Residential	Sum of acreages in U1, U2, U3, and U4 designations	6,271	Sum of acreages in H2, H5, H18, and H30 designations	13,878	7,607
Commercial	Sum of acreages in C and RR designations	1,053	Sum of acreages in CG and CM designations.	1,681	628
Industrial	Acreage in M designation	1,411	Sum of acreages in IL and IO designations	3,151	1,740
Public and Community Service	Sum of acres in P and AP designations	3,693	Acreage in P-CS designation	3,853	160
Transportation Corridor	Acreage in TC designations	3,185	Acreage in P-TF designation	3,356	171
Other Land Uses	Acreage in W designations	5,029	N/A	0	-5,029
Open Space	Sum of acreages in all OS designations	165,192	Sum of acreages in all OS designations	168,771	3,579
Specific Plan	Acreage in SP designations	14,283	Acreage in SP designation.	14,341	58

Source: Existing Area Plan Figures -- County of Los Angeles Department of Regional Planning, March 2009. Proposed Area Plan Figures – Project Description, Table 2.0-2.
Notes: [1] The County Acres include the unincorporated County land and the City SOI within the OVOV Planning Area. Approximately 18,901.48 acres of land comprise the City's SOI.

Figure 3.1-3, Land Use Change Map for the Planning Area, shows the proposed changes in residential and commercial/industrial land uses from existing and proposed land uses. A down zone is an area where the proposed OVOV residential designation is less dense than the current Area Plan and an upzone is an area where the proposed designation is denser than the current Area Plan. The proposed Area Plan would allow a balance of land uses in appropriate amounts to meet future community needs, while ensuring that no land use designation is over-represented in a manner that is not economically

viable (**Policy LU 2.1.1**). The proposed Area Plan would adopt a compatible set of land use designations between the County and City for land in the Santa Clarita Valley, to be implemented through standards and zones applied by each agency to ensure compatibility with the character of each area and with the goals of the County's Area Plan **(Policy LU 2.1.4**). In addition, the proposed Area Plan has identified areas with hazardous conditions to ensure that uses in or adjacent to these areas pose minimal risk to public health or safety (**Policy LU 2.1.5**).

The most significant change in the proposed Land Use Policy Map includes the decrease in Rural Residential Land Uses (a decrease of 8,913 acres from the existing land use map). Within the Rural Residential Land Uses areas there are areas designated as Non-Urban Hill Side Areas (HM) by the existing Land Use Policy Map. This land would be converted to primarily RL land use designations under the proposed land use policy map. For the most part, the RL designation of the proposed Land Use Policy Map will be equally as dense as or less dense than the existing HM designation. The proposed Area Plan and Land Use Policy Map would ensure that special resources such as open space, SEAs, and culturally significant areas are compatible with adjoining land uses.

Existing Communities and Approved Specific Plans

The proposed Area Plan is designed to protect existing communities and provide direction for the development and revitalization of different communities located within the County's Planning Area. The proposed Area Plan contains policies directed at specific communities and approved Specific Plans: Pico Canyon (**Policy LU 1.2.10**), and Fair Oaks (**Policy LU 1.2.12**). The Pico Canyon area extends into both County and City areas and includes the Santa Clarita Woodlands State Park, Towsley Canyon State Park, Ed Davis Park, and the historic oil town of Mentryville.

The proposed Area Plan would allow the use of Specific Plan process to plan for cohesive, vibrant, pedestrian-oriented communities with access to public transit, and opportunities for living and working with the same community (**Policy LU 1.2.13**). Implementation of these policies would ensure that the Area Plan creates residential and urbanized areas in an orderly fashion, while providing for the protection of Open Space lands within the County's Planning Area.

Community Character

The proposed Area Plan will provide policies that preserve community character, ensuring that the future development of infill and redevelopment projects in currently developed areas will be consistent with community character objectives and promote economic opportunity for all segments of the community (**Policies LU 4.1.4, 4.1.5,** and **9.1.4**). The proposed Area Plan will promote the inclusion of

green spaces, neighborhood parks, and other gathering places that allow neighbors to meet one another and encourage "eyes on the street" for safety purposes (**Policy LU 3.4.1**); will ensure provision of street trees in urban residential areas where appropriate, to provide shade, comfort, and aesthetic enhancement (**Policy LU 3.4.2**); will provide appropriate levels of code enforcement to ensure maintenance of neighborhoods in a clean, healthy, and safe condition (**Policy LU 3.4.3**); within higher density housing developments, will ensure provision of adequate recreational and open space amenities to ensure a higher quality of living (**Policy LU 3.4.4**); will ensure compatibility between single-family and multiple-family residential development though consideration of building height and massing, architectural treatment, connectivity, privacy, and other design considerations (**Policy LU 3.4.5**); will promote mixed-density residential neighborhoods that are consistent with community character, avoiding over-development of high-density multiple-family units in any particular location **(Policy LU 3.4.6**), and will help prevent crime within multiple family residential projects (**Policy LU 3.3.8**). The proposed Area Plan encourages the development of a range of childcare services and facilities to serve the needs of working families (**Policy LU 4.1.6**). The proposed Area Plan will also minimize the prominence of areas devoted to automobile parking and access in the design of residential neighborhoods (**Policy LU 3.4.7**); and will require architectural design treatment along all sides of new housing to promote continuity of architectural scale and rhythm, avoiding the appearance of blank walls (360 degree enhancement) (**Policy LU 3.4.8**).

Other policies focusing on maintaining and developing community character include planting of street trees throughout urban areas in the County's Planning Area (**Policy LU 6.3.1**); encouraging street cross-sections that locate landscaped parkways between the curb and the sidewalk to create a visually pleasing landscape and provide pedestrian protection (**Policy LU 3.4.9**); developing compatible landscape plans for major arterials including landscaped medians and parkways (**Policy LU 6.3.2**); enhancing major entrance points, including on and off ramps from Interstate 5 and State Route 14 as well as entrances along State Route 126 and Sierra Highway (**Policy LU 6.3.3**); undergrounding of utility lines for new development where feasible, and plan for undergrounding of existing utility lines in conjunction with street improvement projects (**Policy LU 6.3.4**); and restricting the establishment of billboards (**Policy LU 6.3.5**).

Legend

Land Use Policy

- OVOV Boundary
- City of Santa Clarita Boundary
- City's SOI
- H2 - Large Lot Residential (0-2 du/ac)
- H5 - Suburban Residential (0-5 du/ac)
- H18 - Medium Density Residential (9-18 du/ac)
- H30 - Urban Residential (18-30 du/ac)
- RL1 - Rural Land 1 (1 du / 1 ac)
- RL2 - Rural Land 2 (1 du / 2 ac)
- RL5 - Rural Land 5 (1 du / 5 ac)
- RL10 - Rural Land 10 (1 du / 10 ac)
- RL20 - Rural Land 20 (1 du / 20 ac)
- CM - Major Commercial
- CN - Neighborhood Commercial
- IO - Office and Professional
- IL - Light Industrial
- OS-C - Open Space Conservation
- OS-BLM - Bureau of Land Management
- OS-PR - Open Space Parks and Recreation
- OS-NF - Open Space National Forest
- OS-W - Water
- P - Public and Community Serving
- TC - Transportation Corridor
- SP - Specific Plan

2 1 0 2

APPROXIMATE SCALE IN MILES

County Land Use Changes (August 2009)	Acres
Airport to Residential	22.49
Commercial to Industrial	64.6
Commercial to Open Space	6.46
Commercial to Public Facility	0.65
Commercial to Residential	161.41
Commercial to TC	39.51
HM to Commercial	210.228
HM to Industrial	1049.78
HM to Open Space	6187.02
HM to Public Facility	681.29
HM to Residential	7396.11
HM to SP	39.83
HM to TC	35.40
Industry to Commercial	146.9
Industry to Open Space	1.26
Industry to Public Facility	165.24
Industry to Residential	55.04
Industry to SP	16.36
Industry to TC	64.01
Residential to Commercial	273.97
Residential to Industrial	350.64
Residential to Open Space	686.91
Residential to Public Facility	206.87
Residential to SP	2.09
Residential to TC	69.96
Open Space to Commercial	15.45
Open Space to Industrial	0.94
Open Space to Public Facility	75.36
Open Space to Residential	356
Open Space to SP	0.48
Open Space to TC	12.45
P to Industrial	5.1
P to Open Space	7.55
P to Residential	192.97
P to SP	0.02
P to TC	0.01
SP to Commercial	1.12
SP to Industrial	0.15
SP to Open Space	0.02
SP to Public Facility	0.26
SP to Residential	2.31
SP to TC	1.37
TC to Commercial	2.46
TC to Industrial	16.51
TC to Open Space	39.16
TC to Public Facility	0.01
TC to Residential	30.6
TC to SP	4.27
Water to Commercial	#REF!
Water to Industrial	#REF!
Water to Public Facility	48.36
Water to Residential	2683.01
Water to SP	0.58
Water to TC	40.09

SOURCE: City of Santa Clarita, County of Los Angeles, Valleywide General Plan - August 2009; County of Los Angeles - August 2009

FIGURE **3.1-3**

Land Use Change Map for the Planning Aea

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To further encourage maintenance of neighborhoods, the use of high quality, durable, and natural-appearing building materials will be required (**Policy LU 6.5.1**). Designs and architectural styles that incorporate classic and timeless architectural features (**Policy LU 6.5.2**) will be encouraged as will architectural enhancement and articulation on all sides of buildings (360 degree architecture), with special consideration at building entrances and corners, and along facades adjacent to major arterial streets (**Policy LU 6.5.3**). New development will be evaluated in consideration of its context, to ensure that buildings create a coherent living environment, a cohesive urban fabric, and contribute to a sense of place consistent with the surrounding neighborhoods (**Policy LU 6.5.4**).

The proposed Area Plan would guide where and in what manner future development would occur. Growth in the County's Planning Area shall account for the visions and objectives for each community. Because the proposed Area Plan and existing Specific Plans provide policies reflective of the unique intentions for the quality and character of the distinct communities, implementation of the proposed Area Plan would not physically divide any established community. No significant impact to an established community would occur.

Proposed Area Plan Policies

Policy LU 1.2.11: In Pico Canyon, recognize the historic significance of Mentryville in future planning; preserve the existing rural development pattern; and ensure compatibility of new development with the adjacent Significant Ecological Area and habitat.

Policy LU 1.2.12: In the Fair Oaks community, facilitate location of commercial and community services in proximity to residences to serve local needs.

Policy LU 1.2.13: Encourage use of the Specific Plan process to plan for cohesive, vibrant, pedestrian-oriented communities with mixed uses, access to public transit, and opportunities for living and working within the same community.

Policy LU 2.1.1: On the Land Use Map, designate a balance of land uses in appropriate amounts to meet future community needs while ensuring that no use designation is over-represented in a manner that is not economically viable.

Policy LU 2.1.3: Provide a range of land use types and densities to reflect the special characteristics, lifestyles, and opportunities that differentiate various

communities and villages in the Santa Clarita Valley, including urban, suburban, and rural living environments.

Policy LU 2.1.4: Adopt a compatible set of land use designations between the County and City of Santa Clarita for land in the Santa Clarita Valley, to be implemented through standards and zones applied by each agency to ensure compatibility with the character of each area and with the goals of the County's Area Plan and the City's General Plan.

Policy LU 2.1.5: Identify areas with hazardous conditions and ensure that uses in or adjacent to these areas pose minimal risk to public health or safety.

Policy LU 3.3.3: Identify neighborhoods in which uses that pose a potential hazard to human health and safety may be over-concentrated, and address public safety through use of buffer areas, policies on siting decisions for such uses, changing land use designations, or other means as deemed appropriate.

Policy LU 3.3.8: Within multiple family residential projects comprised of multiple buildings, ensure that project designs include crime prevention measures such as delineating public and private open space, designs for defensible space, easy surveillance by residents of all outdoor and indoor common areas, lack of dead end aisles or paths, and similar measures.

Policy LU 3.4.1: Promote the inclusion of green spaces, neighborhood parks, and other gathering places that allow neighbors to meet one another and encourage "eyes on the street" for safety purposes.

Policy LU 3.4.2: Ensure provision of street trees in urban residential areas where appropriate, to provide shade, comfort, and aesthetic enhancement.

Policy LU 3.4.3: Provide appropriate levels of code enforcement to ensure maintenance of neighborhoods in a clean, healthy, and safe condition.

Policy LU 3.4.4: Within higher density housing developments, ensure provision of adequate recreational and open space amenities to ensure a high quality living environment.

Policy LU 3.4.5: Ensure compatibility between single family and multiple family residential developments through consideration of building height and massing, architectural treatment, connectivity, privacy, and other design considerations.

Policy LU 3.4.7: Minimize the prominence of areas devoted to automobile parking and access in the design of residential neighborhoods.

Policy LU 3.4.8: Require architectural design treatment along all sides of new housing to promote continuity of architectural scale and rhythm and avoid the appearance of blank walls (360 degree enhancement).

Policy LU 3.4.9: Encourage street cross-sections that locate landscaped parkways between the curb and the sidewalk to create a visually pleasing streetscape and provide pedestrian protection.

Policy LU 4.1.6: Encourage the development of a range of child care services and facilities to serve the needs of working families, including public and private child care centers, infant care, and after-school care, through supportive zoning regulations and permitting procedures.

Policy LU 6.3.1: Promote planting of street trees throughout urban areas in the Santa Clarita Valley.

Policy LU 6.3.2: Develop compatible landscape plans for major arterials traversing the Santa Clarita Valley, including landscaped medians and parkways, and implement these plans in both County and City of Santa Clarita areas, where feasible and appropriate based on right of way and other conditions.

Policy LU 6.3.3: Enhance major entrance points to the community, including on and off ramps from Interstate 5 and State Route 14; entrances along State Route 126; and at the northern and southern entrance points on Sierra Highway, where feasible and appropriate.

Policy LU 6.3.4: Require undergrounding of utility lines for new development where feasible, and plan for undergrounding of existing utility lines in conjunction with street improvement projects where economically feasible.

Policy LU 6.3.5: Restrict the establishment of billboards within the planning area.

Policy LU 6.5.1: Require use of high quality, durable, and natural-appearing building materials pursuant to the ordinances developed through the County's Green Building Program.

Policy LU 6.5.2: Encourage the use of designs and architectural styles that incorporate classic and timeless architectural features.

Policy LU 6.5.3: Require architectural enhancement and articulation on all sides of buildings (360 degree architecture), with special consideration at building entrances and corners, and along facades adjacent to major arterial streets.

Policy LU 6.5.4: Evaluate new development in consideration of its context, to ensure that buildings create a coherent living environment, a cohesive urban fabric, and contribute to a sense of place consistent with the surrounding neighborhoods.

Policy LU 9.1.4: Develop and apply compatible standards within County and City of Santa Clarita areas for design and maintenance of utility infrastructure, in consideration of the character of each community.

Effectiveness of Proposed Area Plan Policies

The above policies are designed to provide continuity and smart land use designation decisions for the County's Planning Area. The proposed Area Plan and Land Use Policy Map would not physically divide an established community. Therefore, impacts would be less than significant.

Plan to Plan Analysis

Both the existing and proposed Area Plans provide policies that protect for the division of communities. Therefore, impacts would be similar between both Plans.

Impact 3.1-2 **Future development permitted by the proposed Area Plan may conflict with an 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.**

Buildout under the proposed Area Plan would facilitate controlled growth and development of the County's Planning Area. A consistency analysis for the proposed Area Plan policies is provided below to ensure that the County's Planning Area will be consistent with SCAG policies and plans.

SCAG Regional Transportation Plan Goals and Policies

RTP G1 **Maximize mobility and accessibility for all people and goods in the region.**

Analysis (Consistent):

The County's proposed Area Plan would maximize mobility and accessibility for all people and goods in the region with the implementation of numerous improvements to local roadways systems, which are included in the Circulation Element. Alternative modes of transportation would facilitate movement of people and goods into and out of the County's Planning Area. The proposed Area Plan includes the following policies to ensure that mobility and accessibility are key to the future of the County's Planning Area and ensure consistency with RTP G1.

Proposed Area Plan Policies

Policy LU 5.1.2: Require connectivity between walkways and bikeways serving neighborhoods and nearby commercial areas, schools, parks, and other supporting services and facilities.

Policy LU 5.1.3: Ensure that adequate bus turnouts, served by walkways and comfortable, safe, and convenient waiting facilities, are provided for transit users within residential, shopping, and business developments.

Policy LU 5.2.1: Designate higher-density residential uses in areas served by public transit and a full range of support services.

Policy LU 5.2.2: Provide for location of neighborhood commercial uses in proximity to the neighborhoods they serve, to encourage cycling and walking to local stores.

Policy C 1.1.2: Promote expansion of alternative transportation options to increase accessibility to all demographic and economic groups throughout the community, including mobility-impaired persons, senior citizens, low-income persons, and youth.

Policy C 1.2.2: Create walkable communities, with paseos and walkways connecting residential neighborhoods to multi-modal transportation services such as bus stops and rail stations.

Policy C 1.2.3: Require that new commercial and industrial development provide walkway connections to public sidewalks and transit stops, where available.

Policy C 1.2.7: In pedestrian-oriented areas, provide a highly connected circulation grid with relatively small blocks to encourage walking.

RTP G2 **Ensure travel safety and reliability for all people and goods in the region.**

Analysis (Consistent):

The proposed Area Plan would promote safety for all types of mobility within the County's Planning Area. Policies are provided to promote safe and reliable travel for people and goods, whether they are walking, bicycling, using alternative forms of transportation such as buses and trains, or jogging. The following policies would ensure travel safety and reliability for all people and goods in the region and ensure consistency with RTP G2.

Proposed Area Plan Policies

Policy LU 3.2.1: Require provision of adequate walkways in urban residential neighborhoods that provide safe and accessible connections to destinations such as schools, parks, and neighborhood commercial centers.

Policy LU 5.1.1: Require safe, secure, clearly-delineated, adequately-illuminated walkways and bicycle facilities in all commercial and business centers.

Policy C 1.1.7: Consider the safety and convenience of the traveling public, including pedestrians and cyclists, in design and development of all transportation systems.

Policy C 1.2.8: Provide safe pedestrian connections across barriers, which may include but are not limited to major traffic corridors, drainage and flood control facilities, utility easements, grade separations, and walls.

Policy C 2.1.5: Periodically monitor levels of service, traffic accident patterns, and physical conditions of the existing street system, and upgrade roadways as needed through the Capital Improvement Program.

Policy S 6.2.3: In reviewing development plans, ensure that pedestrian pathways, stairs, steps, and ramps are designed to provide clear and unimpeded passage in order to avoid trip hazards and conflicts with vehicles.

Policy S 6.2.4: Continue to monitor traffic accident data in order to evaluate and address any traffic control needs to enhance public safety.

RTP G3: Preserve and ensure a sustainable regional transportation system.

Analysis (Consistent):

The County would preserve and ensure a sustainable roadway and transportation system by conforming to regional plans though its proposed Area Plan and Land Use and Circulation Elements. The following policies would ensure that the proposed Area Plan is consistent with RTP G3.

Proposed Area Plan Policies

Policy C 1.1.3: Work with local and regional agencies and employers to promote an integrated, seamless transportation system that meets access needs, including local and regional bus service, dial-a-ride, taxis, rail, van pools, car pools, bus pools, bicycling, walking, and automobiles.

Policy C 1.1.12: Encourage the City of Santa Clarita to implement recommendations of its Non-Motorized Transportation Plan to expand opportunities for alternative travel modes.

Policy C 1.2.10: Protect communities by discouraging the construction of facilities that sever residential neighborhoods.

Policy C 2.1.4: Ensure that future dedication and acquisition of right-of-way is based on the adopted Circulation Plan, proposed land uses, and projected demand.

RTP G4: **Maximize the productivity of our transportation system.**

Analysis (Consistent):

The proposed Area Plan would help maximize productivity of the transportation system by providing for and maintaining well-designed roads, streets, and highways. Level of Service on intersections within the County's Planning Area would be maintained at a LOS D or better. Additionally, the proposed Area Plan would allow for development of Transient Oriented Development (TOD), which would facilitate movement of residents and employees. The following proposed policies would ensure that the proposed Area Plan is consistent with RTP G4.

Proposed Area Plan Policies

Policy LU 5.2.1: Designate higher-density residential uses in areas served by public transit and a full range of support services.

Policy LU 5.2.4: Encourage transit-oriented development (TOD) through designation of land uses that allow compact, mixed-use development in proximity to rail stations and multi-modal transit facilities, in conformance with applicable policies.

Policy C 1.1.8: Acquire and/or reserve adequate right-of-way in transportation corridors to accommodate multiple travel modes, including bus turnouts, bus rapid transit (BRT), bikeways, walkways, and linkages to trail systems.

Policy C 1.1.9: Incorporate funding for all modes of transportation in the capital improvement program, and seek funding from all available sources for multi-modal system development.

Policy C 1.1.11: Promote use of multi-modal facilities by providing adequate and attractive way-finding programs directing users to transit stations, park-and-ride lots, bicycle storage, and other facilities.

Policy C 1.2.6: Provide flexible standards for parking and roadway design in transit-oriented development areas to promote transit use, where appropriate.

Policy C 2.1.3: Protect and enhance the capacity of the roadway system by upgrading intersections to meet level of service standards, widening and/or restriping for additional lanes, synchronizing traffic signals, and other means as appropriate.

Policy C 2.2.4: Strive to maintain a Level of Service (LOS) D or better on most roadway segments and intersections to the extent practical; in some locations, a LOS E may be acceptable, or a LOS F may be necessary, for limited durations during peak traffic periods.

RTP G5: Protect the environment, improve air quality, and promote energy efficiency.

Analysis (Consistent):

The proposed Area Plan is intended to protect the environment, improve air quality, and promote energy efficiency while supporting buildout of its projected population increase. The proposed Land Use Element would provide for Open Space land use designations that protect environmentally sensitive areas throughout the County's Planning Area, specifically within any of the designated SEAs, particularly along the Santa Clara River, and its tributaries; ridgelines and hillside areas. The proposed Area Plan would improve air quality, by allowing residential land uses to be interconnected with commercial and industrial land uses, and allowing for the creation of a pedestrian/bicycle linkage system that would reduce automobiles mileage and reduce the number of average daily trips (ADTs). Additionally, any new developments that are proposed within the County's Planning Area would use green building techniques, thereby promoting energy efficiency on an individual development basis. The following policies would ensure that the proposed Area Plan is consistent with RTP G5.

Proposed Area Plan Policies

Policy LU 1.1.1: Where appropriate, protect mountains and foothills surrounding the Valley floor from urban development by designating these areas as Open Space or Rural Land on the Land Use Map.

Policy LU 1.1.4: Preserve community character by maintaining natural features that act as natural boundaries between developed areas, including significant ridgelines, canyons, rivers and drainage courses, riparian areas, topographical features, habitat preserves, or other similar features, where appropriate.

Policy LU 1.1.6: Preserve the rural lifestyle in canyons and low-density, outlying areas of the Santa Clarita Valley, through designating these areas as Rural Land on the Land Use Map where appropriate.

Policy LU 1.3.2: Substantially retain the integrity and natural grade elevations of significant natural ridgelines and prominent landforms that form the Valley's skyline backdrop.

Policy LU 1.3.3: Discourage development on ridgelines and lands containing 50% slopes so that these areas are maintained as natural open space.

Policy LU 1.3.4: Encourage density transfers where appropriate to facilitate development in more suitable locations while retaining significant natural slopes and areas of environmental sensitivity, provided that urban densities (exceeding one dwelling unit per acre) are not permitted in rural areas.

Policy LU 1.3.5: Encourage flexible siting and design techniques within hillside areas in order to preserve steep slopes or other unique physical features, including density-controlled development (clustering) in accordance with the provisions of the Zoning Ordinance, provided that all residential lots meet the minimum lot size requirements of a Community Standards District, where applicable.

Policy LU 2.2.3: Consistent with adopted plans, ensure that adequate open space is set aside and protected from development throughout the planning area in order to provide the benefits of watershed management, habitat preservation and connectivity, and recreational opportunities.

Policy LU 3.2.2: In planning residential neighborhoods, include pedestrian linkages, landscaped parkways with sidewalks, and separated trails for pedestrians and bicycles, where appropriate and feasible.

Policy LU 5.2.3: Promote location of non-polluting businesses providing employment opportunities in proximity to neighborhoods, to encourage walking to work.

Policy C 1.1.12: Encourage the City of Santa Clarita to implement recommendations of its Non-Motorized Transportation Plan to expand opportunities for alternative travel modes.

Policy C 1.2.7: In pedestrian-oriented areas, provide a highly connected circulation grid with relatively small blocks to encourage walking.

Policy C 1.2.9: Emphasize providing right-of-way for non-vehicular transportation modes so that walking and bicycling are the easiest, most convenient modes of transportation available for short trips.

Policy C 2.6.4: Coordinate road construction with improvements to other utility systems in the right-of-way.

RTP G6: **Encourage land use and growth patterns that complement our transportation investments and improves the cost-effectiveness of expenditures.**

Analysis (Consistent):

The proposed Land Use Policy Map promotes growth patterns that allow residents and employees to gain easier access to different modes of transportation, thus improving the cost-effectiveness of expenditures in key transportation areas. Additionally, the proposed Area Plan would allow for the development of TOD that would encourage land use and growth patterns that complement transportation investments. The following Area Plan policies would provide consistency with RTP G6.

Proposed Area Plan Policies

Policy LU 5.2.4: Encourage transit-oriented development (TOD) through designation of land uses that allow compact, mixed-use development in proximity to rail stations and multi-modal transit facilities, in conformance with applicable policies.

Policy LU 5.2.5: Encourage the mix of compatible uses in areas where, though not served by rail or transit, mixed uses will achieve more walkable neighborhoods and trip reduction, in conformance with applicable policies.

Policy C 1.2.1: Develop coordinated plans for land use, circulation, and transit to promote transit-oriented development that concentrates higher density housing, employment, and commercial areas in proximity to transit corridors.

Policy C 1.2.4: Consider location, availability, and accessibility of transit in evaluating new development plans.

Policy C 1.2.5: In mixed use projects, require compact development and a mix of land uses to locate housing, workplaces, and services within walking or bicycling distance of each other.

Policy C 2.6.2: Evaluate the feasibility of establishing a joint City/County Intelligent Transportation Management System (ITMS) impact fee for new development that is unable to otherwise mitigate its impacts to the roadway system through implementation of the adopted Highway Plan.

Policy C 2.6.3: Support local, regional, state, and federal agencies in identifying and implementing funding alternatives for the Valley's transportation systems.

RTP G7: **Maximize the security of our transportation system through improved systems monitoring, rapid recovery planning, and coordination with other security, and coordination with other security agencies.**

Analysis (Consistent):

Implementation of the proposed Area Plan would ensure that the County's Planning Area provides a transportation system that is safe and reliable. The proposed Area Plan would ensure that roadways within the County's Planning Area are updated with the best safety features to prevent accidents, and reduce vehicle traffic. Additionally, the proposed Area Plan would allow for repair and redevelopment of roadways that are heavily traveled in the region and that pose safety issues. The following policies would ensure Area Plan consistency with RTP G7.

Proposed Area Plan Policies

Policy C 2.5.1: Maintain a current evacuation plan as part of emergency response planning.

Policy C 2.5.2: Ensure that new development is provided with adequate emergency and/or secondary access for purposes of evacuation and emergency response; require two points of ingress and egress for every subdivision or phase thereof, except as otherwise approved for small subdivisions where physical constraints preclude a second access point.

Policy C 2.5.4: Provide directional signage to Interstate 5 and State Route 14 at key intersections in the Valley, to assist emergency evacuation operations.

Policy LU 9.1.5: Work with the Los Angeles County Sheriff's Department to expand law enforcement facilities to meet the needs of the Santa Clarita Valley's growing population.

Compass/Growth Visioning Principals

The fundamental goal of the 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. The following analysis determines if the proposed Area Plan's policies are consistent with the Compass/Growth Visioning Principals of SCAG.

Principle 1: Improve Mobility for all residents.

GV P1.1: **Encourage transportation investments and land use decisions that are mutually supportive.**

Analysis (Consistent):

The proposed Area Plan would encourage the placement of land uses that complement and support transportation investments. One example is the use of TOD and the incorporation of mixed-use development. The proposed Area Plan would implement the following policies that would ensure compliance with GV P1.1.

Proposed Area Plan Policies

Policy C 1.2.2: Create walkable communities, with paseos and walkways connecting residential neighborhoods to multi-modal transportation services such as bus stops and rail stations.

Policy C 1.2.3: Require that new commercial and industrial development provide walkway connections to public sidewalks and transit stops, where available.

Policy C 1.2.4: Consider location, availability, and accessibility of transit in evaluating new development plans.

GV P1.2: Locate new housing near existing jobs and new jobs near existing housing.

Analysis (Consistent):

Implementation of the County's proposed Area Plan would ensure that new housing is near existing jobs and that new jobs are near existing housing through the placement of complementary residential and mixed-use land uses near commercial and industrial land uses. Buildout under the proposed Land Use Map would enable residents and employees to decrease their reliance on motor vehicles. The proposed Area Plan would be consistent with GV P1.2 by implementing the following policies.

Proposed Area Plan Policies

Policy LU 1.2.13: Encourage use of the Specific Plan process to plan for cohesive, vibrant, pedestrian-oriented communities with mixed uses, access to public transit, and opportunities for living and working within the same community.

Policy C 1.2.5: In mixed use projects, require compact development and a mix of land uses to locate housing, workplaces, and services within walking or bicycling distance of each other.

Policy LU 4.5.4: Encourage the provision of support services for employees within business park areas, such as dining and personal services where appropriate, to reduce vehicle trips and promote pedestrian-friendly work environments.

GV P1.3: Encourage transit-oriented development.

Analysis (Consistent):

The proposed Area Plan would allow for development of TOD, thereby encouraging land use and growth patterns within walking distance of a major transit stop, generally with a mix of residential, employment, and shopping opportunities. TOD encourages walking and transit use without excluding the automobile. The following Area Plan policies would ensure consistency with GV P1.3.

Proposed Area Plan Policies

Policy C 1.2.1: Develop coordinated plans for land use, circulation, and transit to promote transit-oriented development that concentrates higher density housing, employment, and commercial areas in proximity to transit corridors.

Policy C 1.2.6: Provide flexible standards for parking and roadway design in transit-oriented development areas to promote transit use, where appropriate.

Policy C 4.1.6: Provide incentives to promote transit-oriented development near rail stations.

Policy C 5.2.4: Enhance way-finding signage along walkways and paseos to direct pedestrians to transit stops.

Policy C 5.3.1: Continue to provide fixed route service to significant activity areas and neighborhoods with moderate to high density, and serve low-density and rural areas with dial-a-ride, flexible fixed routes, or other transit services as deemed appropriate.

Policy C 5.3.2: Promote concentrated development patterns in coordination with transit planning to maximize service efficiency and ridership.

Policy C 5.4.1: Establish transit impact fee rates that are based on the actual impacts of new development on the transit system, and regularly monitor and adjust these fees as needed to ensure adequate mitigation.

Policy C 5.4.2: Evaluate the feasibility of establishing a joint City/County transit impact fee to equitably distribute the capital costs of transit system expansion to meet the needs of new development in both County and City areas of the Valley.

Policy C 5.4.3: Seek funding for transit system expansion and improvement from all available sources, including local, state, and federal programs and grants.

Policy LU 6.4.2: Enhance the area around historic Lang Station by requiring a Specific Plan for redevelopment of this area.

GV P1.4: Promote a variety of travel choices.

Analysis (Consistent):

The proposed Area Plan would allow the County to accommodate growth for different types of travel choices, besides reliance on the automobile. The proposed Area Plan encourages bicycle/pedestrian linkages, and development near existing transportation infrastructure including trains and buses. The following policies would ensure that the proposed Area Plan is consistent with GV P1.4.

Proposed Area Plan Policies

Rail Service

Policy C 1.2.9: Emphasize providing right-of-way for non-vehicular transportation modes so that walking and bicycling are the easiest, most convenient modes of transportation available for short trips.

Policy C 4.1.1: Develop permanent Metrolink facilities with an expanded bus transfer station and additional park-and-ride spaces at the Via Princessa station, or other alternative location as deemed appropriate to meet the travel needs of residents on the Valley's east side.

Policy C 4.1.2: Coordinate with other agencies to facilitate extension of a passenger rail line from the Santa Clarita Station to Ventura County, which may be used for Metrolink service.

Policy C 4.1.3: Continue to expand and improve commuter services, including park-and-ride lots, bicycle parking and storage, and waiting facilities, at all Metrolink stations.

Policy C 4.1.4: Encourage the preservation of abandoned railroad right-of-way for future transportation facilities, where appropriate.

Policy C 4.1.5: Work with other agencies to increase rail efficiency and public safety through street and track improvements and grade separations, where needs are identified.

Policy C 4.1.7: Facilitate coordination of planning for any future high speed regional rail systems in the Valley with Metrolink services.

Policy C 4.1.8: Minimize impacts to passenger rail service and the community from any proposed increase to freight rail service through the Valley.

Policy C 4.2.1: Continue to work with the Orange Line Development Authority (OLDA) to plan for development of an environmentally sensitive, high speed transportation system with a route through the Santa Clarita Valley, including a regional transit hub with associated infrastructure that would provide connections to the Los Angeles Basin, Palmdale Regional Airport, and other destinations.

Policy C 4.2.2: Coordinate with other agencies as needed to facilitate planning for other high-speed rail alternatives in the Santa Clarita Valley.

Policy C 4.2.3: Promote and encourage the expansion of Amtrak Rail Service to the Santa Clarita Valley.

Policy LU 4.4.3: Evaluate the feasibility of connecting business activity centers throughout the Santa Clarita Valley with light rail, to provide increased mobility and access for customers and employees between the Valencia Town Center, Whittaker Bermite property, Newhall, Valencia Industrial Center, Magic Mountain and Entrada, Newhall Ranch, and other areas as deemed appropriate.

Bus Service

Policy C 5.1.2: For private gated communities, require the developer to accommodate bus access through the entry gate, or provide bus waiting facilities at the project entry with pedestrian connections to residential streets, where appropriate.

Policy C 5.1.3: Consider the operational characteristics of buses when determining acceptable street designs, including grades and turning radii.

Policy C 5.1.4: Provide for location of bus stops within ¼-mile of residential neighborhoods, and include paved bus waiting areas in street improvement plans wherever appropriate and feasible.

Policy C 5.1.5: Locate and design of bus turnouts to limit traffic obstruction and to provide sufficient merging length for the bus to re-enter the traffic flow.

Policy C 5.1.6: Evaluate the feasibility of giving buses priority at signalized intersections to maintain transit service level standards, where appropriate.

Policy C 5.2.1: Require paved waiting areas, accessible by paved walkways and reasonably direct pedestrian routes, for bus stops in new development; and provide for retrofitting of existing bus stops, where feasible and practicable.

Policy C 5.2.2: Adopt and implement consistent design standards for use in both City and County areas for bus shelters, bus benches, trash receptacles, lighting, and other improvements for transit stops that are aesthetically pleasing and consistent with community character.

Policy C 5.2.3: Adopt and implement common design standards for bus turnouts and merging lanes along arterial streets, in convenient, accessible locations.

Policy C 5.2.5: Complementary transportation modes should be interconnected at intermodal transit centers, including provisions for bicycles on buses, bicycle parking at transit centers, and park-and-ride at transit stops.

Policy C 5.3.3: Evaluate the feasibility of providing "fly-away" bus transit service to airports located at Burbank, Palmdale, and Los Angeles, and implement this program when warranted by demand.

Policy C 5.3.4: Evaluate the feasibility of providing bus rapid transit (BRT) for key transit corridors when light-rail is not feasible or cost effective.

Bikeways

Policy C 6.1.1: For recreational riders, continue to develop Class 1 bike paths, separated from the right-of-way, linking neighborhoods to open space and activity areas.

Policy C 6.1.2: For long-distance riders and those who bicycle to work or services, provide striped Class 2 bike lanes within the right-of-way, with adequate delineation and signage, where feasible and appropriate.

Policy C 6.1.3: Continue to acquire or reserve right-of-way and/or easements needed to complete the bicycle circulation system as development occurs.

Policy C 6.1.4: Where inadequate right-of-way exists for Class 1 or 2 bikeways, provide signage for Class 3 bike routes or designate alternative routes as appropriate.

Policy C 6.1.5: Plan for continuous bikeways to serve major destinations, including but not limited to regional shopping areas, college campuses, public buildings, parks, and employment centers.

Policy C 6.2.1: Require bicycle parking, which can include bicycle lockers and sheltered areas at commercial sites and multi-family housing complexes for use by employees and residents, as well as customers and visitors.

Policy C 6.2.2: Provide bicycle racks on transit vehicles to give bike-and-ride commuters the ability to transport their bicycles.

Policy C 6.2.3: Promote the inclusion of services for bicycle commuters, such as showers and changing rooms, as part of the review process for new development or substantial alterations of existing commercial or industrial uses, where appropriate.

Pedestrian

The proposed Area Plan would provide for walkable communities in which interconnected walkways provide a safe, comfortable, and viable alternative to driving for local destinations. Information of the proposed Area Plan policies that would facilitate and promote pedestrian-friendly travel are addressed in GV P2.3, below.

Air Travel

Policy S 6.4.1: Require all new development in the vicinity of the Agua Dulce Airpark to comply with the Airport Land Use Plan and applicable Federal Aviation Administration (FAA) regulations.

Principle 2: Foster livability in all communities

GV P2.1: **Promote infill development and redevelopment to revitalize existing communities.**

Analysis (Consistent):

The proposed Area Plan would provide the County's Planning Area direction in revitalizing communities within its boundaries by promoting infill development and redevelopment in communities such as Castaic, Pico Canyon, and Fair Oaks. The following policies would help to ensure that the proposed Area Plan is consistent with the GV P2.1 while maintaining community character.

Proposed Area Plan Policies

Policy LU 1.1.5: Increase infill development and re-use of underutilized sites within and adjacent to developed urban areas to achieve maximum benefit from existing infrastructure and minimize loss of open space, through redesignation of vacant sites for higher density and mixed use, where appropriate.

Policy LU 1.2.8: In Castaic, promote expansion of neighborhood commercial uses to serve local residents; address traffic congestion; and ensure compatibility between highway-oriented commercial uses and nearby residential uses; and maintain community character in accordance with the County's Castaic Area Community Standards District.

Policy LU 1.2.9: In Val Verde, protect the existing rural lifestyle and small town community character while providing residents with additional access to needed services; and ensure compatibility between existing residential areas and the nearby landfill; and maintain community character in accordance with the County's Castaic Area Community Standards District.

Policy LU 1.2.11: In Pico Canyon, recognize the historic significance of Mentryville in future planning; preserve the existing rural development pattern; and ensure compatibility of new development with the adjacent Significant Ecological Area and habitat.

Policy LU 1.2.12: In the Fair Oaks community, facilitate location of commercial and community services in proximity to residences to serve local needs.

Policy LU 4.3.2: Promote business development in Castaic and Val Verde to provide a greater range of goods and services to area residents.

Policy LU 4.3.3: Promote revitalization of commercial uses along Sierra Highway between Soledad Canyon Road and Vasquez Canyon Road, to encourage businesses serving the Canyon Country neighborhoods and support services for the College of the Canyons east campus.

Policy LU 4.3.4: Promote business development that upgrades and revitalizes older commercial corridors, including Lyons Avenue, Railroad Avenue, Newhall Avenue, Main

Street, and Soledad Canyon Road, in a manner that reflects each area's character, architecture, and history.

Policy LU 4.3.5: Support efforts by the City of Santa Clarita to coordinate with property owners and environmental agencies, and provide assistance as appropriate, to promote clean-up and redevelopment of the Whittaker Bermite property as a business and employment center.

GV P2.2: Promote developments that provide a mix of uses.

Analysis (Consistent)

The County's proposed Area Plan and Land Use Map promote the development of a mix of uses within urbanized communities in its Planning Area. The proposed Area Plan and Land Use Map would allow for supportive commercial uses to serve local areas that are designated as Rural Land 2 (RL2), Rural Land 1 (RL1), Residential 2 (H2), Residential 5 (H5), Residential 18 (H18) and Residential 30 (H30). These uses would include stores, restaurants, personal services, limited medical services, and retail sale of specialty goods. A mix of uses would allow residents easy convenience to local retail and commercial areas, while reducing dependence on the automobile. The following policies would ensure that the Area Plan and proposed Land Use Map are consistent with SCAG principle GV P2.2.

Proposed Area Plan Policies

Policy LU 2.1.1: On the Land Use Map, designate a balance of land uses in appropriate amounts to meet future community needs while ensuring that no use designation is over-represented in a manner that is not economically viable.

Policy LU 2.1.2: On the Land Use Map, integrate land use designations in a manner that promotes healthy, walkable communities, by providing an appropriate mix of residential and service uses in proximity to one another.

Policy LU 2.1.3: Provide a range of land use types and densities to reflect the special characteristics, lifestyles, and opportunities that differentiate various communities and villages in the Santa Clarita Valley, including urban, suburban, and rural living environments.

GV P2.3: Promote "people scaled," pedestrian-friendly (walkable) communities.

Analysis (Consistent):

One of the main goals of the proposed Area Plan and Land Use Map is to encourage future development to be more pedestrian friendly and less reliant on the automobile. The proposed Area Plan would promote this idea by encouraging new development and revitalization to include pedestrian linkages between communities and land uses that would allow residents and employees alike to walk, jog, or bicycle to different locations within the County's Planning Area. The proposed Area Plan would be consistent with GV P2.3 through implementation of the following principles.

Proposed Area Plan Policies

Policy C 1.2.7: In pedestrian-oriented areas, provide a highly connected circulation grid with relatively small blocks to encourage walking.

Policy C 1.2.8: Provide safe pedestrian connections across barriers, which may include but are not limited to major traffic corridors, drainage and flood control facilities, utility easements, grade separations, and walls.

Policy C 7.1.1: In reviewing new development proposals, consider pedestrian connections within and between developments as an integral component of the site design, which may include seating, shading, lighting, directional signage, accessibility, and convenience.

Policy C 7.1.2: For existing walled subdivisions, extend pedestrian access to connect these neighborhoods to transit and services through public education and by facilitating retrofitted improvements where feasible.

Policy C 7.1.3: Where feasible and practical, consider grade separated facilities to provide pedestrian connections across arterial streets, flood control channels, utility easements, and other barriers.

Policy C 7.1.4: Identify and develop an improvement program to connect existing walkways and paseos to transit and services, where needed and appropriate.

Policy C 7.1.5: In new commercial development, provide for direct, clearly delineated, and preferably landscaped pedestrian walkways from transit stops and parking areas to building entries, and avoid placement of uses (such as drive-through facilities) in locations that would obstruct pedestrian pathways.

Policy C 7.1.6: Encourage placement of building entries in locations accessible to public sidewalks and transit.

Policy C 7.1.7: Promote use of pedestrian-oriented scale and design features in areas intended for pedestrian use.

Policy C 7.1.8: Upgrade streets that are not pedestrian-friendly due to lack of sidewalk connections, safe street crossing points, vehicle sight distance, or other design deficiencies.

Policy LU 8.2.1: In making locational decisions for siting new community facilities, consider ease of access for all users (vehicular, pedestrian, and transit).

GV P2.4: **Support the preservation of stable, single-family neighborhoods.**

Analysis (Consistent):

Although the proposed Area Plan does not contain specific policies in support of the preservation of stable, single-family neighborhoods, the proposed Area Plan Land Use Map does offer land use designations that support single-family neighborhoods. The proposed Land Use Map allows single-family homes within the Rural Land 20 (RL20), Rural Land 10 (RL10), Rural Land 5 (RL5), Rural Land 2 (RL2), Rural Land 1 (RL1), Residential 2 (H2), Residential 5 (H5), and Residential 18 (H18) land use designations. Since the proposed Land Use Map allows for single-family residential neighborhoods within these land use designations, the proposed Area Plan policy would be consistent with GV P2.4.

Proposed Area Plan Policy

Policy C 1.2.10: Protect communities by discouraging the construction of facilities that sever residential neighborhoods.

Principle 3: Enable prosperity for all people

GV P3.1: **Provide, in each community, a variety of housing types in each community to meet the housing needs of all income levels.**

Analysis (Consistent):

The proposed Area Plan and Land Use Map would allow for the placement and development of housing for all different levels of income within the County's Planning Area. **Section 3.19, Population and**

Housing, of this environmental impact report (EIR), discusses the different types of housing needs the County's Planning Area would require to fulfill estimated population increases as buildout of the proposed Area Plan occurs. The following policies would provide consistency between the proposed Area Plan and GV P3.1.

Proposed Area Plan Policies

Policy LU 3.1.2: Provide a mix of housing types within neighborhoods that accommodate households with varied income levels.

Policy LU 8.1.8: Work with social service agencies providing assistance to homeless persons to develop and maintain a suitable shelter in the Santa Clarita Valley.

Policy LU 8.1.9: Assist persons and households with temporary housing needs by promoting transitional housing facilities for victims of domestic violence in multiple family residential land use designations, subject to the provisions of the County Zoning Ordinance.

Policy LU 8.1.10: Coordinate with agencies that provide services to seniors and the elderly to expand senior facilities, which may include a new senior center.

GV P3.2: Support educational opportunities that promote balanced growth.

Analysis (Consistent):

The proposed Area Plan and Land Use Map allow for development of educational facilities. Residential land uses would be located within areas of educational facilities and school districts to provide equal opportunity for all residents to gain an education. Additionally, the proposed Area Plan and Land Use Map have land use designations that provide development space for educational type facilities, including libraries, cultural event areas, and facilities for all residents. The proposed Area Plan policies support educational opportunities that promote balanced growth throughout the County's Planning Area and are consistent with GVP3.2.

Proposed Area Plan Policies

Policy LU 8.1.1: Coordinate plans for new residential development with affected school districts to ensure adequate mitigation of impacts on school facilities; provision of facilities and programs to promote academic excellence for Santa Clarita Valley

students; coordination on joint use of facilities and transportation; and long-range planning.

Policy LU 8.1.5: Coordinate with the Los Angeles County Library System to assist in expanding library services as needed to meet the needs of the community.

Policy LU 8.1.6: Coordinate with the Arts Alliance and other similar entities to promote access to cultural events and facilities for all residents.

GV P3.3: Ensure environmental justice regardless of race, ethnicity or income class.

Analysis (Consistent):

Housing types would be available for all levels of income throughout the County's Planning Area, as further described in **Section 3.19, Population and Housing,** of this EIR and the Housing Element. Amenities would be available for residents throughout the County's Planning Area regardless of race, ethnicity, and age or income class. With implementation of the following policies, the proposed Area Plan would be consistent with GV P3.3.

Proposed Area Plan Policies

Policy LU 3.1.1: On the Land Use Map, designate adequate land for residential use at various densities to provide a mix of housing opportunities for all segments of the population, including attached, detached, senior, and mixed use housing types, which are consistent with community character and meet the region's housing goals.

Policy LU 8.1.2: Implement a master plan for trails throughout the Santa Clarita Valley to serve all residents.

Policy LU 8.1.3: Implement a master plan for parks, with special focus on provision of additional playfields for youth sports in locations accessible to underserved neighborhoods.

Policy LU 8.1.4: Ensure that an adequate and diverse supply of child care facilities and services is available to parents who live and/or work in the Santa Clarita Valley, by promoting child care facilities in commercial and residential areas subject to the provisions of the County Zoning Ordinance.

Policy LU 8.2.2: Identify neighborhoods that are underserved by public facilities and community services, and plan for equitable distribution of these facilities.

Policy LU 8.3.1: Require fair and equitable treatment in considering, adopting, implementing, and enforcing development regulations and policies, including but not limited to providing equal opportunity for public input and considering impacts from development approvals on all segments of the population.

Policy S 6.3.1: In cooperation with other agencies, ensure adequate shelter for homeless persons to limit their exposure to accidental injury and illness.

Policy S 6.3.2: Implement the provisions of the Americans with Disabilities Act to ensure safe travel paths and accommodations for persons with disabilities.

Principle 3: Enable prosperity for all people

GV P3.4: Support local and state fiscal policies that encourage balanced growth.

Analysis (Consistent):

The County's proposed Area Plan would be consistent with SCAG GV P3.4. As stated in **Section 3.19, Population and Housing**, of this EIR, the proposed Area Plan would be consistent with the employment/housing forecast predicted under SCAG analysis, allowing for balanced growth.

GV P3.5: Encourage civic engagement.

Analysis (Consistent):

Civic engagement can mean a feeling of belonging and working to make a difference in the civic life of our communities. It can take many forms from volunteerism to organizational involvement to electoral participation. Residents and employees can take it upon themselves to engage in civic engagements, and would not be required under an Area Plan to do so. However, the following Area Plan policies promote civic engagement and consistency with GV P3.5.

Proposed Area Plan Policies

Policy LU 8.1.4: Ensure that an adequate and diverse supply of child care facilities and services is available to parents who live and/or work in the Santa Clarita Valley, by

promoting child care facilities in commercial and residential areas subject to the provisions of the County Zoning Ordinance.

Policy LU 8.1.6: Coordinate with the Arts Alliance and other similar entities to promote access to cultural events and facilities for all residents.

Policy LU 8.1.10: Coordinate with agencies that provide services to seniors and the elderly to expand senior facilities, which may include a new senior center.

Principle 4: Promote sustainability for future generations

GV P4.1: Preserve rural, agricultural, recreational and environmentally sensitive areas.

Analysis (Consistent):

The proposed Area Plan would promote the preservation of rural, agricultural, recreational, and environmentally sensitive areas within the County's Planning Area through implementation of **Policies LU 1.1.1, LU 1.1.4, LU 1.1.6**, **LU 1.1.7, LU 6.4.4, LU 7.8.1**, **LU 7.8.2, LU 9.1.3, CO 1.5.6, CO 1.6.1 through CO 1.6.3**, and **CO 5.2.4** The proposed Area Plan and Land Use Map would expand SEAs and protect them from incompatible development through appropriate land use designations. Additionally, sensitive areas of the Santa Clara River and its associated tributaries would be protected from incompatible development through appropriate land use designations. Therefore, the proposed Area Plan and Land Use Map would preserve rural, agricultural, recreational, and environmentally sensitive areas within the County Planning Area. The following Area Plan policies, including those mentioned above, would ensure consistency with GV P4.1.

Proposed Area Plan Policies

Policy LU 1.1.1: Where appropriate, protect mountains and foothills surrounding the Valley floor from urban development by designating these areas as Open Space or Rural Land on the Land Use Map.

Policy LU 1.1.4: Preserve community character by maintaining natural features that act as natural boundaries between developed areas, including significant ridgelines, canyons, rivers and drainage courses, riparian areas, topographical features, habitat preserves, or other similar features, where appropriate.

Policy LU 1.1.6: Preserve the rural lifestyle in canyons and low-density, outlying areas of the Santa Clarita Valley, through designating these areas as Rural Land on the Land Use Map where appropriate.

Policy LU 1.1.7: Preserve and protect important agricultural resources, including farmland and grazing land, through designating these areas as Rural Land on the Land Use Map where appropriate.

Policy LU 6.4.4: Maintain the historic site of Mentryville by designating the site as Open Space on the Land Use Map.

Policy LU 7.8.1: Adopt and implement policies for protection of oak woodlands and oak trees throughout the planning area that are compatible with City of Santa Clarita policies.

Policy LU 7.8.2: Protect all designated Significant Ecological Areas (SEA's) from incompatible development.

Policy LU 9.1.3: Protect major utility transmission corridors, pumping stations, reservoirs, booster stations, and other similar facilities from encroachment by incompatible uses, while allowing non-intrusive uses such as plant nurseries, greenbelts, and recreational trails.

Policy CO 1.5.6: Through the development review process, consider the impacts of development on the entire watershed of the Santa Clara River and its tributaries, including hydromodification.

Policy CO 1.6.1: Identify environmental conditions that represent a healthy, sustainable community.

Policy CO 1.6.2: Use Geographic Information Systems, modeling, and other tools to indicate the locations of natural systems, such as floodplain and floodway areas, oak tree woodlands, Significant Ecological Areas, and plant and animal species habitat.

Policy CO 1.6.3: Provide information on the condition of natural systems to decision makers as part of the decision-making process regarding land use and development.

Policy CO 5.2.4: Continue to support "Heritage Junction" and the historical museum within William S. Hart Park as historical resources that illustrate the various phases of settlement within the Santa Clarita Valley.

GV P4.2: **Focus development in urban centers and existing cities.**

Analysis (Consistent):

As described above, the proposed County's Area Plan and Land Use Map would encourage the development, revitalization, and maintenance of urban centers. The proposed Area Plan would fulfill this by implementing **Policy LU 1.2.1** through **Policy LU 1.2.13.** Additionally, the following policies would be implemented, providing consistency with Policy GV P4.2.

Proposed Area Plan Policies

Policy LU 1.1.2: On the Land Use Map, concentrate urban development within flatter portions of the Santa Clarita Valley floor in areas with limited environmental constraints and served with infrastructure.

Policy LU 1.1.3: Discourage urban sprawl into rural areas by limiting non-contiguous, "leap-frog" development outside of areas designated for urban use.

Policy LU 1.1.5: Promote infill development and re-use of underutilized sites within and adjacent to developed urban areas to achieve maximum benefit from existing infrastructure and minimize loss of open space, through redesignation of vacant sites for higher density or mixed uses where appropriate.

Policy C 1.2.11: Reduce vehicle miles traveled (VMT) through the use of smart growth concepts.

GV P4.3: **Develop strategies to accommodate growth that uses resources efficiently, eliminate pollution and significantly reduce waste.**

Analysis (Consistent):

As discussed above, the proposed Area Plan would implement policies that would help reduce air pollution, such as developing residential areas near and adjacent to commercial areas where residents can use alternative modes of transportation to move around the County's Planning Area, and by developing residential land uses near transit centers. The proposed Area Plan would fulfill this by implementing

Policy C 1.2.2, **Policy C 1.2.3, Policy C 1.2.5, Policy C 1.2.6, Policy C 1.2.8, Policy C 1.2.9**, and **Policy C 1.2.10**. Additionally, the proposed Area Plan would provide guidance on efficiently using resources, such as water, and guidance on helping to reduce waste. The following policies would provide strategies to accommodate growth that uses resources efficiently and eliminate pollution and significantly reduce waste and consistency with GV P 4.3.

Proposed Area Plan Policies

Policy LU 7.2.1: Monitor growth, and coordinate with water districts as needed to ensure that long-range needs for potable and reclaimed water will be met.

Policy LU 7.2.2: If water supplies are reduced from projected levels due to drought, emergency, or other unanticipated events, take appropriate steps to limit, reduce, or otherwise modify growth permitted by the Area Plan in consultation with water districts to ensure adequate long-term supply for existing businesses and residents.

Policy LU 7.3.3: Seek methods to decrease impermeable site area where reasonable and feasible, in order to reduce stormwater runoff and increase groundwater infiltration, including use of shared parking and other means as appropriate.

Policy LU 7.3.4: Implement best management practices for erosion control throughout the construction and development process.

Policy LU 7.4.1: Require the use of drought tolerant landscaping, native California plant materials, and evapotranspiration (smart) irrigation systems.

Policy LU 7.4.2: Require the use of low-flow fixtures in all non-residential development and residential development with five or more dwelling units, which may include but are not limited to water conserving shower heads, toilets, waterless urinals and motion-sensor faucets, and encourage use of such fixtures in building retrofits as appropriate.

Policy LU 7.5.1: Ensure that all new development provides adequate space for recycling receptacles and bins on site.

Policy LU 7.5.2: Promote the use of recycled building materials.

Policy LU 7.6.1: Limit outdoor lighting levels to the minimum needed for safety and security, and encourage lower lighting levels when businesses are closed.

Policy LU 7.6.4: Encourage site designs that protect oak trees, hillsides, and biological resources through creative solutions.

Policy LU 7.7.1: Maintain a suitable distance and/or provide buffering to separate aggregate mining and processing activities from nearby residential uses and other uses with sensitive receptors to noise and airborne emissions.

Policy LU 7.7.2: Avoid designating land uses in areas with significant mineral resources or utility facilities that would preclude the future extraction and use of those resources and facilities.

Policy C 1.2.1: Develop coordinated plans for land use, circulation, and transit to promote transit-oriented development that concentrates higher density housing, employment, and commercial areas in proximity to transit corridors.

Policy C 1.2.4: Consider location, availability, and accessibility of transit in evaluating new development plans.

Policy C 1.2.11: Reduce vehicle miles traveled (VMT) through the use of smart growth concepts.

Policy C 1.2.12: Balance the anticipated volume of people and goods movement with the need to maintain a walkable and bicycle friendly environment.

Policy C 1.3.2: Through trip reduction strategies and emphasis on multi-modal transportation options, contribute to achieving the air quality goals of the South Coast Air Quality Management District Air Quality Management Plan.

Policy CO 1.4.2: In cooperation with other appropriate agencies, abate or remediate known areas of contamination, and limit the effects of any such areas on public health.

Policy CO 1.5.8: Consider environmental responsibility in all procurement decisions, including purchasing policies and capital projects.

Policy CO 1.6.3: Provide information on the condition of natural systems to decision makers as part of the decision-making process regarding land use and development.

Policy CO 2.3.5: Promote remediation and restoration of mined land to a condition that supports beneficial uses, which may include but are not limited to recreational open space, habitat enhancement, groundwater recharge, or urban development.

GV P4.4: **Utilize "green" development techniques.**

Analysis (consistent):

The proposed Area Plan would ensure that any development or redevelopment that occurs within the County's Planning Area would use green development techniques, such as those described in the U.S. Green Building Council's Leadership in Energy and Environmental Design, and the California Green Builder Program. Enforcing Area Plan **Policy LU 7.1.1, Policy LU 7.1.2, Policy LU 7.1.3,** and **Policy LU 7.1.4**, as described above, would ensure compliance with this SCAG principle. Additionally, prior to approval, each proposed development within the County's Planning Area would be analyzed pursuant to the County's Green Building Program to ensure that appropriate green development techniques are being used in the best available manner and consistency with GV P4.4.

Proposed Area Plan Policies:

Policy LU 7.3.1: Promote the use of permeable paving materials to allow infiltration of surface water into the water table.

Policy LU 7.3.2: Maintain stormwater runoff on site by directing drainage into rain gardens, natural landscaped swales, rain barrels, permeable areas and use of drainage areas as design elements, where feasible and reasonable.

Policy CO 1.2.2: Working with other agencies as appropriate, develop and apply models and other tools for decision-making to support the sustainability of renewable systems.

Policy CO 1.4.3: Encourage use of non-hazardous building materials, and non-polluting materials and industrial processes, to the extent feasible.

Policy CO 1.5.2: Design and manage public urban infrastructure systems to reduce impacts to natural systems.

Policy CO 1.5.3: Consider life-cycles for buildings, development patterns, and uses, and their long-term effects on natural systems, through the following measures:

a. Through the environmental review and development review processes, consider the impacts of new development on renewable systems through various phases including construction, use and operation, potential reuse, cessation of use, demolition, and reuse or restoration of the development site.

b. Ensure that mitigation measures and conditions of approval intended to protect natural systems are adequately funded and monitored for the required timeframe.

Policy CO 1.5.4: Seek ways to discourage human behavior that may be detrimental to natural systems and to encourage environmental responsibility, through education, incentives, removing barriers, enforcement, and other means as practicable and feasible.

Congestion Management Program)

The Congestion Management Program (CMP) was enacted by the State Legislature to address traffic congestion in California's urbanized counties. The Legislature noted that the existing transportation system relies upon an overcrowded street and highway system that impacts the economic vitality of the state and diminishes the quality of life in many communities. The current CMP for Los Angeles County was adopted in 2002, and it is required by law to be updated biennially.

The CMP was created for the purposes of linking land use, transportation and air quality decisions; developing a partnership among transportation decision-makers on devising appropriate transportation solutions that include all modes of travel; and proposing transportation projects eligible to compete for state gas tax funds.

The requirements for the CMP became effective with voter approval of Proposition 111 in June 1990. Proposition 111 provided for a nine-cent increase in the state gas tax over a five-year period to generate revenues to fund transportation investment statewide. In order to receive these funds, jurisdictions must comply with CMP requirements.

By statute, the CMP has five elements: (1) a system of highways and roadways with a minimum level of service performance standards designated for highway segments and key roadway intersections on the system, (2) transit standards for frequency and routing of transit service and coordination between transit operators, (3) a trip reduction and travel demand management element promoting alternative

transportation methods, (4) a land use impact analysis program, and (5) a seven-year capital improvement program of projects.

Local jurisdictions are responsible for assessing the impacts of new development on the CMP highway system when preparing project EIRs and for selecting appropriate measures to mitigate such impacts from a "toolbox" of strategies. To be classified as a CMP roadway, the roadway must meet the following criteria:

- it must be an existing State Highway (both freeways and arterials), and
- it must be a principal arterial, defined as:
  - routes that complete gaps in the State Highway system,
  - routes providing connections with the CMP systems in adjacent counties, or
  - routes along major inter-jurisdictional travel corridors, providing primary, high volume or multi-modal transportation.

Several CMP roadways exist within the County's Planning Area, including State Route 126 (SR-126) and Interstate 5 (I-5). SR-126 is designated by the CMP as a State Highway (Arterial) and I-5 is designated as a State Freeway. For a detailed discussion of project impacts on CMP roadways and consistency with the CMP, refer to **Section 3.2, Transportation and Circulation**, of this EIR. As indicated in **Section 3.2**, the proposed General Plan is consistent with the CMP.

Air Quality Management Plan (AQMP)

The intent of the Air Quality Management Plan (AQMP) is to establish a comprehensive program that would result in the achievement of federal and state air quality standards. The County's Planning Area is located in the South Coast Air Basin, which, at the time of this writing, fails to meet the National Ambient Air Quality Standards (NAAQS), and State Ambient Air Quality Standards (SAAQS) established under the Federal Clean Air Act and the California Clean Air Act, respectively. Specifically, the South Coast Air Basin is classified by the U.S. EPA as an extreme non-attainment area for ozone (the only area in the nation to be classified as such), a serious non-attainment area for carbon monoxide (CO) and respirable particulate matter (PM_{10}), and a non-attainment area for nitrogen dioxide (NO_2). The U.S. EPA designates the Basin as an attainment area for sulfur dioxide (SO_2) and lead. The AQMP for the South Coast Air Quality Management District is incorporated into the State Implementation Plan (SIP). The SIP constitutes all AQMPS prepared by all Air Quality Management Districts in the state. The SIP is the

state's effort to comply with state air quality standards. For detailed discussion of the County's Planning Area's consistency with the AQMP, refer to **Section 3.3, Air Quality,** of this EIR.

Plan to Plan Analysis

The existing Area Plan does not provide the same level of directive goals and policies that support and promote alternative modes of transportation or that support the SCAG policy goals of the RTP: Maximize mobility and accessibility for all people and goods in the region; Ensure travel safety and reliability for all people and goods in the region; Preserve and ensure a sustainable regional transportation system; Maximize the productivity of our transportation system; Protect the environment, improve air quality, and promote energy efficiency; Encourage land use and growth patterns that complement our transportation investments and improves the cost-effectiveness of expenditures; and to maximize the security of our transportation system through improved systems monitoring, rapid recovery planning, and coordination with other agencies.

While the existing Area Plan provides for many policies that are similar to those outlined in SCAG's Compass Plan Visioning Principals, it does not, however**,** provide green building policies and goals, support mixed use developments as strongly, promote environmental justice, nor focus upon transit oriented development when compared to the OVOV Plan**.**

Impact 3.1-3 **Conflict with an applicable habitat conservation plan or natural community conservation plan.**

The County's Planning Area contains areas designated or proposed as critical habitat for the unarmored stickleback, arroyo toad, California red-legged frog, and coastal California gnatcatcher. Future development projects would be subject to consultation with the U.S. Fish Wildlife Service if project implementation could result in impacts on any of these species. However, the County's Planning Area does not contain any areas falling within the purview of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State Habitat Conservation Plan. Implementation of the County's proposed Area Plan would therefore not conflict with the provisions of such a conservation plan.

The proposed Area Plan protects mountains and foothills surrounding the Valley floor from urban development by designating these areas as Open Space or Rural Land on the Land Use Map (**Policy LU 1.1.1**); concentrates urban development within flatter portions of the Santa Clarita Valley floor in areas with limited environmental constraints and served with infrastructure (**Policy LU 1.1.2**); discourages urban sprawl into rural areas by limited non-contiguous, "leap-frog" development outside of areas

designated for urban use (**Policies LU 1.2.3, LU 7.6.2 and LU 7.6.4**) and protects all designated SEAs from incompatible development (**Policy LU 7.8.2**). Impacts would be less than significant.

Proposed Area Plan Policies

Policy LU 1.1.1: Where appropriate, protect mountains and foothills surrounding the Valley floor from urban development by designating these areas as Open Space or Rural Land on the Land Use Map.

Policy LU 1.1.2: On the Land Use Map, concentrate urban development within flatter portions of the Santa Clarita Valley floor in areas with limited environmental constraints and served with infrastructure.

Policy LU 1.1.3: Discourage urban sprawl into rural areas by limiting non-contiguous, "leap-frog" development outside of areas designated for urban use.

Policy LU 1.1.4: Preserve community character by maintaining natural features that act as natural boundaries between developed areas, including significant ridgelines, canyons, rivers and drainage courses, riparian areas, topographical features, habitat preserves, or other similar features, where appropriate.

Policy LU 1.1.5: Increase infill development and re-use of underutilized sites within and adjacent to developed urban areas to achieve maximum benefit from existing infrastructure and minimize loss of open space, through redesignation of vacant sites for higher density and mixed use, where appropriate.

Policy LU 1.1.6: Preserve the rural lifestyle in canyons and low-density, outlying areas of the Santa Clarita Valley, through designating these areas as Rural Land on the Land Use Map where appropriate.

Policy LU 1.1.7: Preserve and protect important agricultural resources, including farmland and grazing land, through designating these areas as Rural Land on the Land Use Map where appropriate.

Policy LU 1.2.11: In Pico Canyon, recognize the historic significance of Mentryville in future planning; preserve the existing rural development pattern; and ensure compatibility of new development with the adjacent Significant Ecological Area and habitat.

Policy LU 7.6.2: Preserve habitat connectivity in site planning where feasible, and discourage the creation of open space islands surrounded by paving.

Policy LU 7.6.3: Protect wildlife corridors through site design and appropriate land use designations, including mapped corridors and other corridors that may be identified through biological surveys.

Policy LU 7.8.1: Adopt and implement policies for protection of oak woodlands and oak trees throughout the planning area that are compatible with City of Santa Clarita policies.

Policy LU 7.8.2: Protect all designated Significant Ecological Areas (SEA's) from incompatible development.

Effectiveness of Proposed Area Plan Policies

As discussed above, the proposed Area Plan and Land Use Map would allow for the preservation of environmentally sensitive areas within the County's Planning Area through the expansion of SEAs and appropriate land use designations. The above noted policies of the proposed Area Plan would provide guidance for decision makers to develop the best environmentally friendly areas within the County's Planning Area, and reducing the possibility of conflict with habitat conservation plans.

Plan to Plan Analysis

Both the existing and proposed Area Plans provide for policies that protect environmentally sensitive habitats. The OVOV Plan goes a step further in protecting environmentally sensitive area by reducing densities in more fragile and environmentally sensitive areas when compared to the existing Area Plan.

MITIGATION FRAMEWORK

The proposed Area Plan policies, when implemented, would provide sufficient guidance for development of land use areas within the County's Planning Area and no mitigation measures would be required.

SIGNIFICANCE OF IMPACTS WITH MITIGATION FRAMEWORK

Implementation of the proposed policies as set forth in the proposed County's Area Plan, as discussed above, would reduce potential impacts associated with land use to less than significant levels.

3.2 TRANSPORTATION AND CIRCULATION

EXECUTIVE SUMMARY

This section summarizes existing and projected traffic conditions in the County's Planning Area. The County's Planning Area consists of unincorporated land outside the City's Planning Area and adopted Sphere of Influence (SOI) but within the One Valley One Vision (OVOV) Planning Area boundaries. The City of Santa Clarita's (City) Planning Area consists of its incorporated boundaries and adopted SOI. Both the County and City Planning Areas comprise the OVOV Planning Area. Information on existing and proposed traffic conditions was provided by a traffic impact analysis prepared by Austin-Foust Associates, Inc. (2010), which is included in **Appendix 3.2**.[1]

Buildout of the County's proposed Santa Clarita Valley Area Plan Update in place of the existing Area Plan would reduce traffic on the County's roadways, including those monitored by the Los Angeles County Congestion Management Program (CMP), and at principal intersections. However, without implementation of mitigation measures, impacts would be potentially significant. Implementation of the proposed Area Plan Update would not result in a change in air traffic patterns, substantially increase hazards due to a design feature or incompatible uses, result in inadequate emergency access, or generate a parking demand that exceeds municipal code-required parking capacity. Furthermore, implementation of the proposed Area Plan would promote policies, plans, and programs supporting alternative transportation, and remove hazards and barriers to pedestrians and bicyclists. Therefore, with the implementation of mitigation measures potential traffic and circulation impacts would be less than significant.

EXISTING CONDITIONS

Vehicle Circulation System

Introduction

Arterial Roadways

Traffic can be measured by identifying both the capacity and volume of a roadway. "Capacity" refers to the vehicle carrying ability of a roadway, and "volume" is either a traffic count or a forecast for a future point in time. The ratio of the volume to the capacity provides the volume/capacity (V/C) ratio. Intersection capacity utilization (ICU) is a measure of the V/C ratio for an intersection. Based on the V/C ratio and ICU value, a corresponding level of service (LOS) is defined. The LOS designation of a roadway

1 Austin-Foust Associates, Inc., Technical Report for the Circulation Elements of the Santa Clarita Valley Area Plan Update (Los Angeles County) and the City of Santa Clarita General Plan Update, (2009).

or intersection indicates whether the capacity is adequate to handle the volume of traffic using the facility. Levels of service provided by street segments and intersections are dependent upon traffic volumes, number of lanes, whether the roadway is divided, the number of access points (driveways and cross streets) along the roadway, and the lane configuration at intersections. The LOS rating may range from A to F, with LOS A representing free flowing traffic conditions and LOS F representing severe traffic congestion, long queues of traffic, and unstable flows. Traffic flow quality for each LOS rating is provided in **Table 3.2-1, Level of Service Criteria – Roadways and Intersections**.

Table 3.2-1
Level of Service Criteria – Roadways and Intersections

Level of Service	Roadway V/C Ratio & Intersection ICU Ranges	Flow Conditions	Percent of free flow speeds (FFS)
A	0.00 – 0.60	LOS "A" describes primarily free-flow operations at average travel speeds, usually about 90 percent of the FFS for the given street class. Vehicles are completely unimpeded in their ability to maneuver within the traffic stream. Control delay at signalized intersections is normal.	90
B	0.61 – 0.70	LOS "B" describes reasonably unimpeded operations at average travel speeds, usually about 70 percent of the FFS for the street class. Vehicles are completely unimpeded in their ability to maneuver with the traffic stream. Control delay at signalized intersections is minimal.	70
C	0.71 – 0.80	LOS "C" describes stable operations; however, ability to maneuver and change lanes in midblock locations may be more restricted that at LOS "B," and longer queues, adverse signal coordination, or both may contribute to lower average travel speeds of about 50 percent of the FFS for the street class.	50
D	0.81 – 0.90	LOS "D" borders on a range in which small increases in flow may cause substantial increases in delay and decreases in travel speed. LOS "D" may be due to adverse signal progression, inappropriate signal timing, high volumes, or a combination of these factors. Average travel speeds are about 40 percent of FFS.	40
E	0.91 – 1.00	LOS "E" is characterized by significant delays and average travel speeds of 33 percent or less of the FFS. Such operations are caused by a combination of adverse progression, high signal density, high volumes, extensive delays at critical intersections, and inappropriate signal timing.	33
F	Above 1.00	LOS "F" is characterized by urban street flow at extremely low speeds, typically one-third to one-fourth of the FFS. Intersection congestion is likely at critical signalized locations, with high delays, high volumes, and extensive queuing.	25

Source: Austin-Foust Associates, Inc., 2009.

Average Daily Traffic (ADT) is a measurement of the average number of vehicles that travel a segment of roadway during a 24-hour period. Arterial roadway segments in the OVOV Planning Area are evaluated using a generalized ADT capacity based on their classifications, each of which is identified in **Table 3.2-2, Roadway Classification Capacities**. The actual capacity of a roadway is based upon a number of factors including the relationships between peak hour and daily traffic volumes, roadway design features (access, intersection geometrics, etc.), the volume of traffic crossing the roadway or turning onto or off of the roadway at intersecting roadways, and the actual turn movements at an intersection.

Table 3.2-2
Roadway Classification Capacities

County Area Plan/City General Plan Classification	Number of Lanes	Ultimate Capacity (Level of Service "E")[1]
Major Arterial Highway	8	72,000
	6	54,000
Secondary Arterial Highway	4	36,000
Limited Secondary Arterial Highway	2	18,000
Collector[2]	2	15,000

Source: Austin-Foust Associates, Inc., 2009.
1 The ultimate capacity value is an estimate of the physical limit of daily traffic flows (level of service "E") based upon typical suburban peak hour characteristics. This value can vary significantly depending upon volume demand characteristics (i.e., volume of off-peak travel and duration of peak periods) as well as roadway design features (access, spacing, intersection geometrics, etc.).

Freeways

Table 3.2-3, Level of Service Criteria – Freeway Segments summarizes the V/C ratio ranges that correspond to LOS A through F for general freeway segments. The V/C ratio ranges listed for freeway segments are based on the V/C and LOS relationships for basic freeway sections with free-flow speeds of 65 miles per hour, and are specified by the County's Congestion Management Program (CMP) for the evaluation of CMP freeway monitoring stations (the CMP is discussed in greater detail later in the section).

Roadway Network

Figure 3.2-1, Existing Roadway Network, identifies the roadways, including freeways and arterial roadways, within the Santa Clarita Valley. The primary regional roadways serving the Santa Clarita Valley are the Interstate-5 (I-5) and State Route-14 (SR-14) freeways, passing through the Santa Clarita

Valley in the north-south direction, and State Route-126 (SR-126) expressway, which connects the Santa Clarita Valley to Ventura County.

Table 3.2-3
Level of Service Criteria – Freeway Segments

LOS	Freeway Segment Volume Density Ranges	Freeway Segment V/C Ratio Ranges
A	0.0 – 11.0	0.00 – 0.30
B	11.1 – 18.0	0.31 – 0.50
C	18.1 – 26.0	0.51 – 0.71
D	26.1 – 35.0	0.72 – 0.89
E	35.1 – 45.0	0.90 – 1.00
F	Above 45.0	Above 1.00

Sources: HCM 2000; Congestion Management Program of Los Angeles County

The I-5 freeway serves inter-regional travel in the north-south direction from California's southern border with Mexico to Washington's northern border with Canada. Within the OVOV Planning Area, the I-5 freeway is classified as an urban interstate. The I-5 freeway generally consists of four mix-flow lanes in each direction through the OVOV area. Through the SR-14 interchange area, the I-5 freeway consists of three mix-flow lanes in each direction along with two dedicated truck bypass lanes which are separated from the mainline lanes. A truck weigh station facility operated by the California Highway Patrol is located on the northbound side of the I-5 freeway just south of the SR-126 interchange. High Occupancy Vehicle (HOV) lanes are located just south of the Santa Clarita Valley.

The SR-14 freeway, which runs from the I-5 freeway at Newhall Pass to US 395, is one of the four major north-south corridors serving California. This corridor connects the Eastern Sierra and Western Nevada regions to the Southern California region. The SR-14 freeway is designated as a Super Truck Route (STR), and is also part of the Surface Transportation Assistance Act (STAA) truck network, which provides freeway access for oversized trucks. Within Los Angeles and Ventura Counties, the SR-14 freeway serves as a major commuter route between Antelope Valley cities such as Palmdale and Lancaster and the Los Angeles area. Within the OVOV area, the SR-14 freeway generally consists of three to six lanes in each direction, including one HOV lane in each direction. From the I-5 freeway to the Newhall Avenue interchange, there are five mix-flow lanes and one HOV lane in each direction; from the Newhall Avenue interchange to the Golden Valley Road interchange, there are three mix-flow lanes and one HOV lane in

each direction; from the Golden Valley Road interchange to the Sierra Highway interchange, there are four mix-flow lanes and one HOV lane in each direction; from the Sierra Highway interchange to the Sand Canyon Road interchange, there are three mix-flow lanes and one HOV lane in each direction; from the Sand Canyon Road interchange to the Soledad Canyon Road interchange, there are two mix-flow lanes and one HOV lane in each direction; and from the Soledad Canyon Road interchange to the Escondido Canyon Road interchange, there are three mix-flow lanes and one HOV lane in each direction.

Secondary regional access to the County's Planning Area is provided to motorists via SR-126, which extends from the City of Ventura east to the I-5 freeway. SR-126 was once designated along portions of Magic Mountain Parkway and San Fernando Road between the I-5 and SR-14 freeways; however, these roadways were turned over to the City in 2002 and no longer serve as a State highway alignment.

In addition to the above roadways, several major north-south arterials run through the County's Planning Area, including the following:

- Newhall Avenue/Railroad Avenue/Bouquet Canyon Road originates at the southern part of the SR-14 freeway, traverses the Santa Clarita Valley, and terminates at Elizabeth Lake Road, just west of Palmdale, and well north of the OVOV boundaries. The roadway varies in width from two to eight lanes.

- Stevenson Ranch Road/McBean Parkway originates at Pico Canyon Road, traverses the City, and terminates at Copper Hill Drive. The roadway varies in width from four to eight lanes.

- The Old Road originates near the SR-14/I-5 interchange and traverses the entire west side of the Santa Clarita Valley, terminating north of Lake Hughes Road. The roadway varies in width from two to six lanes.

- Sierra Highway originates near the SR-14/I-5 interchange, traverses the Santa Clarita Valley on the east side, and terminates at Angeles Forest Highway just north of the Angeles National Forest and well northeast of the OVOV boundaries. Sierra Highway varies between two to six lanes.

Several east-west arterials serve the Santa Clarita Valley and provide access to the I-5 and SR-14 freeways. Many of these arterials are incomplete and provide access to only portions of the Santa Clarita Valley. These roadways include the following:

- SR-126/Newhall Ranch Road varies from four to eight lanes and provides an interchange to the I-5 freeway and terminates at Golden Valley Road.

- Magic Mountain Parkway originates just west of the I-5 freeway and terminates at Railroad Avenue.

- Valencia Boulevard/Soledad Canyon Road is the main east-west arterial; and varies from two to seven lanes. Valencia Boulevard originates just west of the I-5 freeway, and is renamed to Soledad

Canyon Road at the Bouquet Canyon Road intersection. The roadway terminates to the east of the SR-14 freeway near the Acton Canyon area and well east of the OVOV boundaries. This roadway features interchanges with the I-5 freeway as well as the SR-14 freeway.

- Pico Canyon Road/Lyons Avenue varies from two to six lanes. This stretch of roadway is relatively short, starting west of Stevenson Ranch Parkway in the Santa Susana Mountains and terminating at Railroad Avenue. It also provides an interchange with the I-5 freeway.

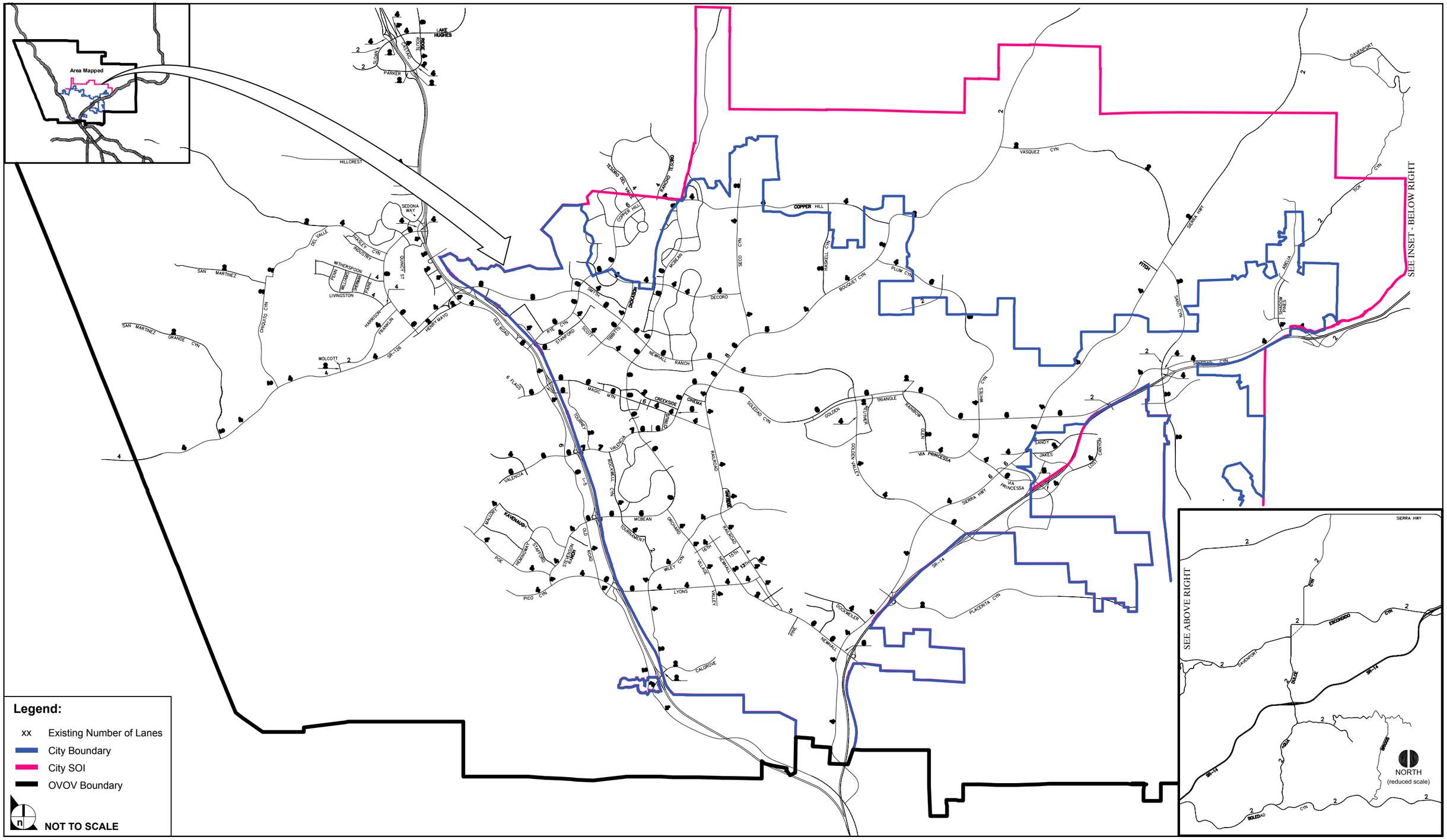
- The Cross Valley Connector is a primarily east-west roadway formed by the combination of Newhall Ranch Road and Golden Valley Road. As Newhall Ranch Road, the Cross Valley Connector originates at the SR-126/I-5 interchange and continues east to a terminus east of Bouquet Canyon Road near the Santa Clara River. A future extension of Golden Valley Road will cross the Santa Clara River and connect to Newhall Ranch Road, resulting in a continuous roadway between SR-126 and the SR-14 freeway.

Within the Santa Clarita Valley, connectivity of the street network is interrupted by topographic constraints, including rolling terrain, canyons, and the Santa Clara River. In addition, due to the prevalent pattern of cul-de-sac streets with limited connectivity within residential subdivisions, traffic is funneled onto collector and arterial streets. As a result, regional traffic is concentrated onto a limited number of arterial streets.

Existing Levels of Service

Arterial Roadway Segments

Figure 3.2-2, Study Area Roadway Segments, identifies the study arterial roadway segments included in this analysis. Existing ADT volumes on each study segment are illustrated in **Figure 3.2-3, Existing Average Traffic Volumes**. Traffic counts used to determine these ADT volumes were conducted at various times between 2005 and 2008 by the Traffic and Transportation Planning Division of the City of Santa Clarita Department of Public Works, the Traffic and Lighting division of the Los Angeles County Department of Public Works, and by various development projects within the OVOV Planning Area as part of their entitlement process.

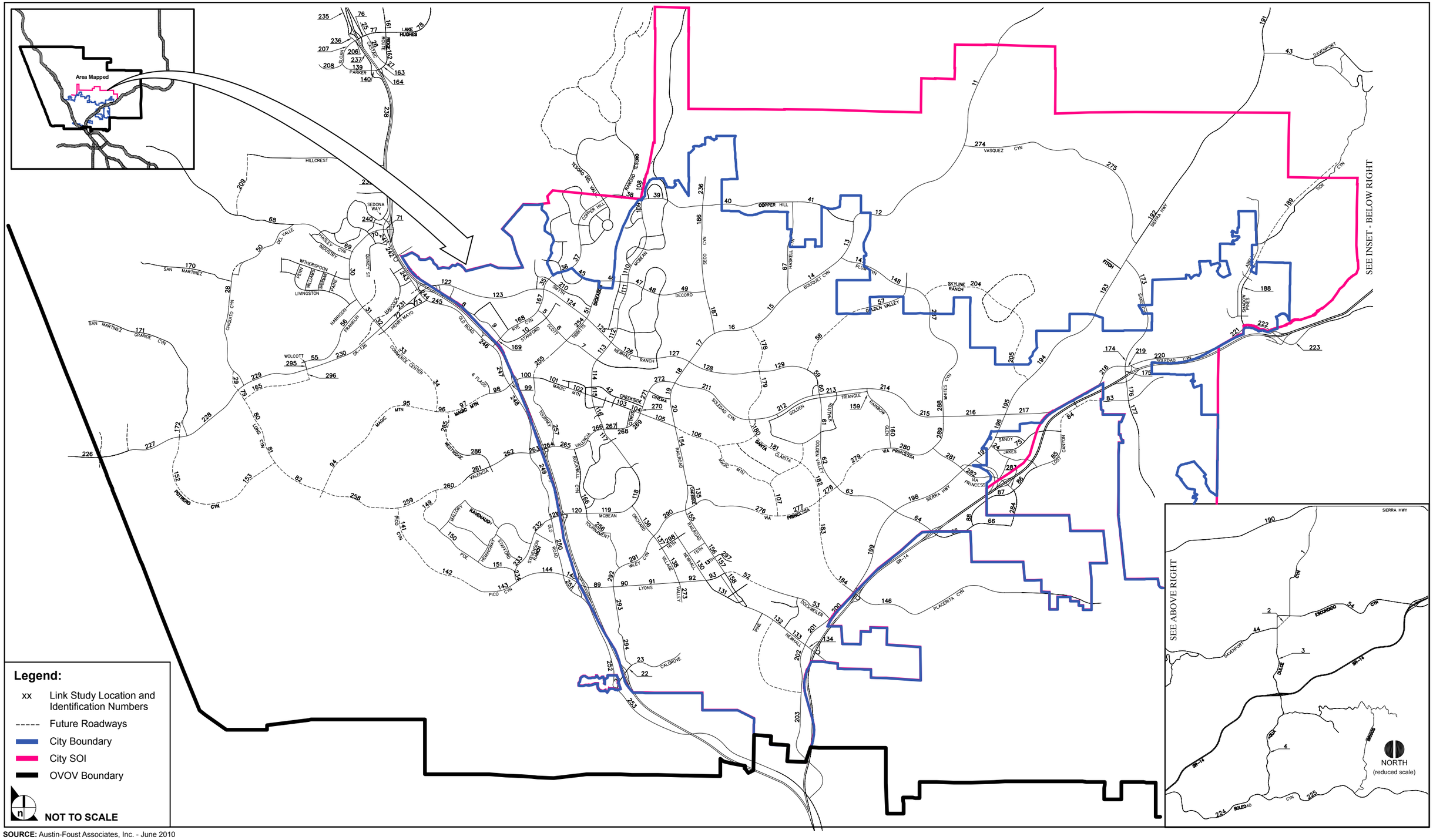


SOURCE: Austin-Foust Associates, Inc. - June 2010

FIGURE **3.2-1**

Existing Roadway Network

112-023•09/10

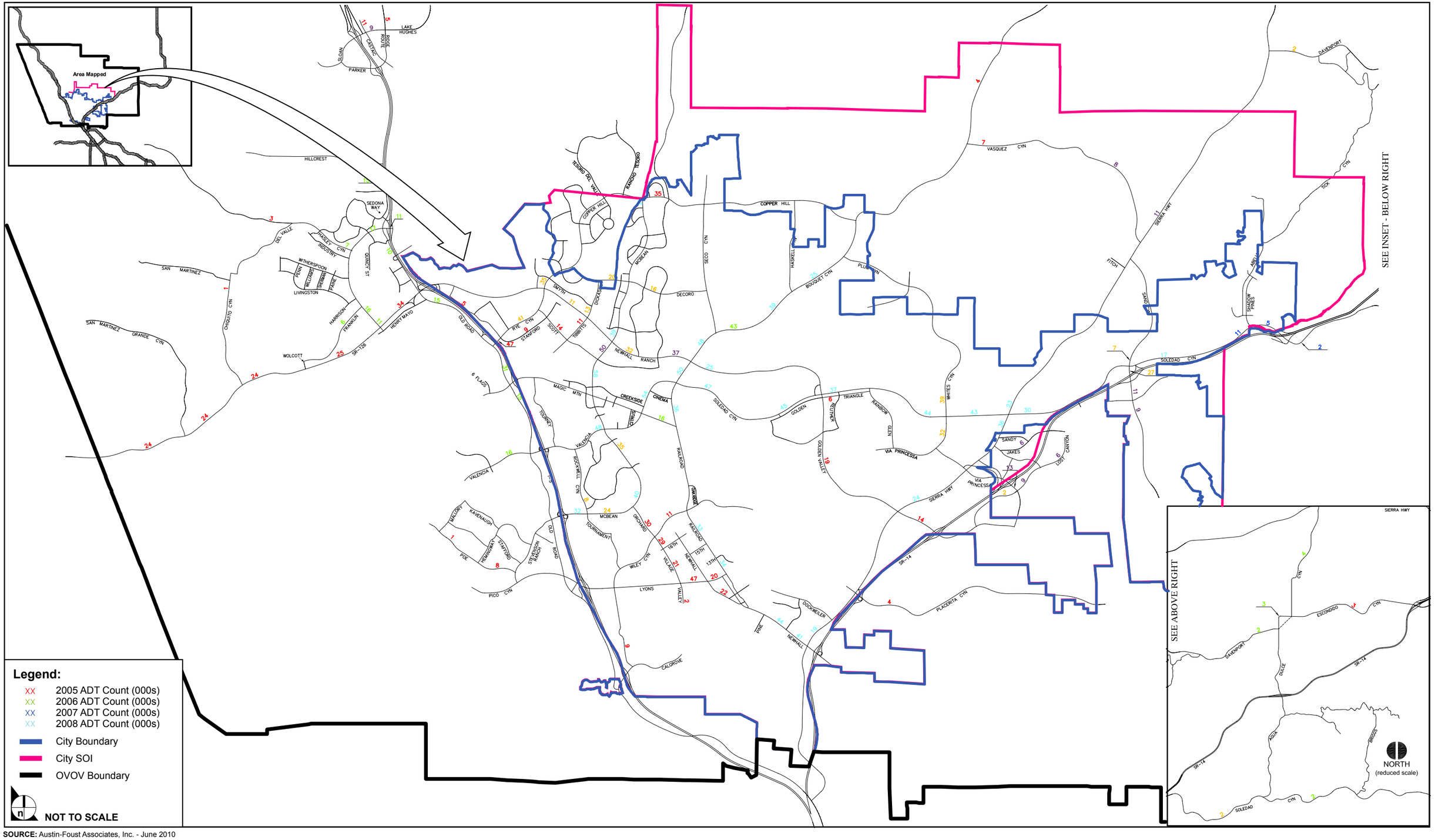


SOURCE: Austin-Foust Associates, Inc. - June 2010

FIGURE **3.2-2**

Study Area Roadway Segments

112-023•09/10



SOURCE: Austin-Foust Associates, Inc. - June 2010

FIGURE **3.2-3**

Existing Average Traffic Volumes

112-023•09/10

Table 3.2-4, Existing Level of Service Summary – Arterial Roadways, lists the existing ADT volume and corresponding V/C ratio and LOS rating of each study segment. The majority of segments operate at LOS A or B. Of the intersections operating at or below LOS C, the following four arterial roadway segments operate at LOS F:

- Bouquet Cyn w/o Haskell (Segment No. 15)
- Lyons Avenue between Orchard Village Road and Newhall Avenue (Segment No.92)
- Newhall Avenue between Lyons Avenue and Main Street (Segment No.131)
- Whites Canyon Road between Soledad Canyon Road and Pleasantdale Street (Segment No.288)

All of the above arterial roadway segments are located within the City's Planning Area. Therefore, no segments within the County's Planning Area operate at LOS F.

Table 3.2-4
Existing Level of Service Summary – Arterial Roadways

Map No.	Roadway Segment (Location)	Average Daily Traffic Volume	Year	Number of Lanes	Capacity	V/C Ratio	LOS
1.	Agua Dulce n/o Escondido Canyon (County)	4,000	2006	2	18,000	0.22	A
2.	Agua Dulce n/o Davenport (County)	3,000	2006	2	18,000	0.17	A
4.	Agua Dulce s/o SR-14 (County)	<500	2005	2	18,000	0.00	A
6.	Ave Scott s/o Stanford (City)	14,000	2007	4	36,000	0.39	A
8.	Ave Stanford s/o Vanderbilt (City)	5,000	2007	4	36,000	0.14	A
10.	Ave Stanford s/o Rye Canyon (City)	9,000	2007	4	36,000	0.25	A
11.	Bouquet Canyon n/o Vasquez (County)	4,000	2007	2	18,000	0.22	A
14.	Bouquet Cyn e/o Haskell (City)	25,000	2010	4	36,000	.69	B
15.	Bouquet Cyn w/o Haskell (City)	39,000	2010	4	36,000	1.08	**F**
16.	Bouquet Canyon e/o Seco (City)	43,000	2006	5	45,000	0.96	E
17.	Bouquet Cyn w/o Seco (City)	48,000	2010	6	54,000	.89	D
18.	Bouquet Cyn s/o Newhall Ranch (City)	50,000	2010	8	72,000	.69	B
20.	Bouquet Cyn n/o Magic Mtn (City)	36,000	2010	4	36,000	1.00	E
25.	Castaic n/o Lake Hughes (County)	11,000	2007	4	36,000	0.31	A
28.	Chiquito Canyon s/o San Martinez Canyon (County)	1,000	2007	2	18,000	0.06	A
31.	Commerce Center s/o Franklin (County)	16,000	2006	6	54,000	0.30	A

Map No.	Roadway Segment (Location)	Average Daily Traffic Volume	Year	Number of Lanes	Capacity	V/C Ratio	LOS
32.	Commerce Center n/o SR-126 (County)	11,000	2006	6	54,000	0.20	A
35.	Copper Hill n/o Newhall Ranch (City)	35,000	2005	8	72,000	0.49	A
39.	Copper Hill e/o McBean (City)	35,000	2007	4	36,000	0.97	E
43.	Davenport e/o Sierra Hwy (County)	2,000	2005	2	18,000	0.11	A
44.	Davenport w/o Agua Dulce (County)	2,000	2006	2	18,000	0.11	A
46.	Decoro e/o Dickason (City)	20,000	2005	4	36,000	0.56	A
48.	Decoro w/o Hillsborough (City)	16,000	2005	4	36,000	0.44	A
51.	Dickason n/o Newhall Ranch (City)	13,000	2005	4	36,000	0.36	A
54.	Escondido e/o Agua Dulce (County)	3,000	2007	2	18,000	0.17	A
55.	Franklin e/o Wolcott Way (County)	<500	2006	2	15,000	0.00	A
56.	Franklin w/o Commerce Center (County)	6,000	2006	4	36,000	0.17	A
62.	Golden Valley s/o Centre Point (City)	19,000	2007	4	36,000	0.53	A
64.	Golden Valley e/o Sierra Hwy (City)	14,000	2007	6	54,000	0.26	A
68.	Hasley Canyon w/o Del Valle (County)	3,000	2007	2	18,000	0.17	A
69.	Hasley Canyon w/o Commerce Center (County)	7,000	2006	4	36,000	0.19	A
70.	Hasley Canyon w/o The Old Road (County)	17,000	2006	6	54,000	0.31	A
71.	Hasley Canyon w/o I-5 (County)	11,000	2006	4	36,000	0.31	A
74.	Hillcrest w/o The Old Road (County)	9,000	2007	4	36,000	0.25	A
75.	Jakes Way e/o Canyon Park (City/County)	6,000	2005	2	18,000	0.33	A
77.	Lake Hughes e/o Castaic (County)	9,000	2008	4	36,000	0.25	A
78.	Lake Hughes e/o Ridge Route (County)	2,000	2007	2	18,000	0.11	A
86.	Lost Canyon n/o Via Princessa (County/City)	9,000	2008	4	36,000	0.25	A
87.	Lost Canyon s/o Via Princessa (County/City)	2,000	2005	2	18,000	0.11	A
92.	Lyons e/o Orchard Village (City)	47,000	2007	4	36,000	1.31	**F**
93.	Lyons w/o Main Street (City)	20,000	2007	4	36,000	0.56	A
105.	Magic Mountain e/o Valencia (City)	16,000	2006	4	36,000	0.44	A
109.	McBean s/o Copper Hill (City)	21,000	2010	6	54,000	0.39	A
112.	McBean n/o Newhall Ranch (City)	39,000	2010	6	54,000	.72	C
113.	McBean s/o Newhall Ranch (City)	50,000	2008	8	72,000	0.69	B
114.	McBean s/o Ave Scott (City)	58,000	2010	6	54,000	1.07	**F**
117.	McBean s/o Valencia (City)	35,000	2005	6	54,000	0.65	B

Map No.	Roadway Segment (Location)	Average Daily Traffic Volume	Year	Number of Lanes	Capacity	V/C Ratio	LOS
118.	McBean n/o Orchard Village (City)	40,000	2010	6	54,000	0.67	B
119.	McBean e/o Rockwell Canyon (City)	24,000	2005	6	54,000	0.44	A
120.	McBean w/o Rockwell Cyn (City)	32,000	2010	6	54,000	.59	A
124.	Newhall Ranch e/o Rye Canyon (City)	11,000	2005	8	72,000	0.15	A
126.	Newhall Ranch e/o McBean (City)	32,000	2005	8	72,000	0.44	A
127.	Newhall Ranch w/o Bouquet Canyon (City)	37,000	2008	8	72,000	0.51	A
128.	Newhall Ranch e/o Bouquet Cyn (City)	25,000	2010	4	36,000	.69	**B**
131.	Newhall s/o Lyons (City)	22,000	2007	2	18,000	1.22	**F**
132.	Newhall n/o Valle Oro (City)	44,000	2010	6	54,000	.81	D
133.	Newhall n/o Sierra Hwy (City)	41,000	2010	6	54,000	.76	C
136.	Orchard Village s/o McBean (City)	30,000	2007	4	36,000	0.83	D
137.	Orchard Village s/o Wiley Canyon (City)	29,000	2007	4	36,000	0.81	D
138.	Orchard Village n/o Lyons (City)	21,000	2007	4	36,000	0.58	A
146.	Placerita Canyon e/o SR-14 (County)	4,000	2007	2	18,000	0.22	A
150.	Poe s/o Mallory (County)	1,000	2007	4	36,000	0.03	A
151.	Poe w/o Stevenson Ranch (County)	8,000	2007	4	36,000	0.22	A
155.	Railroad s/o Oak Ridge (City)	33,000	2010	4	36,000	.92	E
157.	Railroad n/o Lyons (City)	34,000	2010	4	36,000	.94	E
161.	Ridge Route n/o Lake Hughes (County)	5,000	2007	6	54,000	0.09	A
166.	Rockwell Canyon n/o McBean (City)	8,000	2005	4	36,000	0.22	A
168.	Rye Canyon w/o Ave Scott (City)	41,000	2005	6	54,000	0.76	C
169.	Rye Canyon e/o The Old Road (County)	47,000	2007	6	54,000	0.87	D
172.	San Martinez Grande Canyon n/o SR-126 (County)	<500	2005	2	15,000	0.00	A
174.	Sand Canyon n/o Soledad Canyon (City)	7,000	2005	2	18,000	0.39	A
175.	Sand Canyon s/o Soledad Canyon (City)	27,000	2005	4	36,000	0.75	C
192.	Sierra Hwy n/o Vasquez Canyon (County)	11,000	2008	2	18,000	0.61	B
195.	Sierra Hwy n/o Soledad Canyon (City)	23,000	2010	4	36,000	0.64	B
196.	Sierra Hwy s/o Soledad Canyon (City)	36,000	2010	6	54,000	0.67	B
198.	Sierra Hwy s/o Via Princessa (City)	24,000	2010	4	36,000	.67	**B**
201.	Sierra Hwy n/o Newhall (City)	19,000	2010	4	36,000	.53	**A**

Map No.	Roadway Segment (Location)	Average Daily Traffic Volume	Year	Number of Lanes	Capacity	V/C Ratio	LOS
211.	Soledad Canyon e/o Bouquet Canyon (City)	47,000	2010	6	54,000	.87	D
212.	Soledad Cyn w/o Golden Valley (City)	45,000	2010	6	54,000	.83	D
213.	Soledad Cyn e/o Golden Valley (City)	37,000	2010	6	54,000	.69	B
215.	Soledad Canyon w/o Whites Canyon (City)	44,000	2010	6	54,000	0.81	D
216.	Soledad Cyn e/o Whites Cyn (City)	43,000	2010	6	54,000	.80	C
217.	Soledad Canyon e/o Sierra Hwy (City)	30,000	2010	6	54,000	0.56	A
220.	Soledad Cyn e/o SR-14 (at Sand Cyn) (City)	17,000	2010	4	36,000	.47	A
222.	Soledad Canyon e/o Shadow Pines (City)	5,000	2009	4	36,000	0.22	A
223.	Soledad Canyon e/o SR-14 (County)	2,000	2009	2	18,000	0.33	A
224.	Soledad Canyon w/o Agua Dulce (County)	2,000	2005	2	18,000	0.11	A
225.	Soledad Canyon e/o Agua Dulce (County)	2,000	2006	2	18,000	0.11	A
227.	SR-126 w/o San Martinez Grande Canyon (County)	24,000	2007	4	44,000	0.55	A
228.	SR-126 w/o Chiquito Canyon/Long Canyon (County)	24,000	2007	4	44,000	0.55	A
229.	SR-126 w/o Wolcott (County)	24,000	2007	4	44,000	0.55	A
230.	SR-126 w/o Commerce Center (County)	25,000	2007	4	44,000	0.57	A
231.	SR-126 w/o I-5 (County)	34,000	2007	6	66,000	0.52	A
239.	The Old Road n/o Sedona Way (County)	15,000	2006	2	18,000	0.83	D
242.	The Old Road n/o Biscailuz (County)	10,000	2006	2	18,000	0.56	A
245.	The Old Road s/o Henry Mayo (County)	15,000	2006	4	36,000	0.42	A
247.	The Old Road n/o Magic Mtn (County)	31,000	2006	4	36,000	0.86	D
248.	The Old Road s/o Magic Mtn (County)	15,000	2006	4	36,000	0.42	A
254.	Avenue Tibbitts s/o Newhall Ranch (City)	11,000	2007	6	54,000	0.20	A
262.	Valencia w/o The Old Road (County)	16,000	2006	6	54,000	0.30	A
266.	Valencia w/o McBean (City)	48,000	2010	7	63,000	.76	C
271.	Valencia s/o Cinema (City)	54,000	2010	6	54,000	1.00	E
273.	Valley s/o Lyons (City)	2,000	2007	4	36,000	0.06	A
274.	Vasquez Canyon e/o Bouquet Canyon (County)	7,000	2007	2	18,000	0.39	A

Map No.	Roadway Segment (Location)	Average Daily Traffic Volume	Year	Number of Lanes	Capacity	V/C Ratio	LOS
275.	Vasquez Canyon w/o Sierra Hwy (County)	8,000	2008	2	18,000	0.44	A
288.	Whites Canyon n/o Soledad (City)	39,000	2005	4	36,000	1.08	**F**
289.	Whites Canyon s/o Soledad (City)	32,000	2005	6	54,000	0.59	A
290.	Wiley Canyon e/o Orchard Village (City)	11,000	2007	4	36,000	0.31	A
294.	Wiley Canyon n/o Calgrove (City)	9,000	2007	2	18,000	0.50	A

Source: Austin-Foust Associates, Inc., 2010.
Note: Only those roadway segments for which ADT volumes are available are shown above.

Principal Intersections

Key intersections within the OVOV Planning Area accommodate significant volumes of traffic and are critical to vehicle mobility within the Santa Clarita Valley. These intersections are indentified in **Figure 3.2-4, Study Area Principal Intersections**. As with the ADT counts, the peak hour counts were collected at various times between 2005 and 2008 and provide a representative sample of existing traffic conditions throughout the Santa Clarita Valley.

Table 3.2-5, ICU and Level of Service Summary – Principal Intersections (2007–2010), lists the existing ICU ratio and LOS rating for each principal intersection during the AM and PM peak hour periods. These periods represent the hours during which the greatest number of vehicle trips on a given roadway are generated. The AM peak period is between 7:00 AM and 9:00 PM, and the PM peak period is between 3:00 PM and 6:00 PM. As shown in the table, all principal intersections operate at LOS D or better except for the Bouquet Canyon Road/Soledad Canyon Road intersection in the City's Planning Area, which operates at LOS E during the PM peak hour. No principal intersections currently operate at LOS F.

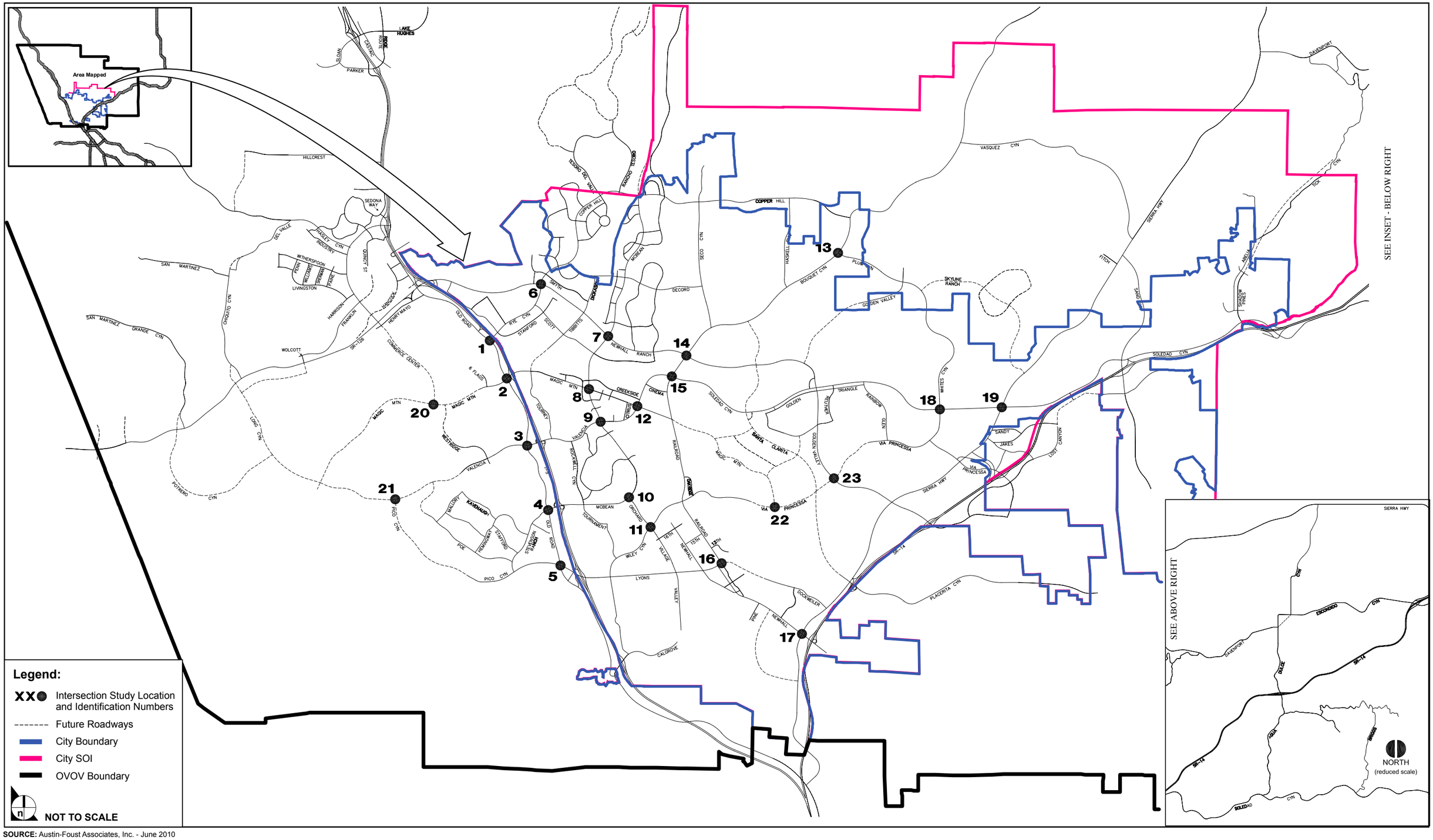
Table 3.2-5
ICU and Level of Service Summary – Principal Intersections (2007–2010)

Intersection (Location)	AM Peak Hour ICU	AM Peak Hour LOS	PM Peak Hour ICU	PM Peak Hour LOS
1. The Old Road & Rye Canyon (County)	.61	B	.66	B
2. The Old Road & Magic Mountain (County)	.28	A	.32	A
3. The Old Road & Valencia (County)	.67	B	.44	A
4. The Old Road & McBean (County)	.58	A	.76	C
5. The Old Road & Pico Canyon (County)	.76	C	.71	C
6. Rye/Copper Hill & Newhall Ranch (City)	.63	B	.70	B
7. McBean & Newhall Ranch (City)	.73	C	.78	C
8. McBean & Magic Mountain (City)	.61	B	.76	C
9. McBean & Valencia (City)	.61	B	.74	C
10. Orchard Village & McBean (City)	.57	A	.68	B
11. Orchard Village & Wiley Canyon (City)	.60	A	.62	B
12. Valencia & Magic Mountain (City)	.58	A	.66	B
13. Bouquet Canyon & Plum Canyon (City)	.68	B	.73	C
14. Bouquet Canyon & Newhall Ranch (City)	.66	B	.82	D
15. Bouquet Canyon & Soledad Canyon (City)	.68	B	.77	C
16. Railroad & Lyons (City)	.57	A	.56	A
17. Sierra Highway & Newhall (City)	.57	A	.64	B
18. Whites Canyon & Soledad Canyon (City)	.80	C	.86	D
19. Sierra Highway & Soledad Canyon (City)	.67	B	.76	C

Source: Source: Austin-Foust Associates, Inc., 2010.

Planned Roadway Improvements

In order to provide greater connectivity and capacity for east-west traffic across the Santa Clarita Valley, the County and City have worked in partnership to complete the Cross-Valley Connector. When completed, the 8.5-mile system of arterial road, bridges, and intersections will provide a seamless connection between Newhall Ranch Road and Golden Valley Road, and a direct connection between the I-5/SR-126 junction and the SR-14/Golden Valley Road interchange. In addition to serving auto and truck traffic in the Santa Clarita Valley with six to eight travel lanes, the Cross-Valley Connector was designed to include a Class 1 bike path adjacent to the roadway and a landscaped median. Completed in 2010, the Cross-Valley Connector is projected to substantially reduce traffic volumes on Soledad Canyon Road and other major arterials in the City.



SOURCE: Austin-Foust Associates, Inc. - June 2010

FIGURE **3.2-4**

Study Area Principal Intersections

112-023•09/10

Public Transportation

Public transportation within the County's Planning Area is primarily operated by the City.

City of Santa Clarita Transit

Local and regional bus service is provided by City of Santa Clarita Transit, which operates local routes within the OVOV Planning Area and commuter service into and out of Century City, the Antelope Valley, Van Nuys, and Warner Center. The City completed a Transit Development Plan (TDP) in 1997, which made several recommendations for improvements and modifications. Since 1997 and based on the TDP, total transit system ridership has more than doubled. The City updated the TDP in 2006.

City of Santa Clarita Transit provides connections with services by Metrolink, Antelope Valley Transit Authority, Metro, and other regional transit providers. City of Santa Clarita Transit provides service on nine local fixed routes, nine commuter express routes, four station link routes, and supplemental school day service. Local routes provide service seven days a week while the remaining services operate on weekdays only. Express buses operate to and from the Antelope Valley, downtown Los Angeles, Van Nuys, Westwood/Century City, and Woodland Hills. City of Santa Clarita Transit's regional routes serve several park-and-ride lots located throughout the Santa Clarita Valley, as well as the Santa Clarita and Newhall Metrolink stations. The areas generating the highest transit ridership are Newhall and Canyon Country in the vicinity of the intersection of Soledad Canyon Road and Sierra Highway.

City of Santa Clarita Transit also provides daily Dial-a-Ride (DAR) service within the Santa Clarita Valley to provide service to senior citizens and disabled residents. Much of the DAR services are to the Adult Day Care Center and the Senior Center in Newhall. The updated TDP proposes several operational improvements to improve efficiency of this program.

Commuter Express Transit Service

City of Santa Clarita Transit operates local commuter service into and out of Century City, downtown Los Angeles, the Antelope Valley, and Warner Center. Most of these routes are well used; use is monitored and adjustments are made to times if necessary to accommodate demand. The busiest commuter transit stops serve the Metrolink stations and park-and-ride lots. Commuters have identified the need to increase service to downtown Los Angeles during mid-day hours, and to provide service to the North Hollywood Metrolink Station, which has service to the Orange and Red Lines. City of Santa Clarita Transit will continue to expand service to meet customer needs as funding allows.

Special Transit Services

In 2006, the City acquired an old-fashioned trolley (Santa Clarita Hometown Trolley) that provides free service to major destination points within the community, including the Town Center, Six Flags Magic Mountain, and the Aquatics Center. Service hours and routes may be expanded in the future. In order to facilitate multi-modal transportation, City of Santa Clarita Transit installed bicycle racks on all buses in July 2006. These racks can accommodate two to three bicycles per bus. Approximately 100 riders per month use the bicycle racks.

Bus Stop Improvement Program

The Bus Stop Improvement Program identified opportunities to create uniform and aesthetically pleasing bus stop improvements throughout the Santa Clarita Valley. As highly visible features within the streetscape right-of-way, bus shelters and benches provide an opportunity to assist in creating a distinctive identity for the Santa Clarita Valley, as well as promoting a positive environment for transit riders. A goal of the program is to remove shelters that provide advertising and replace them with an architecturally enhanced bus shelter design that meets federal regulations and enhances the Santa Clarita Valley's image.

Park-and-Ride Lots

Two park-and-ride lots are located in and near the County's Planning Area to encourage the use of public transit for a portion of commuter travel. All park-and-ride lots within the City have transit service except for the lot at Golden Valley Road at SR-14. Several of the park-and-ride lots, including those at the Newhall and Santa Clarita Metrolink stations, are at or exceeding capacity. Additional commuter parking is provided in scattered locations within businesses adjacent to transit routes.

School Bus Transportation

Each of the elementary school districts provides yellow bus transportation to students. Over the last decade the William S. Hart School District has gradually eliminated school buses to junior high and high schools. City of Santa Clarita Transit provides transit services near the schools, providing an alternative means of transportation for students although not designated as the official school transport provider.

Rail Service

Metrolink Service

The Southern California Regional Rail Authority (SCRRA) operates Metrolink, a five-county commuter rail network of over 400 miles. Metrolink serves Union Station in downtown Los Angeles, where connections to other trains operated by Amtrak can be made, or where riders may board buses, vans, or the Metro Red Line subway to central downtown Los Angeles locations. Union Station also provides connections to the Metro Gold Line, a light rail transit line connecting to Pasadena and other San Gabriel Valley destinations, and to Los Angeles International Airport (LAX) via the Metro Purple, Blue and Green light rail lines or the Fly-Away Bus service.

Metrolink provides commuter service between Santa Clarita and downtown Los Angeles, Glendale, Burbank, Sun Valley, Sylmar, San Fernando, and the Antelope Valley. The Antelope Valley line operates on the Union Pacific rail line, which is also used for occasional freight rail service.

Metrolink's Santa Clarita station near Soledad Canyon Road in Saugus, about 2 miles east of Valencia, provides parking for about 500 vehicles, restroom facilities, and a passenger drop-off area. The station also serves as a major transit center for buses. The Via Princessa station, which opened as a temporary facility in 1994, contains 420 parking spaces. The Jan Heidt Newhall station in Newhall contains 250 parking spaces.

As of 2008, 12 commuter trains run daily in each direction on the Antelope Valley line from Monday through Friday, with five trains departing Santa Clarita to Union Station before 8:00 AM. Three of the 12 daily trains in each direction do not extend to the Antelope Valley, and City of Santa Clarita Transit provides connecting express buses for those trips. Reduced weekend service is also available on the Antelope Valley Line, with six trains on Saturday and three trains on Sunday running between Union Station and Lancaster.

Amtrak Service

Amtrak rail service does not operate between Bakersfield and Santa Clarita. However, Amtrak operates an extensive network of daily express buses along the I-5 freeway that connects throughout Southern California, to and from the daily San Joaquin trains that originate at the Bakersfield Amtrak station. Of these connecting Bakersfield buses, a total of 5 daily northbound and 6 daily southbound trips stop in Santa Clarita at the Newhall Metrolink station.

Future Rail Service

The State of California has been studying the feasibility of a statewide intercity high speed rail network since the early 1990s. Various possible alignments have been reviewed by the California High Speed Rail Authority for the proposed 700-mile route linking the cities of Sacramento, San Francisco, Los Angeles and San Diego. The proposed rail system would use steel wheels on steel rails and be powered by electricity, with top speeds of over 200 miles per hour. One segment of the proposed route would extend from Union Station in Los Angeles to Bakersfield, through the San Fernando Valley, Santa Clarita, the Antelope Valley, and Tehachapi Pass. Under this scenario, the closest station serving Santa Clarita would likely be Sylmar.

In addition to the State's high speed rail project, the Orangeline Development Authority (OLDA) was formed as a joint powers authority to "finance, acquire, design, construct, reconstruct, improve, and operate the facilities and improvements to the Orangeline," a proposed regional magnetic levitation (maglev) rail network throughout Southern California. OLDA includes 14 Orange County and Los Angeles County cities, including the City of Santa Clarita. The Orangeline high-speed maglev is proposed as an elevated transportation system that would provide service between Irvine and Palmdale with stations located at key locations along the 108-mile route, including one in Santa Clarita proposed in the vicinity of the SR-14/Via Princessa interchange. The proposed network would also link Los Angeles International Airport to airports in Ontario and Palmdale as well as extend to Las Vegas. The County and City will work cooperatively with the OLDA on the alignment for the Orangeline rail through the OVOV Planning Area, and identifying the most suitable station site in the Santa Clarita Valley.

Bicycle Circulation System

The Santa Clarita Valley's interconnected network of bikeways provides residents with both recreational opportunities and options for reducing vehicle trips. Bikeways are classified into three categories based on their location and type. A Class I bikeway is an exclusive, two-way path for bicycles that is completely separated from a street or highway. Class II bike lanes are signed and striped one-way lanes on streets or highways, typically at the edge of the pavement. Bike lanes provide a demarcated space for bicyclists within the roadway right-of-way, which is especially important on streets with moderate or higher volumes and speeds. Class III bike routes share the right-of-way with vehicles; they may be signed, but are not exclusively striped for use by cyclists. Although bike routes offer little benefit to cyclists on busy roadways, they can be used to guide cyclists through the street network. On any street carrying over 10,000 vehicles per day at speeds of 30 mph or higher, striped bike lanes are recommended over bike routes. In selecting routes for bikeways that share the right-of-way with vehicles, design criteria include

connectivity, traffic volumes, speeds, curb width, intersection protection, and the number of commercial driveways.

The Metro Board adopted the Metro Bicycle Transportation Strategic Plan (Metro Bicycle Plan) in 2006 to promote bicycle use throughout the County. The Metro Bicycle Plan's vision is to make cycling a viable travel choice by promoting links between bicycle facilities and the transit network. The plan identifies four "biketransit" hubs within the Santa Clarita Valley: the Valley's three Metrolink commuter rail stations, and the McBean Transfer Station. Another goal of the Metro Bicycle Plan was to evaluate gaps in the interjurisdictional bikeway network connecting cities and unincorporated areas to destinations and transit stops, and provide strategies for connecting bikeway links. Within the Santa Clarita Valley, four gaps in the interjurisdictional bikeway network were identified by the Metro Bicycle Plan. These gaps are:

- Old Road - Within jurisdiction of the County and is located along Old Road adjacent to I-5 with a connection between Valencia, Santa Clarita and San Fernando Road Metrolink right-of-way bike path in the San Fernando Valley.
- Route 126 – Within jurisdiction of the County and is connected between Santa Clarita and the Ventura County Line (portion of bikeway extends through the Newhall Ranch Specific Plan area).
- Castaic/San Francisquito Creek – Within jurisdiction of the County/City and is connected between Santa Clarita and Castaic Lake along Castaic Creek, San Francisquito Creek, and I-5.
- Sierra Highway – Within jurisdiction of the County/City and is connected between the Old Road and Soledad Canyon Bike Path.

Funds are available from the Bicycle Transportation Account program to help improve bicycle facilities, provided local agencies have adopted Bicycle Transportation Plans. The Master Plan for Trails within the Newhall Ranch Specific Plan shows a regional trail planned adjacent to the Santa Clara River from the eastern edge of the project to the Ventura County Line. When completed, this trail would fulfill the need for a bikeway connection between the Santa Clarita Valley and Ventura County.

Bicycle lockers are provided at all three Metrolink stations and at City Hall. Several major employers, such as Six Flags Magic Mountain and The Master's College, provide bicycle parking and changing facilities to promote bicycle support for employees.

Pedestrian Circulation System

The Santa Clarita Valley's existing pedestrian network is comprised of sidewalks, paseos, and multi-use trails. Sidewalks are defined as pathways running alongside a parallel roadway. Paseos are paved walking paths that provide pedestrian links outside of the street network. Multi-use trails are unpaved

trails that are suitable for walkers, hikers, equestrians and mountain bikers. Most of the major roadways in the Santa Clarita Valley have sidewalks along portions of their length. Along many arterials, such as Soledad Canyon Road, sidewalks are located adjacent to the curb and are not buffered from vehicle traffic by landscaped parkways, causing an unpleasant walking environment due to traffic noise and fumes. In other areas, such as McBean Parkway, sidewalks are separated from vehicle lanes by landscaped parkways, resulting in a more user-friendly pedestrian experience. The network of sidewalks is discontinuous in many areas; sidewalks are not provided on some residential streets, in some industrial areas, or on designated rural roads. Not all bus stops are served by sidewalks, and in some areas sidewalks are not provided on both sides of a street. Some rural communities in the Santa Clarita Valley, such as Agua Dulce and those with special standards districts such as Placerita Canyon and Sand Canyon, have opted not to have concrete sidewalks and prefer streetscape designs more in keeping with the rural and equestrian character of these neighborhoods.

Airports

Aviation facilities are an integral component of the regional transportation system. The Los Angeles World Airports (LAWA) provides commercial air travel to the OVOV Planning Area through its main facilities in Los Angeles (LAX) and the Van Nuys Regional Airport. In addition, the Burbank/Glendale/Pasadena Regional Airport (also called the Bob Hope Airport) serves residents of the OVOV Planning Area.

Santa Clarita Valley residents primarily use the Bob Hope Airport in Burbank for shorter distance flights and LAX for international flights, or for destinations not served by Burbank. In addition to taxi service, shuttles provide trips to local airports, including the Van Nuys Fly-Away Shuttle. Fly-Away service to LAX is also available from Union Station in Los Angeles, which connects with Metrolink service to the Santa Clarita Valley.

The Agua Dulce Airpark is a privately owned airport serving general aviation needs with one runway, aircraft parking, fuel, and basic passenger services. The Airpark averages about 28 operations per week and stores about 35 aircraft. Most of the Airpark's activity involves local operations. The Airpark is located in an unincorporated area of Los Angeles County, and the County has adopted an Airport Land Use Plan to protect the clear zones and ensure land use compatibility with airport operations. In 2006, the County approved continued operation and expansion of Airpark services, including allowing up to 300 airplanes and adding helicopter operations.

Future Airport Service

Planned expansion of passenger air service at the Palmdale Regional Airport is being studied as an alternative to continued expansion of service at LAX. Officials representing the Santa Clarita Valley have indicated support for this plan, which would make air service more accessible to Santa Clarita Valley residents. Due to congestion on the I-5 and I-405 freeways, expanded airport operations in Palmdale would provide a shorter and less congested alternative for air passengers from the Santa Clarita Valley.

REGULATORY FRAMEWORK

Congestion Management Program

The CMP was enacted by the California Legislature in 1989 to improve traffic congestion in urban areas. The program became effective with the passage of Proposition 111 in 1990, which also increased the State gas tax. Funds generated by Proposition 111 are available to cities and counties for regional road improvements, provided these agencies are in compliance with CMP requirements. The intent of the legislation was to link transportation, land use, and air quality decisions by addressing the impact of local growth on the regional transportation system. State statute requires that a CMP be developed, adopted, and updated biennially for every county that includes an urbanized area, which shall include every city and county government within that county. Therefore, the County of Los Angeles and the City of Santa Clarita must comply with CMP requirements in developing a circulation plan for the Santa Clarita Valley.

Under this legislation, regional agencies are designated within each county to prepare and administer the CMP for agencies within that county. Each local planning agency included in the CMP has the following responsibilities:

- Assisting in monitoring the roadways designated within the CMP system;
- Adopting and implementing a trip reduction and travel demand ordinance;
- Analyzing the impacts of local land use decisions on the regional transportation system; and
- Preparing annual deficiency plans for portions of the CMP system where level-of-service standards are not maintained.

Metro is the CMP agency for Los Angeles County. Metro has the responsibility to review compliance with the CMP by agencies under its jurisdiction. For any agency out of compliance, after receiving notice and after a correction period, a portion of State gas tax funds may be withheld if compliance is not

achieved. In addition, compliance with the CMP is necessary to preserve eligibility for state and federal funding of transportation projects.

Metro adopted the County's first CMP in 1992, and completed its most recent update in 2004. The statute requires that all State highways and principal arterials be included within the CMP roadway system. Within the Santa Clarita Valley, the following roadways are designated as CMP roadways:

- I-5 Freeway;
- SR-14 Freeway;
- Sierra Highway from Newhall Avenue (formerly San Fernando Road) to SR-14 at Red Rover Mine Road;
- Magic Mountain Parkway from I-5 to Railroad Avenue (formerly San Fernando Road);
- Railroad Avenue/Newhall Avenue (formerly San Fernando Road) from Magic Mountain Parkway to SR-14; and

The 2004 CMP noted that both the I-5 and SR-14 freeways within the OVOV Planning Area demonstrate traditional commute patterns, with congestion flowing into Los Angeles and the San Fernando Valley in the morning and a reverse flow in the afternoon. Various strategies are available to local jurisdictions to mitigate CMP traffic impacts, including constructing new roadway improvements, managing traffic flow through signal improvements and trip reduction measures, and land use strategies such as locating higher density uses in proximity to public transit.

Metro Bicycle Transportation Strategic Plan

The Metro Board adopted the Metro Bicycle Transportation Strategic Plan in 2006 to promote bicycle use throughout Los Angeles County. The Plan's vision is to make cycling a viable travel choice by promoting links between bicycle facilities and the transit network. The plan identifies four "bike-transit" hubs within the Santa Clarita Valley: the three Metrolink commuter rail stations, and the McBean Transfer Station. The Metro Bicycle Transportation Strategic Plan evaluated gaps in the inter-jurisdictional bikeway network connecting cities and unincorporated areas to destinations and transit stops. Within the Santa Clarita Valley, four gaps in the inter-jurisdictional bikeway network were identified with the Old Road, SR-126, Castaic/San Francisquito Creek, and Sierra Highway corridors.

THRESHOLDS OF SIGNIFICANCE

In order to assist in determining whether a project will have a significant effect on the environment, the *State CEQA Guidelines*, Appendix G identify criteria for conditions that may be deemed to constitute a substantial or potentially substantial adverse change in physical conditions. Potentially significant impacts on transportation and circulation would occur if the proposed Area Plan would:

- Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to-capacity ratio on roads, or congestion at intersections);
- Exceed, either individually or cumulatively, a level of service standard established by the County congestion management agency for designated roads or highways;
- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks;
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);
- Result in inadequate emergency access;
- Generate a parking demand that exceeds municipal code–required parking capacity.
- Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks); and/or
- Cause a hazard or barrier for pedestrians or bicyclists.

According to the County,[2] the project would cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system if the project would:

- Increase the V/C ratio or ICU by at least one percentage point (0.01) at any location where the final V/C ratio or ICU is 0.91 or greater (LOS E or F).
- Increase the V/C ratio or ICU by at least two percentage points (0.02) at any location where the final V/C ratio or ICU is between 0.81 and 0.90 (LOS D).
- Increase the V/C ratio or ICU by at least four percentage points (0.04) at any location where the final V/C ratio or ICU is between 0. 71 and 0.80 (LOS C).

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2 County of Los Angeles Department of Public Works, *County of Los Angeles Traffic Impact Analysis Report Guidelines*, (1997), p. 5 and 6.

These standards would be applied to individual development projects as buildout of the County's Planning Area occurs.

Los Angeles County does not specify an acceptable LOS for the purpose of long-range planning. However, in conformance with the Los Angeles County CMP, the maximum acceptable level of service on arterial roads (i.e., major, secondary, and limited secondary highways) within the OVOV Planning Area is LOS E.

IMPACT ANALYSIS

Impact 3.2-1 **Implementation of the proposed Area Plan could result in a potentially significant increase in traffic.**

Trip Generation

The Santa Clarita Valley Consolidated Traffic Model (SCVCTM) was used to derive traffic forecasts.[3] This traffic model produces peak hour and ADT forecasts for the OVOV area roadway system. Buildout land use data from the proposed County Area Plan and City General Plan Land Use Elements was used as the basis for the traffic forecasts.

The number of trips generated by a certain type of land use is estimated by applying a representative trip generation rate to the quantity of land use in the area under consideration. The SCVCTM uses a predefined set of trip generation rates calibrated specifically to local conditions to calculate both peak hour and ADT trips by land use.

Table 3.2-6, Trip Generation – Existing vs. OVOV Buildout compares the number of trips generated by existing (2004)[4] land uses to that generated by future (OVOV Buildout) land uses in the Santa Clarita Valley based on six generalized land use categories. As shown in the table, buildout of the OVOV land uses would result in an approximately 121 percent increase in valley-wide trip ends[5] over existing trip ends. However, this comparison does not account for future increases in trip ends that could result from growth under the existing County Area Plan and City General Plan. Therefore, the more appropriate approach involves comparing the number of trips that would be generated under buildout of the current

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3 The SCVCTM, originally developed in 1994, was substantially updated in 2004 with subsequent refinements. See **Appendix 3.2** for a more detailed discussion of the updates to this model and the version used in this traffic analysis.

4 One Valley One Vision Valley-Wide Traffic Study, Austin-Foust Associates, June 2010, 2-19.

5 Trip ends are daily trip ends where one trip is equal to two trip ends. One Valley One Vision Valley-Wide Traffic Study, Austin-Foust Associates, June 2010, 2-18.

County Area Plan and City General Plan to the number of trips that would be generated under buildout of the proposed County Area Plan and City General Plan. This comparison, which is presented in **Table 3.2-7, Trip Generation – Existing County Area Plan and City General Plan Buildout vs. OVOV Buildout**, forms the basis for the analysis of project impacts in this section. As shown in this table, buildout of the OVOV land uses would result in an approximately 3 percent increase in valley-wide trip ends over those that would be generated under buildout of the current County Area Plan and City General Plan.

Table 3.2-6
Trip Generation – Existing vs. OVOV Buildout

		Existing (2004)		Future (OVOV Buildout)		
Land Use Category	**Units**	**Quantity**	**Trip Ends**	**Quantity**	**Trip Ends**	**Increase**
Singe-Family Residential	du	48,251	471,153	81,395	795,563	69%
Multi-Family Residential	du	24,387	191,023	67,679	514,809	170%
Subtotal	*du*	*72,638*	*662,176*	*149,074*	*1,310,372*	*98%*
Commercial Retail	tsf	9,157.63	515,716	23,585.06	1,230,042	139%
Commercial Office	tsf	2,072.12	25,996	17,311.53	205,851	692%
Industrial Park	tsf	18,332.42	107,565	40,735.96	240,697	124%
Subtotal	*tsf*	*29,562.17*	*649,277*	*81,632.55*	*1,676,590*	*158%*
Other (Schools, etc.)	--	--	176,541	--	301,424	71%
	Total:	**--**	**1,487,994**	**--**	**3,288,386**	**121%[1]**

[1] *Represents an annual increase of approximately 2.6% (compounded) if buildout is presumed to occur over a 30-year period.*
du = dwelling units
tsf = thousand square feet
Trip Ends = Daily trip ends (one trip = 2 trip ends)

Table 3.2-7
Trip Generation – Existing County Area Plan and City General Plan Buildout vs. OVOV Buildout

		Existing Plan Buildout		Proposed Plan Buildout		
Land Use Category	**Units**	**Quantity**	**Trip Ends**	**Quantity**	**Trip Ends**	**Increase**
Singe-Family Residential	du	89,373	877,112	81,395	795,563	-9%
Multi-Family Residential	du	62,543	481,988	67,679	514,809	7%
Subtotal	*du*	*151,916*	*1,359,100*	*149,074*	*1,310,372*	*-4%*
Commercial Retail	tsf	21,561.65	1,134,793	23,585.06	1,230,042	8%
Commercial Office	tsf	14,746.77	169,850	17,311.53	205,851	21%
Industrial Park	tsf	43,144.21	254,465	40,735.96	240,697	-5%
Subtotal	*tsf*	*79,452.63*	*1,559,108*	*81,632.55*	*1,676,590*	*8%*
Other (Schools, etc.)	--	--	288,885	--	301,424	4%
	Total:	**--**	**3,207,093**	**--**	**3,288,386**	**3%[1]**

du = dwelling units
tsf = thousand square feet
Trip Ends = Daily trip ends (one trip = 2 trip ends)

Roadway Segments

A comparison of traffic forecasts based on the proposed OVOV plan (the proposed land uses along with the proposed highway network) to existing conditions is provided in **Table 3.2-8**. The table presents roadway segment V/C ratios and LOS values for each of the two scenarios. A comparable table for peak hour intersection conditions is provided in **Table 3.2-8**.

Table 3.2-8 demonstrates that with the proposed Highway Plan in place, each of the four of the five roadway segments that exceed are at LOS F for existing conditions are forecast to operate at LOS E or better with the proposed OVOV plan. The fifth segment that is at LOS F for existing conditions, McBean Parkway south of Avenue Scott, is shown to remain at LOS F with the OVOV plan. However, the V/C ratio at that location does not increase with the OVOV plan.

Table 3.2-8 (the comparison of existing conditions to OVOV Buildout Conditions) identifies three segments that are forecast to operate at LOS F, **Table 3.2-9** (the comparison of the current City/County plan to OVOV Buildout Conditions) identifies five roadway segments that are forecast to operate at LOS F due to a greater number of locations evaluated in **Table 3.2-9**. The number of locations evaluated in the comparison of existing conditions to OVOV Buildout Conditions is limited to the locations where existing traffic data is available, hence a fewer number of locations are evaluated in **Table 3.2-8**.

Table 3.2-8
ADT V/C and LOS – Existing Conditions vs OVOV Buildout Conditions
(With Highway Plan Roadways)

		Existing Conditions			OVOV General Plan With Highway Plan		
	Roadway Segment	Volume	V/C	LOS	Volume	V/C	LOS
1.	Agua Dulce n/o Escondido Cyn	4,000	.22	A	8,000	.22	A
2.	Agua Dulce n/o Davenport	3,000	.17	A	13,000	.36	A
4.	Agua Dulce s/o SR-14	<500	.00	A	3,000	.08	A
6.	Ave Scott s/o Stanford	14,000	.39	A	37,000	.69	B
8.	Ave Stanford s/o Vanderbilt	5,000	.14	A	17,000	.47	A
10.	Ave Stanford s/o Rye Cyn	9,000	.25	A	16,000	.44	A
11.	Bouquet Cyn n/o Vasquez	4,000	.22	A	6,000	.17	A
14.	Bouquet Cyn e/o Haskell	25,000	.69	B	32,000	.59	A
15.	Bouquet Cyn w/o Haskell	39,000	1.08	**F**	49,000	.91	E
16.	Bouquet Cyn e/o Seco	43,000	.96	E	54,000	1.00	E
17.	Bouquet Cyn w/o Seco	48,000	.89	D	53,000	.74	C
18.	Bouquet Cyn s/o Newhall Ranch	50,000	.69	B	77,000	1.07	**F**
20.	Bouquet Cyn n/o Magic Mtn	36,000	1.00	E	54,000	1.00	E
25.	Castaic n/o Lake Hughes	11,000	.31	A	5,000	.14	A
28.	Chiquito Cyn s/o San Martinez Cyn	1,000	.06	A	6,000	.33	A
31.	Commerce Center s/o Franklin	16,000	.30	A	39,000	.72	C
32.	Commerce Center n/o SR-126	11,000	.20	A	43,000	.80	C
35.	Copper Hill n/o Newhall Ranch	35,000	.49	A	54,000	.75	C
39.	Copper Hill e/o McBean	35,000	.97	E	41,000	.76	C
43.	Davenport e/o Sierra Hwy	2,000	.11	A	6,000	.17	A
44.	Davenport w/o Agua Dulce	2,000	.11	A	3,000	.08	A
46.	Decoro e/o Dickason	20,000	.56	A	14,000	.39	A
48.	Decoro w/o Hillsborough	16,000	.44	A	17,000	.47	A
51.	Dickason n/o Newhall Ranch	13,000	.36	A	21,000	.39	A
54.	Escondido e/o Agua Dulce	3,000	.17	A	5,000	.14	A
55.	Franklin e/o Wolcott Way	<500	.00	A	8,000	.53	A
56.	Franklin w/o Commerce Center	6,000	.17	A	11,000	.31	A
62.	Golden Valley s/o Centre Point	19,000	.53	A	39,000	.72	C
64.	Golden Valley e/o Sierra Hwy	14,000	.26	A	36,000	.67	B
68.	Hasley Cyn w/o Del Valle	3,000	.17	A	13,000	.72	C

Roadway Segment	Existing Conditions Volume	V/C	LOS	OVOV General Plan With Highway Plan Volume	V/C	LOS
69. Hasley Cyn w/o Commerce Center	7,000	.19	A	14,000	.39	A
70. Hasley Cyn w/o The Old Road	17,000	.31	A	38,000	.70	B
71. Hasley Cyn w/o I-5	11,000	.31	A	34,000	.63	B
74. Hillcrest w/o The Old Road	9,000	.25	A	17,000	.47	A
75. Jakes Way e/o Canyon Park	6,000	.33	A	12,000	.67	B
77. Lake Hughes e/o Castaic	9,000	.25	A	37,000	.69	B
78. Lake Hughes e/o Ridge Route	2,000	.11	A	7,000	.39	A
85. Lost Cyn n/o Canyon Park	6,000	.17	A	16,000	.30	A
86. Lost Cyn n/o Via Princessa	9,000	.25	A	21,000	.39	A
87. Lost Cyn s/o Via Princessa	2,000	.11	A	11,000	.31	A
92. Lyons e/o Orchard Village	47,000	1.31	**F**	52,000	.96	E
93. Lyons w/o Main Street	20,000	.56	A	24,000	.44	A
105. Magic Mtn e/o Valencia	16,000	.44	A	54,000	1.00	E
109. McBean s/o Copper Hill	21,000	.39	A	27,000	.50	A
112. McBean n/o Newhall Ranch	39,000	.72	C	48,000	.89	D
113. McBean s/o Newhall Ranch	50,000	.69	B	58,000	.81	D
114. McBean s/o Ave Scott	58,000	1.07	**F**	77,000	1.07	**F**
117. McBean s/o Valencia	35,000	.65	B	54,000	1.00	E
118. McBean n/o Orchard Village	40,000	.74	CB	43,000	.80	C
119. McBean e/o Rockwell Cyn	24,000	.44	A	44,000	.81	D
120. McBean w/o Rockwell Cyn	32,000	.59	A	53,000	.98	E
124. Newhall Ranch e/o Rye Cyn	11,000	.15	A	49,000	.68	B
126. Newhall Ranch e/o McBean	32,000	.44	A	68,000	.94	E
127. Newhall Ranch w/o Bouquet Cyn	37,000	.51	A	69,000	.96	E
128. Newhall Ranch e/o Bouquet Cyn	25,000	.69	B	46,000	.85	D
131. Newhall s/o Lyons	22,000	1.22	**F**	27,000	.75	C
132. Newhall n/o Valle Oro	44,000	.81	D	33,000	.61	B
133. Newhall n/o Sierra Hwy	41,000	.76	C	40,000	.74	C
136. Orchard Village s/o McBean	30,000	.83	D	54,000	1.00	E
137. Orchard Village s/o Wiley Cyn	29,000	.81	D	44,000	.81	D
138. Orchard Village n/o Lyons	21,000	.58	A	34,000	.63	B
146. Placerita Cyn e/o SR-14	4,000	.22	A	4,000	.11	A
150. Poe s/o Mallory	1,000	.03	A	3,000	.08	A
151. Poe w/o Stevenson Ranch	8,000	.22	A	14,000	.39	A

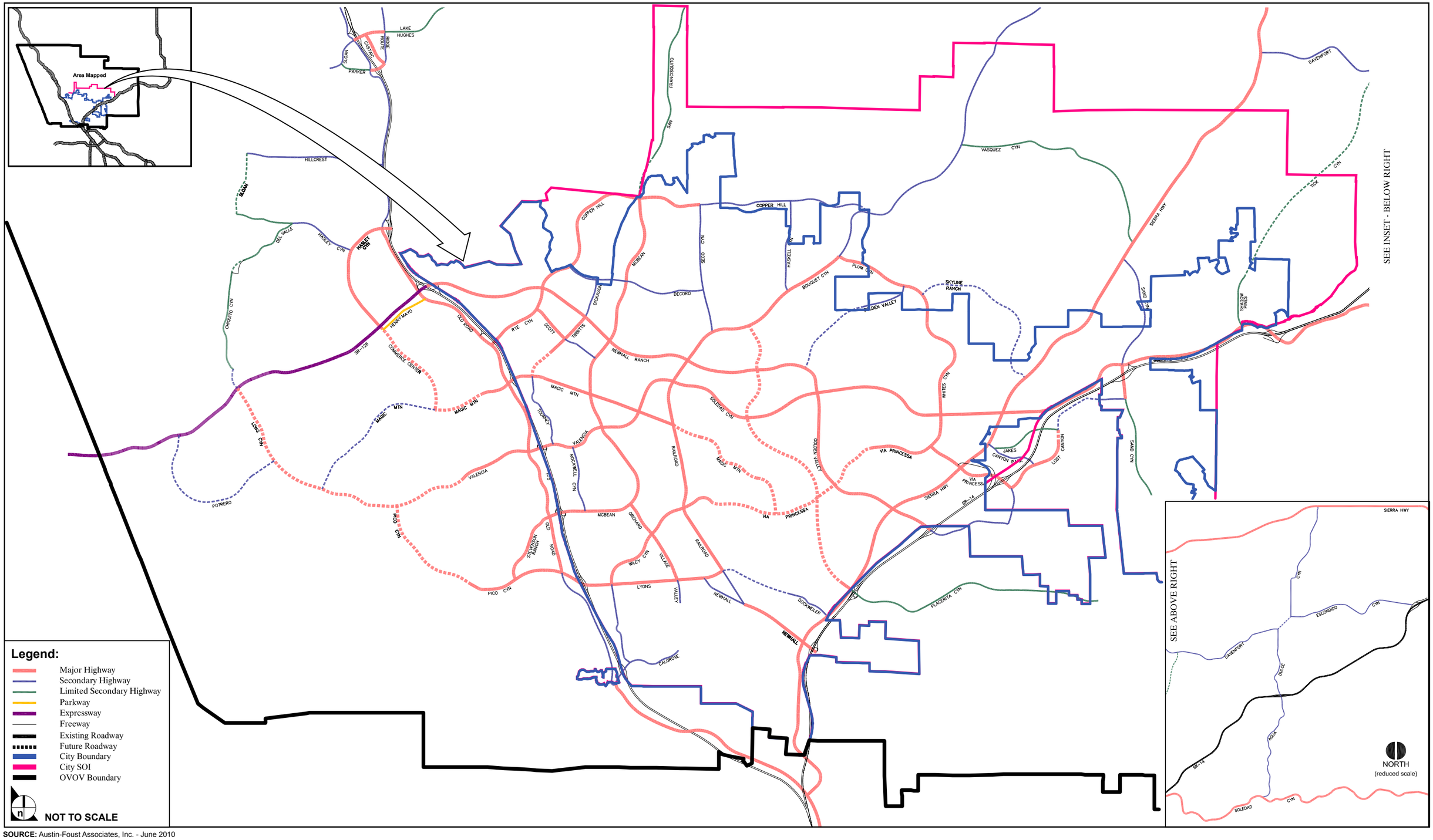
Roadway Segment	Existing Conditions Volume	V/C	LOS	OVOV General Plan With Highway Plan Volume	V/C	LOS
155. Railroad s/o Oak Ridge	33,000	.92	E	40,000	.74	C
157. Railroad n/o Lyons	34,000	.94	E	36,000	.67	B
161. Ridge Route n/o Lake Hughes	5,000	.09	A	35,000	.65	B
166. Rockwell Cyn n/o McBean	8,000	.22	A	23,000	.64	B
168. Rye Cyn w/o Ave Scott	41,000	.76	C	48,000	.89	D
169. Rye Cyn e/o The Old Road	47,000	.87	D	58,000	.92	E
172. San Martinez Grande Cyn n/o SR-126	<500	.00	A	5,000	.14	A
174. Sand Cyn n/o Soledad Cyn	7,000	.39	A	14,000	.39	A
175. Sand Cyn s/o Soledad Cyn	27,000	.75	C	25,000	.46	A
176. Sand Cyn s/o SR-14	11,000	.61	B	26,000	.48	A
177. Sand Cyn s/o Lost Cyn	9,000	.50	A	14,000	.78	C
192. Sierra Hwy n/o Vasquez Cyn	11,000	.61	B	16,000	.30	A
195. Sierra Hwy n/o Soledad Cyn	23,000	.64	B	52,000	.96	E
196. Sierra Hwy s/o Soledad Cyn	36,000	.67	B	36,000	.67	B
198. Sierra Hwy s/o Via Princessa	24,000	.67	B	30,000	.56	A
201. Sierra Hwy n/o Newhall	19,000	.53	A	23,000	.43	A
211. Soledad Cyn e/o Bouquet Cyn	47,000	.87	D	45,000	.83	D
212. Soledad Cyn w/o Golden Valley	45,000	.83	D	38,000	.70	B
213. Soledad Cyn e/o Golden Valley	37,000	.69	B	50,000	.93	E
215. Soledad Cyn w/o Whites Cyn	44,000	.81	D	38,000	.70	B
216. Soledad Cyn e/o Whites Cyn	43,000	.80	C	44,000	.81	D
217. Soledad Cyn e/o Sierra Hwy	30,000	.56	A	34,000	.63	B
220. Soledad Cyn e/o SR-14 (at Sand Cyn)	17,000	.47	A	18,000	.33	A
221. Soledad Cyn w/o Shadow Pines	11,000	.31	A	10,000	.19	A
222. Soledad Cyn e/o Shadow Pines	5,000	.14	A	17,000	.31	A
223. Soledad Cyn e/o SR-14	2,000	.11	A	10,000	.28	A
224. Soledad Cyn w/o Agua Dulce	2,000	.11	A	4,000	.11	A
225. Soledad Cyn e/o Agua Dulce	2,000	.11	A	3,000	.08	A
227. SR-126 w/o San Martinez Grande Cyn	24,000	.55	A	33,000	.75	C
228. SR-126 w/o Chiquito Cyn/Long Cyn	24,000	.55	A	38,000	.86	D
229. SR-126 w/o Wolcott	24,000	.55	A	59,000	.89	D
230. SR-126 w/o Commerce Center	25,000	.57	A	66,000	.75	C
231. SR-126 w/o I-5	34,000	.52	A	75,000	.85	D
239. The Old Road n/o Sedona Way	15,000	.83	D	23,000	.64	B

Roadway Segment	Existing Conditions Volume	V/C	LOS	OVOV General Plan With Highway Plan Volume	V/C	LOS
242. The Old Road n/o Biscailuiz	10,000	.56	A	18,000	.33	A
245. The Old Road s/o Henry Mayo	15,000	.42	A	16,000	.30	A
247. The Old Road n/o Magic Mtn	31,000	.86	D	52,000	.96	E
248. The Old Road s/o Magic Mtn	15,000	.42	A	30,000	.56	A
254. Tibbitts s/o Newhall Ranch	11,000	.20	A	34,000	.63	B
262. Valencia w/o The Old Road	16,000	.30	A	61,000	.97	E
266. Valencia w/o McBean	48,000	.76	C	61,000	.85	D
271. Valencia s/o Cinema	54,000	1.00	E	59,000	1.09	**F**
273. Valley s/o Lyons	2,000	.06	A	11,000	.31	A
274. Vasquez Cyn e/o Bouquet Cyn	7,000	.39	A	6,000	.33	A
275. Vasquez Cyn w/o Sierra Hwy	8,000	.44	A	10,000	.56	A
283. Via Princessa n/o Lost Cyn	13,000	.29	A	24,000	.44	A
288. Whites Cyn n/o Soledad	39,000	1.08	**F**	42,000	.78	C
289. Whites Cyn s/o Soledad	32,000	.59	A	48,000	.89	D
290. Wiley Cyn e/o Orchard Village	11,000	.31	A	42,000	.78	C
294. Wiley Cyn n/o Calgrove	9,000	.50	A	19,000	.53	A

*LOS in **Bold** exceeds performance criteria of LOS E.*

Level of service ranges: .00 - .60 A .61 - .70 B .71 - .80 C .81 - .90 D .91 – 1.00 E Above 1.00 F

Future daily traffic volumes on study arterial roadways were estimated for both the current County Area Plan and City General Plan land uses and the proposed OVOV land uses, with incorporation of the proposed Highway Plan, which is illustrated in **Figure 3.2-5, OVOV Highway Plan**. The proposed Highway Plan includes improvements such as roadway designation changes, widenings, and traffic signal modifications, to roadways located throughout the OVOV Planning Area. These improvements are summarized in **Appendix 3.2**. For purposes of this analysis, the buildout year is conservatively assumed to be 2035.



SOURCE: Austin-Foust Associates, Inc. - June 2010

FIGURE **3.2-5**

OVOV Highway Plan

Plan to Plan Analysis

Long-range ADT volumes for study arterial roadways under current County Area Plan and City General Plan buildout are shown in **Figure 3.2-6, Average Daily Traffic Volumes – Buildout of County Area Plan and Current City General Plan**. Long-range ADT volumes for study arterial roadways under the proposed County Area Plan and City General Plan buildout are shown in **Figure 3.2-7**, **Average Daily Traffic Volumes – Buildout of County Area Plan and Proposed City General Plan**.

As previously stated, the maximum acceptable LOS on arterial roads within the OVOV Planning Area is LOS E; therefore, a LOS F rating is considered unacceptable. According to **Table 3.2-9, Future Level of Service Summary – Arterial Roadways**, the following 10 roadway segments would operate at LOS F under buildout of the existing County Area Plan and City General Plan:

County

- County: Valencia Boulevard between Pico Canyon Road and Magic Mountain Parkway (West) (Segment No. 258)

City

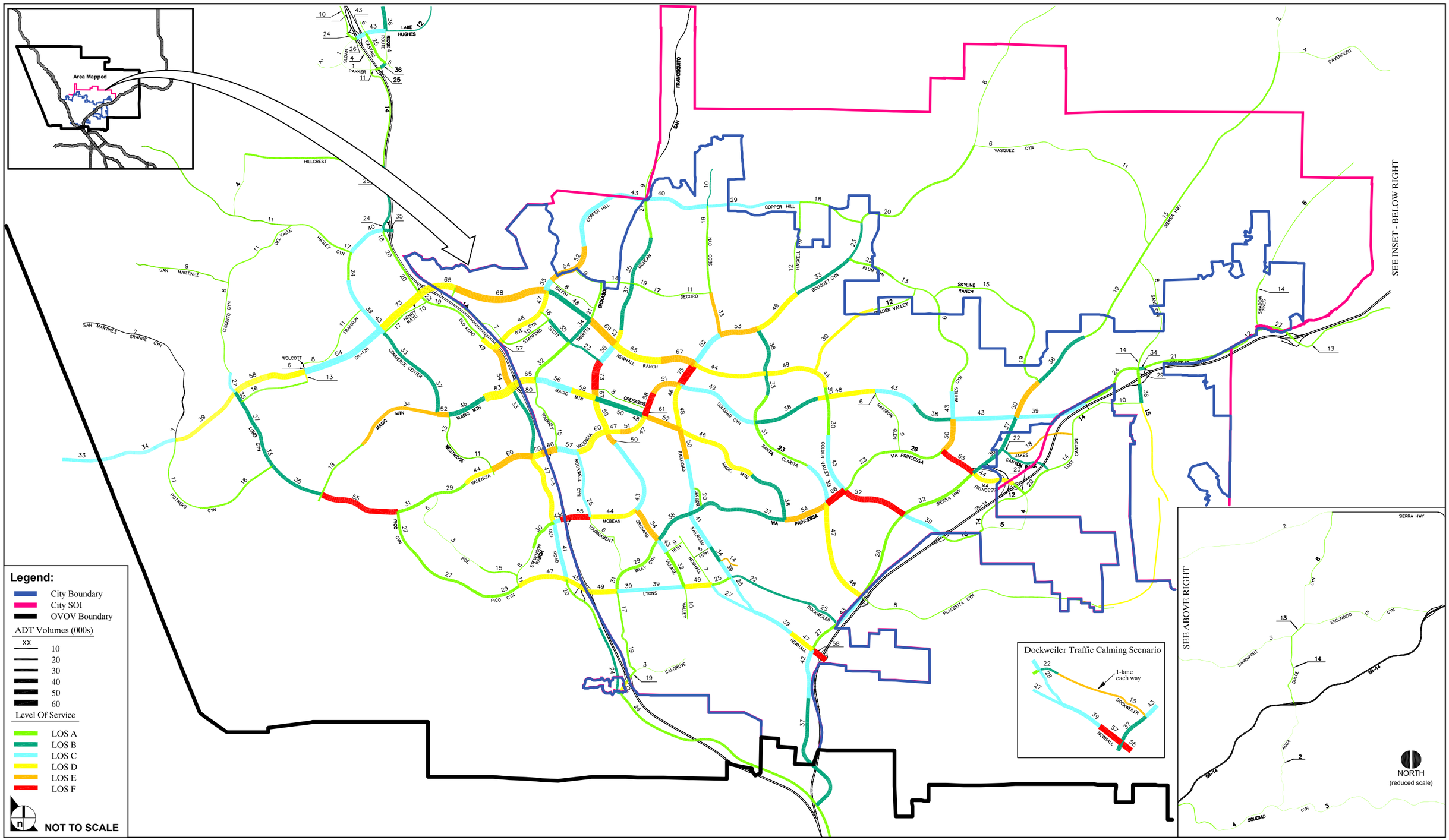
- Bouquet Canyon Road between Newhall Ranch Road and Soledad Canyon Road (Segment No. 18)
- Golden Valley Road between Via Princessa and Sierra Highway (Segment No. 63)
- McBean Parkway between Avenue Scott and Creekside Road (Segment No. 114)
- McBean Parkway between the I-5 freeway and Rockwell Canyon Road (Segment No. 120)
- Newhall Avenue between Sierra Highway and SR-14 freeway (Segment No. 134)
- Valencia Boulevard between Creekside Road and Magic Mountain Parkway (Segment No. 270)
- Valencia Boulevard between Cinema Drive and Creekside Road (Segment No. 271)
- Via Princessa between Santa Clarita Parkway and Golden Valley Road (Segment No. 278)
- Via Princessa between Whites Canyon Road and Sierra Highway (Segment No. 281)

In contrast, five arterial roadway segments, all located within the City, would operate at LOS F under buildout of the proposed County Area Plan and City General Plan.

City

- Bouquet Canyon Road between Newhall Ranch Road and Soledad Canyon Road (Segment No. 18)
- McBean Parkway between Avenue Scott and Creekside Road (Segment No. 114)
- Valencia Boulevard between Creekside Road and Magic Mountain Parkway (Segment No. 270)
- Valencia Boulevard between Cinema Drive and Creekside Road (Segment No. 271)
- Via Princessa between Santa Clarita Parkway and Golden Valley Road (Segment No. 278)

It should be noted that these same arterial roadway segments would also operate at LOS F under buildout of the existing County Area Plan and City General Plan. Therefore, five fewer roadway segments would operate at LOS F with implementation of the proposed County Area Plan and City General Plan. Consequently, roadway operations would incrementally improve with implementation of the proposed County Area Plan and City General Plan in place of the existing County Area Plan and City General Plan.

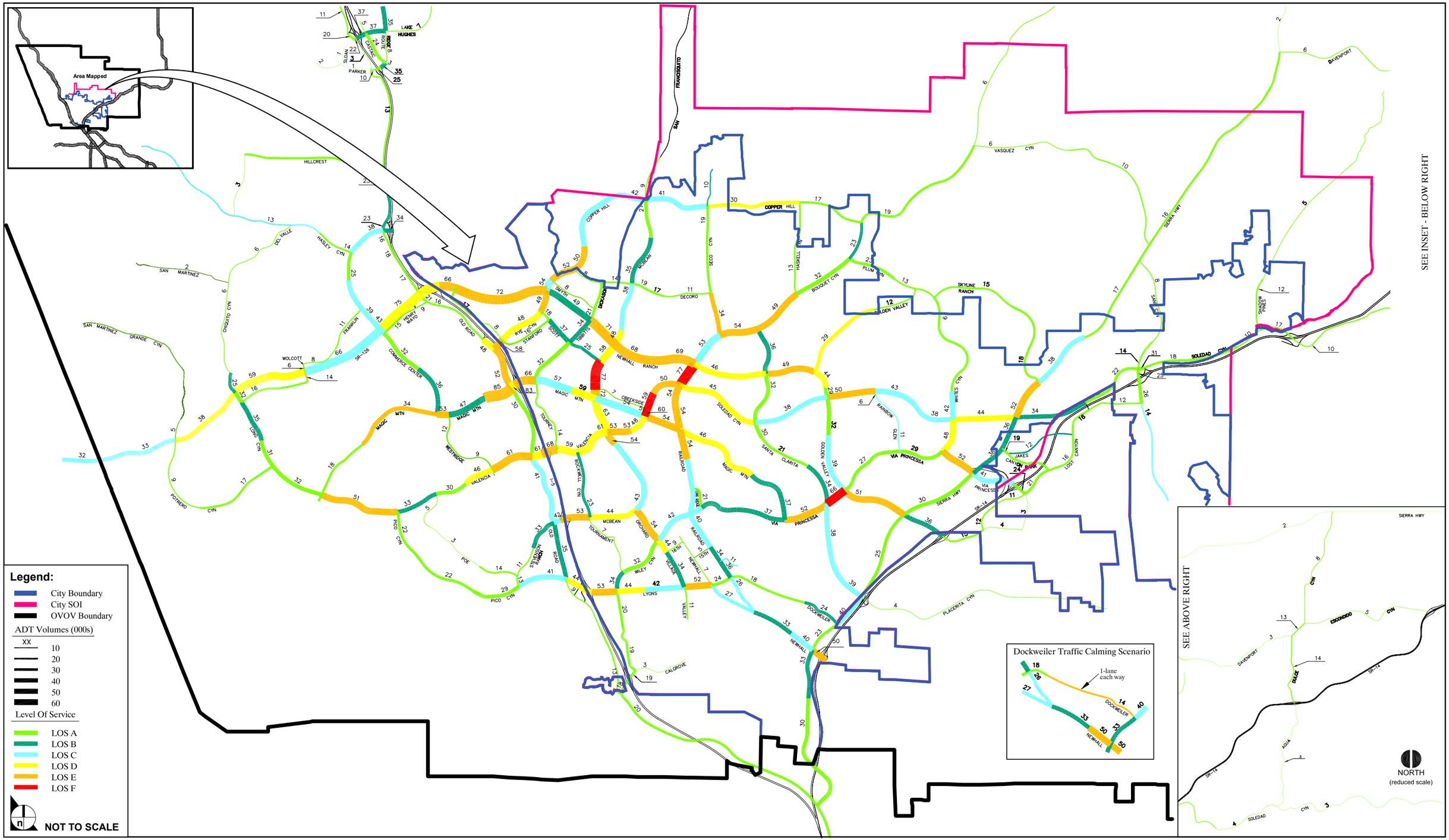


SOURCE: Austin-Foust Associates, Inc. - June 2010

FIGURE **3.2-6**

Average Daily Traffic Volumes - Buildout of County Area Plan and Current City General Plan

112-023•09/10



SOURCE: Austin-Foust Associates, Inc. - June 2010

FIGURE **3.2-7**

Average Daily Traffic Volumes - Buildout of County Area Plan and Proposed City General Plan

Table 3.2-9
Future Level of Service Summary – Arterial Roadways

				Existing Area Plan and General Plan			OVOV Area Plan and General Plan		
	Roadway Segment (Location)	Lanes	Capacity	Volume	V/C	LOS	Volume	V/C	LOS
1.	Agua Dulce n/o Escondido Canyon (County)	4	36,000	8,000	0.22	A	8,000	0.22	A
2.	Agua Dulce n/o Davenport (County)	4	36,000	13,000	0.36	A	13,000	0.36	A
3.	Agua Dulce n/o SR-14 (County)	4	36,000	14,000	0.39	A	14,000	0.39	A
4.	Agua Dulce s/o SR-14 (County)	4	36,000	2,000	0.06	A	3,000	0.08	A
5.	Ave Scott s/o Rye Canyon (City)	6	54,000	16,000	0.30	A	18,000	0.33	A
6.	Ave Scott s/o Stanford (City)	6	54,000	35,000	0.65	B	37,000	0.69	B
7.	Ave Scott n/o McBean (City)	4	36,000	23,000	0.64	B	25,000	0.69	B
8.	Ave Stanford s/o Vanderbilt (City)	4	36,000	14,000	0.39	A	17,000	0.47	A
9.	Ave Stanford n/o Rye Canyon (City)	4	30,000	7,000	0.23	A	8,000	0.27	A
10.	Ave Stanford s/o Rye Canyon (City)	4	36,000	15,000	0.42	A	16,000	0.44	A
11.	Bouquet Canyon n/o Vasquez (County)	4	36,000	6,000	0.17	A	6,000	0.17	A
12.	Bouquet Canyon n/o Copper Hill (County)	4	36,000	20,000	0.56	A	19,000	0.53	A
13.	Bouquet Canyon e/o Plum Canyon (City)	4	36,000	23,000	0.64	B	23,000	0.64	B
14.	Bouquet Canyon e/o Haskell (City)	6	54,000	33,000	0.61	B	32,000	0.59	A
15.	Bouquet Canyon w/o Haskell (City)	6	54,000	49,000	0.91	E	49,000	0.91	E
16.	Bouquet Canyon e/o Seco (City)	6	54,000	53,000	0.98	E	54,000	1.00	E
17.	Bouquet Canyon w/o Seco (City)	8	72,000	52,000	0.72	C	53,000	0.74	C
18.	Bouquet Canyon s/o Newhall Ranch (City)	8	72,000	75,000	1.04	**F**	77,000	1.07	**F**
19.	Bouquet Canyon s/o Soledad (City)	6	54,000	46,000	0.85	D	54,000	1.00	E
20.	Bouquet Canyon n/o Magic Mtn (City)	6	54,000	48,000	0.89	D	54,000	1.00	E
21.	Calgrove e/o The Old Road (County)	4	36,000	30,000	0.83	D	18,000	0.50	A
22.	Calgrove w/o Wiley Canyon (City)	4	36,000	19,000	0.53	A	19,000	0.53	A
23.	Calgrove e/o Wiley Canyon (City)	4	36,000	3,000	0.08	A	3,000	0.08	A
24.	Canyon Park e/o Sierra Hwy (County)	4	36,000	22,000	0.61	B	19,000	0.53	A
25.	Castaic n/o Lake Hughes (County)	4	36,000	6,000	0.17	A	5,000	0.14	A
26.	Castaic s/o Lake Hughes (County)	6	54,000	25,000	0.46	A	24,000	0.44	A
27.	Castaic s/o Ridge Route (County)	2	15,000	5,000	0.33	A	3,000	0.20	A
28.	Chiquito Canyon s/o San Martinez Canyon (County)	2	18,000	8,000	0.44	A	6,000	0.33	A
29.	Chiquito Canyon (Long Canyon) n/o SR-126 (County)	4	36,000	27,000	0.75	C	25,000	0.69	B

Roadway Segment (Location)	Lanes	Capacity	Existing Area Plan and General Plan Volume	V/C	LOS	OVOV Area Plan and General Plan Volume	V/C	LOS
30. Commerce Center s/o Industry (County)	6	54,000	24,000	0.44	A	25,000	0.46	A
31. Commerce Center s/o Franklin (County)	6	54,000	39,000	0.72	C	39,000	0.72	C
32. Commerce Center n/o SR-126 (County)	6	54,000	43,000	0.80	C	43,000	0.80	C
33. Commerce Center s/o Henry Mayo (County)	6	54,000	33,000	0.61	B	32,000	0.59	A
34. Commerce Center n/o Magic Mtn (County)	6	54,000	37,000	0.69	B	36,000	0.67	B
35. Copper Hill n/o Newhall Ranch (City)	8	72,000	55,000	0.76	C	54,000	0.75	C
36. Copper Hill s/o Decoro (City)	6	54,000	54,000	1.00	E	52,000	0.96	E
37. Copper Hill n/o Decoro (County)	6	54,000	52,000	0.96	E	50,000	0.93	E
38. Copper Hill w/o McBean (County)	6	54,000	43,000	0.80	C	42,000	0.78	C
39. Copper Hill e/o McBean (City)	6	54,000	40,000	0.74	C	41,000	0.76	C
40. Copper Hill e/o Seco Canyon (City)	4	36,000	29,000	0.81	D	30,000	0.83	D
41. Copper Hill e/o Haskell (County)	4	36,000	18,000	0.50	A	17,000	0.47	A
42. Creekside e/o McBean Pkwy (City)	4	36,000	8,000	0.22	A	7,000	0.19	A
43. Davenport e/o Sierra Hwy (County)	4	36,000	4,000	0.11	A	6,000	0.17	A
44. Davenport w/o Agua Dulce (County)	4	36,000	3,000	0.08	A	3,000	0.08	A
45. Decoro e/o Copper Hill (City)	4	36,000	9,000	0.25	A	8,000	0.22	A
46. Decoro e/o Dickason (City)	4	36,000	14,000	0.39	A	14,000	0.39	A
47. Decoro e/o McBean (City)	4	36,000	19,000	0.53	A	19,000	0.53	A
48. Decoro w/o Hillsborough (City)	4	36,000	17,000	0.47	A	17,000	0.47	A
49. Decoro w/o Seco Canyon (City)	4	36,000	11,000	0.31	A	11,000	0.31	A
50. Del Valle n/o San Martinez (County)	2	18,000	11,000	0.61	B	6,000	0.33	A
51. Dickason n/o Newhall Ranch (City)	6	54,000	21,000	0.39	A	21,000	0.39	A
52. Dockweiler e/o Railroad (City)	4	36,000	22,000	0.61	B	18,000	0.50	A
53. Dockweiler w/o Sierra Hwy (City)	4	36,000	25,000	0.69	B	24,000	0.67	B
54. Escondido e/o Agua Dulce (County)	4	36,000	5,000	0.14	A	5,000	0.14	A
55. Franklin e/o Wolcott Way (County)	2	15,000	8,000	0.53	A	8,000	0.53	A
56. Franklin w/o Commerce Center (County)	4	36,000	11,000	0.31	A	11,000	0.31	A
57. Golden Valley s/o Plum Canyon (City)	4	36,000	12,000	0.33	A	12,000	0.33	A
58. Golden Valley n/o Newhall Ranch (City)	4	36,000	30,000	0.83	D	29,000	0.81	D
59. Golden Valley n/o Soledad (City)	6	54,000	44,000	0.81	D	44,000	0.81	D
60. Golden Valley s/o Soledad (City)	6	54,000	30,000	0.56	A	29,000	0.54	A
61. Golden Valley n/o Centre Point (City)	6	54,000	30,000	0.56	A	32,000	0.59	A
62. Golden Valley s/o Centre Point (City)	6	54,000	43,000	0.80	C	39,000	0.72	C

Roadway Segment (Location)	Lanes	Capacity	Existing Area Plan and General Plan Volume	V/C	LOS	OVOV Area Plan and General Plan Volume	V/C	LOS
63. Golden Valley s/o Via Princessa (City)	6	54,000	57,000	1.06	**F**	51,000	0.94	E
64. Golden Valley e/o Sierra Hwy (City)	6	54,000	39,000	0.72	C	36,000	0.67	B
65. Golden Valley e/o SR-14 (City)	4	36,000	18,000	0.50	A	15,000	0.42	A
66. Golden Valley e/o Lost Canyon (City)	4	36,000	5,000	0.14	A	4,000	0.11	A
67. Haskell Canyon n/o Bouquet (City)	4	36,000	12,000	0.33	A	13,000	0.36	A
68. Hasley Canyon w/o Del Valle (County)	2	18,000	11,000	0.61	B	13,000	0.72	C
69. Hasley Canyon w/o Commerce Center (County)	4	36,000	17,000	0.47	A	14,000	0.39	A
70. Hasley Canyon w/o The Old Road (County)	6	54,000	40,000	0.74	C	38,000	0.70	B
71. Hasley Canyon w/o I-5 (County)	6	54,000	35,000	0.65	B	34,000	0.63	B
72. Henry Mayo e/o Commerce Center (County)	4	36,000	17,000	0.47	A	15,000	0.42	A
73. Henry Mayo w/o The Old Road (County)	4	36,000	10,000	0.28	A	9,000	0.25	A
74. Hillcrest w/o The Old Road (County)	4	36,000	18,000	0.50	A	17,000	0.47	A
75. Jakes Way e/o Canyon Park (County)	2	18,000	18,000	1.00	E	12,000	0.67	B
76. Lake Hughes w/o Castaic (County)	6	54,000	43,000	0.80	C	37,000	0.69	B
77. Lake Hughes e/o Castaic (County)	6	54,000	43,000	0.80	C	37,000	0.69	B
78. Lake Hughes e/o Ridge Route (County)	2	18,000	12,000	0.67	B	7,000	0.39	A
79. Long Canyon s/o SR-126 (County)	6	54,000	35,000	0.65	B	32,000	0.59	A
80. Long Canyon s/o River Village (County)	6	54,000	37,000	0.69	B	35,000	0.65	B
81. Long Canyon n/o Potrero Canyon (County)	6	54,000	33,000	0.61	B	31,000	0.57	A
82. Long Canyon s/o Potrero Canyon (County)	6	54,000	35,000	0.65	B	32,000	0.59	A
83. Lost Canyon w/o Sand Canyon (County)	4	36,000	10,000	0.28	A	12,000	0.33	A
84. Lost Canyon n/o Jakes Way (County)	4	36,000	14,000	0.39	A	16,000	0.44	A
85. Lost Canyon n/o Canyon Park (County)	6	54,000	14,000	0.26	A	16,000	0.30	A
86. Lost Canyon n/o Via Princessa (County)	6	54,000	20,000	0.37	A	21,000	0.39	A
87. Lost Canyon s/o Via Princessa (County)	4	36,000	12,000	0.33	A	11,000	0.31	A
88. Lost Canyon n/o Golden Valley (City)	4	36,000	14,000	0.39	A	12,000	0.33	A
89. Lyons e/o I-5 (City)	6	54,000	49,000	0.91	E	53,000	0.98	E
90. Lyons e/o Wiley Canyon (City)	6	54,000	39,000	0.72	C	44,000	0.81	D
91. Lyons w/o Orchard Village (City)	6	54,000	39,000	0.72	C	42,000	0.78	C
92. Lyons e/o Orchard Village (City)	6	54,000	49,000	0.91	E	52,000	0.96	E
93. Lyons w/o Main Street (City)	6	54,000	25,000	0.46	A	24,000	0.44	A
94. Magic Mtn e/o Long Canyon (County)	4	36,000	18,000	0.50	A	18,000	0.50	A
95. Magic Mtn w/o Commerce Center (County)	4	36,000	34,000	0.94	E	34,000	0.94	E

Roadway Segment (Location)	Lanes	Capacity	Existing Area Plan and General Plan Volume	V/C	LOS	OVOV Area Plan and General Plan Volume	V/C	LOS
96. Magic Mtn e/o Commerce Center (County)	6	54,000	52,000	0.96	E	53,000	0.98	E
97. Magic Mtn e/o Westridge (County)	8	72,000	46,000	0.64	B	47,000	0.65	B
98. Magic Mtn w/o The Old Road (County)	10	90,000	83,000	0.92	E	85,000	0.94	E
99. Magic Mtn e/o The Old Road (County)	10	90,000	80,000	0.89	D	83,000	0.92	E
100. Magic Mtn e/o I-5 (City)	8	72,000	65,000	0.90	D	66,000	0.92	E
101. Magic Mtn e/o Tourney (City)	8	72,000	56,000	0.78	C	57,000	0.79	C
102. Magic Mtn w/o McBean (City)	8	72,000	58,000	0.81	D	59,000	0.82	D
103. Magic Mtn e/o McBean (City)	8	72,000	50,000	0.69	B	54,000	0.75	C
104. Magic Mtn w/o Valencia (City)	8	72,000	48,000	0.67	B	51,000	0.71	C
105. Magic Mtn e/o Valencia (City)	6	54,000	52,000	0.96	E	54,000	1.00	E
106. Magic Mtn e/o Bouquet Canyon (City)	6	54,000	46,000	0.85	D	46,000	0.85	D
107. Magic Mtn n/o Via Princessa (City)	6	54,000	38,000	0.70	B	37,000	0.69	B
108. McBean n/o Copper Hill (City)	2	18,000	9,000	0.50	A	9,000	0.50	A
109. McBean s/o Copper Hill (City)	6	54,000	27,000	0.50	A	27,000	0.50	A
110. McBean n/o Decoro (City)	6	54,000	35,000	0.65	B	35,000	0.65	B
111. McBean s/o Decoro (City)	6	54,000	37,000	0.69	B	38,000	0.70	B
112. McBean n/o Newhall Ranch (City)	6	54,000	47,000	0.87	D	48,000	0.89	D
113. McBean s/o Newhall Ranch (City)	8	72,000	55,000	0.76	C	58,000	0.81	D
114. McBean s/o Ave Scott (City)	8	72,000	73,000	1.01	**F**	77,000	1.07	**F**
115. McBean n/o Magic Mtn (City)	8	72,000	67,000	0.93	E	72,000	1.00	E
116. McBean n/o Valencia (City)	8	72,000	59,000	0.82	D	63,000	0.88	D
117. McBean s/o Valencia (City)	6	54,000	50,000	0.93	E	54,000	1.00	E
118. McBean n/o Orchard Village (City)	6	54,000	43,000	0.80	C	43,000	0.80	C
119. McBean e/o Rockwell Canyon (City)	6	54,000	44,000	0.81	D	44,000	0.81	D
120. McBean w/o Rockwell Canyon (City)	6	54,000	55,000	1.02	**F**	53,000	0.98	E
121. McBean w/o I-5 (County)	6	54,000	43,000	0.80	C	42,000	0.78	C
122. Newhall Ranch e/o I-5 (City)	8	72,000	65,000	0.90	D	66,000	0.92	E
123. Newhall Ranch w/o Rye Canyon (City)	8	72,000	68,000	0.94	E	72,000	1.00	E
124. Newhall Ranch e/o Rye Canyon (City)	8	72,000	48,000	0.67	B	49,000	0.68	B
125. Newhall Ranch w/o McBean (City)	8	72,000	69,000	0.96	E	71,000	0.99	E
126. Newhall Ranch e/o McBean (City)	8	72,000	65,000	0.90	D	68,000	0.94	E
127. Newhall Ranch w/o Bouquet Canyon (City)	8	72,000	67,000	0.93	E	69,000	0.96	E
128. Newhall Ranch e/o Bouquet Canyon (City)	6	54,000	44,000	0.81	D	46,000	0.85	D

Roadway Segment (Location)	Lanes	Capacity	Existing Area Plan and General Plan Volume	V/C	LOS	OVOV Area Plan and General Plan Volume	V/C	LOS
129. Newhall Ranch e/o Santa Clarita (City)	6	54,000	49,000	0.91	E	49,000	0.91	E
130. Newhall n/o Lyons (City)	4	36,000	2,000	0.06	A	1,000	0.03	A
131. Newhall s/o Lyons (City)	4	36,000	27,000	0.75	C	27,000	0.75	C
132. Newhall n/o Valle Oro (City)	6	54,000	39,000	0.72	C	33,000	0.61	B
133. Newhall n/o Sierra Hwy (City)	6	54,000	47,000	0.87	D	40,000	0.74	C
134. Newhall s/o Sierra Hwy (City)	6	54,000	58,000	1.07	**F**	50,000	0.93	E
135. Oak Ridge e/o Railroad (City)	4	36,000	20,000	0.56	A	21,000	0.58	A
136. Orchard Village s/o McBean (City)	6	54,000	54,000	1.00	E	54,000	1.00	E
137. Orchard Village s/o Wiley Canyon (City)	6	54,000	43,000	0.80	C	44,000	0.81	D
138. Orchard Village n/o Lyons (City)	6	54,000	32,000	0.59	A	34,000	0.63	B
139. Parker e/o Sloan (County)	2	18,000	1,000	0.06	A	1,000	0.06	A
140. Parker w/o I-5 (County)	6	54,000	11,000	0.20	A	10,000	0.19	A
141. Pico Canyon s/o Valencia (County)	6	54,000	27,000	0.50	A	22,000	0.41	A
142. Pico Canyon w/o Whispering Oaks (County)	6	54,000	27,000	0.50	A	22,000	0.41	A
143. Pico Canyon w/o Stevenson Ranch (County)	6	54,000	29,000	0.54	A	29,000	0.54	A
144. Pico Canyon w/o The Old Road (County)	6	54,000	47,000	0.87	D	41,000	0.76	C
145. Pico Canyon w/o I-5 (County)	6	54,000	45,000	0.83	D	44,000	0.81	D
146. Placerita Canyon e/o SR-14 (County)	4	36,000	8,000	0.22	A	4,000	0.11	A
147. Plum Canyon s/o Bouquet Canyon (County)	6	54,000	22,000	0.41	A	23,000	0.43	A
148. Plum Canyon w/o Golden Valley (City)	6	54,000	13,000	0.24	A	13,000	0.24	A
149. Poe s/o Valencia (County)	4	36,000	5,000	0.14	A	5,000	0.14	A
150. Poe s/o Mallory (County)	4	36,000	3,000	0.08	A	3,000	0.08	A
151. Poe w/o Stevenson Ranch (County)	4	36,000	15,000	0.42	A	14,000	0.39	A
152. Potrero s/o SR-126 (County)	4	36,000	11,000	0.31	A	9,000	0.25	A
153. Potrero w/o Long Canyon (County)	4	36,000	18,000	0.50	A	17,000	0.47	A
154. Railroad s/o Magic Mtn (City)	6	54,000	50,000	0.93	E	54,000	1.00	E
155. Railroad s/o Oak Ridge (City)	6	54,000	41,000	0.76	C	40,000	0.74	C
156. Railroad n/o 13th St. (City)	6	54,000	34,000	0.63	B	34,000	0.63	B
157. Railroad n/o Lyons (City)	6	54,000	39,000	0.72	C	36,000	0.67	B
158. Railroad s/o Lyons (City)	4	36,000	28,000	0.78	C	26,000	0.72	C
159. Rainbow Glen s/o Soledad Canyon (City)	2	15,000	6,000	0.40	A	6,000	0.40	A
160. Rainbow Glen n/o Via Princessa (City)	2	15,000	9,000	0.60	A	11,000	0.73	C
161. Ridge Route n/o Lake Hughes (County)	6	54,000	36,000	0.67	B	35,000	0.65	B

Roadway Segment (Location)	Lanes	Capacity	Existing Area Plan and General Plan Volume	V/C	LOS	OVOV Area Plan and General Plan Volume	V/C	LOS
162. Ridge Route n/o Castaic (County)	4	36,000	4,000	0.11	A	8,000	0.22	A
163. Ridge Route e/o I-5 (County)	6	54,000	36,000	0.67	B	35,000	0.65	B
164. Ridge Route btwn I-5 Ramps (County)	6	54,000	25,000	0.46	A	25,000	0.46	A
165. Landmark e/o Long Canyon (County)	4	36,000	16,000	0.44	A	16,000	0.44	A
166. Rockwell Canyon n/o McBean (City)	4	36,000	26,000	0.72	C	23,000	0.64	B
167. Rye Canyon e/o Ave Scott (City)	6	54,000	47,000	0.87	D	49,000	0.91	E
168. Rye Canyon w/o Ave Scott (City)	6	54,000	46,000	0.85	D	48,000	0.89	D
169. Rye Canyon e/o The Old Road (City)	7	63,000	57,000	0.90	D	58,000	0.92	E
170. San Martinez w/o Del Valle (County)	2	15,000	9,000	0.60	A	2,000	0.13	A
171. San Martinez Grande Canyon n/o VTTM 60678 (County)	2	15,000	2,000	0.13	A	<500	0.00	A
172. San Martinez Grande Canyon n/o SR-126 (County)	4	36,000	7,000	0.19	A	5,000	0.14	A
173. Sand Canyon s/o Sierra Hwy (County)	4	36,000	8,000	0.22	A	8,000	0.22	A
174. Sand Canyon n/o Soledad Canyon (City)	4	36,000	14,000	0.39	A	14,000	0.39	A
175. Sand Canyon s/o Soledad Canyon (City)	6	54,000	29,000	0.54	A	25,000	0.46	A
176. Sand Canyon s/o SR-14 (City)	6	54,000	36,000	0.67	B	26,000	0.48	A
177. Sand Canyon s/o Lost Canyon (City)	2	18,000	15,000	0.83	D	14,000	0.78	C
178. Santa Clarita s/o Bouquet Canyon (City)	6	54,000	38,000	0.70	B	36,000	0.67	B
179. Santa Clarita s/o Newhall Ranch (City)	6	54,000	33,000	0.61	B	32,000	0.59	A
180. Santa Clarita s/o Soledad (City)	6	54,000	31,000	0.57	A	30,000	0.56	A
181. Santa Clarita s/o Porta Bella (City)	6	54,000	23,000	0.43	A	21,000	0.39	A
182. Santa Clarita n/o Via Princessa (City)	6	54,000	39,000	0.72	C	34,000	0.63	B
183. Santa Clarita s/o Via Princessa (City)	6	54,000	47,000	0.87	D	38,000	0.70	B
184. Santa Clarita w/o Sierra Hwy (City)	6	54,000	48,000	0.89	D	39,000	0.72	C
185. Seco Canyon n/o Copper Hill (City)	2	15,000	10,000	0.67	B	10,000	0.67	B
186. Seco Canyon s/o Copper Hill (City)	4	36,000	19,000	0.53	A	19,000	0.53	A
187. Seco Canyon n/o Bouquet Canyon (City)	4	36,000	33,000	0.92	E	34,000	0.94	E
188. Shadow Pines n/o Soledad Canyon (City)	4	36,000	14,000	0.39	A	12,000	0.33	A
189. Shadow Pines n/o Grandifloras (City)	2	18,000	6,000	0.33	A	5,000	0.28	A
190. Sierra Hwy w/o Agua Dulce (County)	6	54,000	2,000	0.04	A	2,000	0.04	A
191. Sierra Hwy n/o Davenport (County)	6	54,000	2,000	0.04	A	2,000	0.04	A
192. Sierra Hwy n/o Vasquez Canyon (County)	6	54,000	15,000	0.28	A	16,000	0.30	A
193. Sierra Hwy s/o Sand Canyon (County)	6	54,000	19,000	0.35	A	17,000	0.31	A

Roadway Segment (Location)	Lanes	Capacity	Existing Area Plan and General Plan Volume	V/C	LOS	OVOV Area Plan and General Plan Volume	V/C	LOS
194. Sierra Hwy n/o Skyline Ranch (City)	6	54,000	36,000	0.67	B	38,000	0.70	B
195. Sierra Hwy n/o Soledad Canyon (City)	6	54,000	50,000	0.93	E	52,000	0.96	E
196. Sierra Hwy s/o Soledad Canyon (City)	6	54,000	37,000	0.69	B	36,000	0.67	B
197. Sierra Hwy s/o Canyon Park (City)	6	54,000	36,000	0.67	B	36,000	0.67	B
198. Sierra Hwy s/o Via Princessa (City)	6	54,000	32,000	0.59	A	30,000	0.56	A
199. Sierra Hwy s/o Golden Valley (City)	6	54,000	28,000	0.52	A	25,000	0.46	A
200. Sierra Hwy n/o Dockweiler (City)	6	54,000	43,000	0.80	C	40,000	0.74	C
201. Sierra Hwy n/o Newhall (City)	6	54,000	27,000	0.50	A	23,000	0.43	A
202. Sierra Hwy s/o Newhall (City)	6	54,000	42,000	0.78	C	33,000	0.61	B
203. Sierra Hwy n/o SR-14 (County)	6	54,000	37,000	0.69	B	30,000	0.56	A
204. Skyline Ranch e/o Plum Canyon (City)	4	36,000	15,000	0.42	A	15,000	0.42	A
205. Skyline Ranch w/o Sierra Hwy (City)	4	36,000	19,000	0.53	A	18,000	0.50	A
206. Sloan Canyon e/o The Old Road (County)	6	54,000	26,000	0.48	A	22,000	0.41	A
207. Sloan Canyon e/o Parker (County)	4	36,000	1,000	0.03	A	1,000	0.03	A
208. Sloan Canyon w/o Parker (County)	4	36,000	2,000	0.06	A	2,000	0.06	A
209. Sloan Canyon s/o Hillcrest (County)	2	18,000	4,000	0.22	A	3,000	0.17	A
210. Smyth s/o Copper Hill (City)	4	30,000	8,000	0.27	A	8,000	0.27	A
211. Soledad Canyon e/o Bouquet Canyon (City)	6	54,000	42,000	0.78	C	45,000	0.83	D
212. Soledad Canyon w/o Golden Valley (City)	6	54,000	38,000	0.70	B	38,000	0.70	B
213. Soledad Canyon e/o Golden Valley (City)	6	54,000	48,000	0.89	D	50,000	0.93	E
214. Soledad Canyon e/o Rainbow Glen (City)	6	54,000	43,000	0.80	C	43,000	0.80	C
215. Soledad Canyon w/o Whites Canyon (City)	6	54,000	38,000	0.70	B	38,000	0.70	B
216. Soledad Canyon e/o Whites Canyon (City)	6	54,000	43,000	0.80	C	44,000	0.81	D
217. Soledad Canyon e/o Sierra Hwy (City)	6	54,000	39,000	0.72	C	34,000	0.63	B
218. Soledad Canyon w/o Sand Canyon (City)	6	54,000	24,000	0.44	A	22,000	0.41	A
219. Soledad Canyon e/o Sand Canyon (City)	6	54,000	34,000	0.63	B	31,000	0.57	A
220. Soledad Canyon e/o SR-14 (at Sand Canyon) (City)	6	54,000	21,000	0.39	A	18,000	0.33	A
221. Soledad Canyon w/o Shadow Pines (City)	6	54,000	12,000	0.22	A	10,000	0.19	A
222. Soledad Canyon e/o Shadow Pines (City)	6	54,000	22,000	0.41	A	17,000	0.31	A
223. Soledad Canyon e/o SR-14 (County)	4	36,000	13,000	0.36	A	10,000	0.28	A
224. Soledad Canyon w/o Agua Dulce (County)	4	36,000	4,000	0.11	A	4,000	0.11	A
225. Soledad Canyon e/o Agua Dulce (County)	4	36,000	3,000	0.08	A	3,000	0.08	A
226. SR-126 at County Line (County)	4	44,000	33,000	0.75	C	32,000	0.73	C

Roadway Segment (Location)	Lanes	Capacity	Existing Area Plan and General Plan Volume	V/C	LOS	OVOV Area Plan and General Plan Volume	V/C	LOS
227. SR-126 w/o San Martinez Grande Canyon (County)	4	44,000	34,000	0.77	C	33,000	0.75	C
228. SR-126 w/o Chiquito Canyon/Long Canyon (County)	4	44,000	39,000	0.89	D	38,000	0.86	D
229. SR-126 w/o Wolcott (County)	6	66,000	58,000	0.88	D	59,000	0.89	D
230. SR-126 w/o Commerce Center (County)	8	88,000	64,000	0.73	C	66,000	0.75	C
231. SR-126 w/o I-5 (County)	8	88,000	73,000	0.83	D	75,000	0.85	D
232. Stevenson Ranch w/o Old Road (County)	6	54,000	30,000	0.56	A	33,000	0.61	B
233. Stevenson Ranch n/o Poe (County)	6	54,000	8,000	0.15	A	11,000	0.20	A
234. Stevenson Ranch n/o Pico Canyon (County)	6	54,000	11,000	0.20	A	13,000	0.24	A
235. The Old Road n/o I-5 (at Lake Hughes) (County)	4	36,000	10,000	0.28	A	11,000	0.31	A
236. The Old Road n/o Sloan Canyon (County)	6	54,000	24,000	0.44	A	20,000	0.37	A
237. The Old Road n/o Parker (County)	4	36,000	4,000	0.11	A	3,000	0.08	A
238. The Old Road n/o Hillcrest (County)	4	36,000	14,000	0.39	A	13,000	0.36	A
239. The Old Road n/o Sedona Way (County)	4	36,000	25,000	0.69	B	23,000	0.64	B
240. The Old Road n/o Hasley Canyon (County)	4	36,000	24,000	0.67	B	23,000	0.64	B
241. The Old Road s/o Hasley Canyon (County)	6	54,000	18,000	0.33	A	16,000	0.30	A
242. The Old Road n/o Biscailuiz (County)	6	54,000	20,000	0.37	A	18,000	0.33	A
243. The Old Road n/o Turnberry (County)	6	54,000	20,000	0.37	A	17,000	0.31	A
244. The Old Road n/o Henry Mayo (County)	6	54,000	23,000	0.43	A	21,000	0.39	A
245. The Old Road s/o Henry Mayo (County)	6	54,000	19,000	0.35	A	16,000	0.30	A
246. The Old Road n/o Rye Canyon (County)	6	54,000	49,000	0.91	E	48,000	0.89	D
247. The Old Road n/o Magic Mtn (County)	6	54,000	54,000	1.00	E	52,000	0.96	E
248. The Old Road s/o Magic Mtn (County)	6	54,000	33,000	0.61	B	30,000	0.56	A
249. The Old Road s/o Valencia (County)	6	54,000	47,000	0.87	D	41,000	0.76	C
250. The Old Road s/o McBean (County)	6	54,000	41,000	0.76	C	35,000	0.65	B
251. The Old Road s/o Pico (County)	4	36,000	20,000	0.56	A	9,000	0.25	A
252. The Old Road n/o Calgrove (County)	4	36,000	24,000	0.67	B	13,000	0.36	A
253. The Old Road s/o Calgrove (County)	6	54,000	24,000	0.44	A	20,000	0.37	A
254. Tibbitts s/o Newhall Ranch (City)	6	54,000	34,000	0.63	B	34,000	0.63	B
255. Tibbitts n/o Magic Mtn (City)	6	54,000	32,000	0.59	A	32,000	0.59	A
256. Tournament s/o McBean (City)	2	15,000	6,000	0.40	A	7,000	0.47	A
257. Tourney n/o Valencia (City)	4	36,000	15,000	0.42	A	14,000	0.39	A

Roadway Segment (Location)	Lanes	Capacity	Existing Area Plan and General Plan Volume	V/C	LOS	OVOV Area Plan and General Plan Volume	V/C	LOS
258. Valencia e/o Magic Mtn (County)	6	54,000	55,000	1.02	**F**	51,000	0.94	E
259. Valencia e/o Pico Canyon (County)	6	54,000	31,000	0.57	A	33,000	0.61	B
260. Valencia e/o Poe (County)	6	54,000	29,000	0.54	A	30,000	0.56	A
261. Valencia w/o Westridge (County)	6	54,000	44,000	0.81	D	46,000	0.85	D
262. Valencia w/o The Old Road (County)	7	63,000	60,000	0.95	E	61,000	0.97	E
263. Valencia e/o Old Road (County)	8	72,000	59,000	0.82	D	61,000	0.85	D
264. Valencia e/o I-5 (City)	8	72,000	66,000	0.92	E	68,000	0.94	E
265. Valencia e/o Tourney (City)	8	72,000	57,000	0.79	C	59,000	0.82	D
266. Valencia w/o McBean (City)	8	72,000	60,000	0.83	D	61,000	0.85	D
267. Valencia e/o McBean (City)	6	54,000	47,000	0.87	D	53,000	0.98	E
268. Valencia w/o Citrus (City)	6	54,000	51,000	0.94	E	53,000	0.98	E
269. Valencia s/o Magic Mtn (City)	6	54,000	47,000	0.87	D	48,000	0.89	D
270. Valencia n/o Magic Mtn (City)	6	54,000	61,000	1.13	**F**	60,000	1.11	**F**
271. Valencia s/o Cinema (City)	6	54,000	58,000	1.07	**F**	59,000	1.09	**F**
272. Valencia w/o Bouquet Canyon (City)	6	54,000	51,000	0.94	E	50,000	0.93	E
273. Valley s/o Lyons (City)	4	36,000	10,000	0.28	A	11,000	0.31	A
274. Vasquez Canyon e/o Bouquet Canyon (County)	2	18,000	6,000	0.33	A	6,000	0.33	A
275. Vasquez Canyon w/o Sierra Hwy (County)	2	18,000	11,000	0.61	B	10,000	0.56	A
276. Via Princessa e/o Oak Ridge (City)	6	54,000	37,000	0.69	B	37,000	0.69	B
277. Via Princessa e/o Magic Mtn (City)	6	54,000	54,000	1.00	E	52,000	0.96	E
278. Via Princessa e/o Santa Clarita (City)	6	54,000	66,000	1.22	**F**	66,000	1.22	**F**
279. Via Princessa w/o Rainbow Glen (City)	6	54,000	23,000	0.43	A	27,000	0.50	A
280. Via Princessa e/o Rainbow Glen (City)	6	54,000	26,000	0.48	A	29,000	0.54	A
281. Via Princessa s/o Whites Canyon (City)	6	54,000	55,000	1.02	**F**	52,000	0.96	E
282. Via Princessa s/o Sierra Hwy (City)	6	54,000	44,000	0.81	D	41,000	0.76	C
283. Via Princessa n/o Lost Canyon (County)	6	54,000	23,000	0.43	A	24,000	0.44	A
284. Via Princessa s/o Lost Canyon (County)	6	54,000	4,000	0.07	A	3,000	0.06	A
285. Westridge s/o Magic Mtn (County)	4	36,000	13,000	0.36	A	12,000	0.33	A
286. Westridge n/o Valencia (County)	4	36,000	11,000	0.31	A	9,000	0.25	A
287. Whites Canyon s/o Skyline Ranch (City)	6	54,000	19,000	0.35	A	19,000	0.35	A
288. Whites Canyon n/o Soledad (City)	6	54,000	43,000	0.80	C	42,000	0.78	C
289. Whites Canyon s/o Soledad (City)	6	54,000	50,000	0.93	E	48,000	0.89	D
290. Wiley Canyon e/o Orchard Village (City)	6	54,000	38,000	0.70	B	42,000	0.78	C

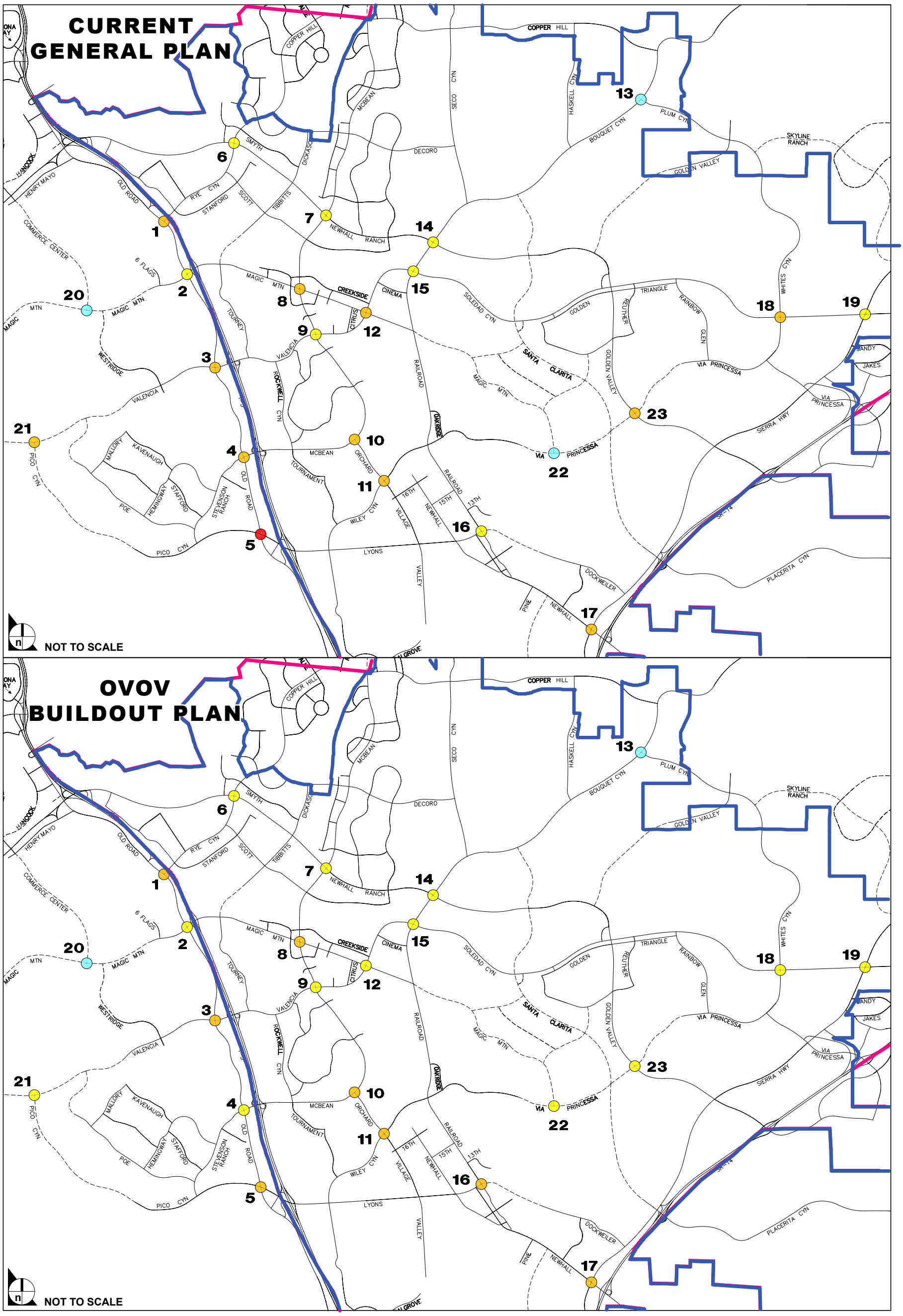
Roadway Segment (Location)	Lanes	Capacity	Existing Area Plan and General Plan Volume	V/C	LOS	OVOV Area Plan and General Plan Volume	V/C	LOS
291. Wiley Canyon e/o Tournament (City)	6	54,000	29,000	0.54	A	32,000	0.59	A
292. Wiley Canyon n/o Lyons (City)	6	54,000	31,000	0.57	A	34,000	0.63	B
293. Wiley Canyon s/o Lyons (City)	4	36,000	17,000	0.47	A	20,000	0.56	A
294. Wiley Canyon n/o Calgrove (City)	4	36,000	19,000	0.53	A	19,000	0.53	A
295. Wolcott n/o SR-126 (County)	2	15,000	6,000	0.40	A	6,000	0.40	A
296. Wolcott s/o SR-126 (County)	4	36,000	13,000	0.36	A	14,000	0.39	A
297. 13th St. e/o Railroad (City)	2	15,000	14,000	0.93	E	11,000	0.73	C
298. 16th St. e/o Orchard Village (City)	4	36,000	9,000	0.25	A	9,000	0.25	A
Average	n/a	n/a	29,583	0.59	A	29,003	0.57	A

Principal Intersections

Table 3.2-10, ICU and LOS Summary for Principal Intersections – Existing Conditions vs OVOV Buildout Conditions (With Highway Plan Roadways), identifies the LOS ratings at principal intersections in the study area under existing conditions and proposed City General Plan and County Area Highway Plans. Table 3.2-10 shows that with the proposed Highway Plan in place, there are no intersections forecast to exceed LOS E, as is also the case for existing conditions.

Plan to Plan Analysis

Table 3.2-11, Comparison of Existing General Plan and Area Plan Intersections with OVOV Buildout without Improvements to Roadways, identifies the LOS ratings at principal intersections in the study area under both the existing and proposed County Area Plan and City General Plan. Additionally, this table identifies LOS ratings at the same principal intersections based on the existing roadway configurations and the modified roadway configurations under the proposed Highway Plan. Peak hour volumes for principal intersections are shown in **Figure 3.2-8, Level of Service Comparison for Principal Intersections**.



Legend:

------- Future Roadways

LOS A · LOS B · LOS C · LOS D · LOS E · LOS F

City Boundary

City SOI

SOURCE: Austin-Foust Associates, Inc. - June 2010

FIGURE **3.2-8**

Level of Service Comparison for Principal Intersections

112-023•09/10

As previously stated, an LOS F rating is considered unacceptable. As shown in this table, without implementation of the roadway improvements in the proposed Highway Plan, multiple intersections would operate at LOS F under buildout of either the existing or proposed County Area Plan and City General Plan. Under the current County Area Plan and City General Plan, the following 12 intersections would operate at LOS F during one or both peak hours without incorporation of the roadway improvements:

Table 3.2-10
ICU and LOS Summary for Principal Intersections – Existing Conditions vs OVOV Buildout Conditions (With Highway Plan Roadways)

	Buildout Intersection Lanes							
	Existing Conditions				OVOV GP With Highway Plan			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
Intersection	ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS
1. The Old Road & Rye Canyon	.61	B	.66	B	.85	D	.99	E
2. The Old Road & Magic Mountain	.28	A	.32	A	.78	C	.86	D
3. The Old Road & Valencia	.67	B	.44	A	.84	D	.95	E
4. The Old Road & Stevenson Ranch	.58	A	.76	C	.65	B	.90	D
5. The Old Road & Pico Canyon	.76	C	.71	C	.85	D	.97	E
6. Rye/Copper Hill & Newhall Ranch	.63	B	.70	B	.81	D	.89	D
7. McBean & Newhall Ranch	.73	C	.78	C	.83	D	.89	D
8. McBean & Magic Mountain	.61	B	.76	C	.77	C	.95	E
9. McBean & Valencia	.61	B	.74	C	.70	B	.87	D
10. Orchard Village & McBean	.57	A	.68	B	.78	C	.98	E
11. Orchard Village & Wiley Canyon	.60	A	.62	B	.78	C	.98	E
12. Valencia & Magic Mountain	.58	A	.66	B	.82	D	.86	D
13. Bouquet Canyon & Plum Canyon	.68	B	.73	C	.80	C	.77	C
14. Bouquet Canyon & Newhall Ranch	.66	B	.82	D	.86	D	.89	D
15. Bouquet Canyon & Soledad Canyon	.68	B	.77	C	.78	C	.90	D
16. Railroad & Lyons	.57	A	.56	A	.60	A	.83	D
17. Sierra Highway & Newhall	.57	A	.64	B	.86	D	.93	E
18. Whites Canyon & Soledad Canyon	.80	C	.86	D	.80	C	.90	D
19. Sierra Highway & Soledad Canyon	.67	B	.76	C	.86	D	.89	D
20. Commerce Center & Magic Mtn[1]	n/a	n/a	n/a	n/a	.76	C	.77	C
21. Pico Canyon & Valencia Boulevard[1]	n/a	n/a	n/a	n/a	.75	C	.81	D

Intersection	Buildout Intersection Lanes Existing Conditions AM Peak Hour ICU	LOS	PM Peak Hour ICU	LOS	OVOV GP With Highway Plan AM Peak Hour ICU	LOS	PM Peak Hour ICU	LOS
22. Magic Mountain & Via Princessa[1]	n/a	n/a	n/a	n/a	.61	B	.81	D
23. Golden Valley & Via Princessa[1]	n/a	n/a	n/a	n/a	.88	D	.76	C

*LOS in **Bold** exceeds performance criteria of LOS E.*
[1] Future Intersection
Level of service ranges: .00 - .60 A .61 - .70 B .71 - .80 C
.81 - .90 D .91 – 1.00 E Above 1.00 F

County

- The Old Road and Rye Canyon (Intersection No. 1)
- The Old Road and Magic Mountain (Intersection No. 2)
- The Old Road and McBean (Intersection No. 4)
- The Old Road and Pico Canyon (Intersection No. 5)

City

- McBean & Newhall Ranch (Intersection No. 7)
- Orchard Village and McBean (Intersection No. 10)
- Orchard Village and Wiley Canyon (Intersection No. 11)
- Valencia and Magic Mountain (Intersection No. 12)
- Bouquet Canyon and Newhall Ranch (Intersection No. 14)
- Sierra Highway and Newhall (Intersection No. 17)
- Sierra Highway and Soledad Canyon (Intersection No. 19)

Under the proposed County Area Plan and City General Plan, all of the above intersections, except Intersection No. 5 (The Old Road and Pico Canyon), would operate at LOS F during one or both peak hours without incorporation of the roadway improvements. Overall, the ICU values at each intersection under either buildout scenario would be comparable.

As shown in **Table 3.2-11**, incorporation of the proposed Highway Plan roadway improvements would reduce the number of intersections operating at LOS F to two intersections (Intersection No. 5, The Old

Road & Pico Canyon, and Intersection No. 17, Sierra Highway & Newhall) under buildout of the existing County Area Plan and City General Plan, and would eliminate LOS F ratings from all intersections under buildout of the proposed County Area Plan and City General Plan. An illustration of intersection LOS conditions based on both the proposed OVOV land uses and the existing County Area Plan and City General Plan is provided in **Figure 3.2-8**.

Given the existing LOS ratings identified in **Table 3.2-5**, this analysis indicates that each of the principal intersections, with the exception of Bouquet Canyon Road at Plum Canyon Road, would be significantly impacted as the Santa Clarita Valley builds out under either the existing or the proposed County Area Plan and City General Plan. However, no intersection would operate at LOS F under the proposed County Area Plan and City General Plan, while two intersections would operate at LOS F under the existing County Area Plan and City General Plan. Therefore, intersection operations would incrementally improve with implementation of the proposed County Area Plan and City General Plan in place of the existing County Area Plan and City General Plan.

Table 3.2-11
Comparison of Existing General Plan and Area Plan Intersections with OVOV Buildout without Improvements to Roadways

	Current Area Plan and General Plan				OVOV Area Plan and General Plan			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
Intersection (Location)	ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS
Existing Intersection Configurations								
1. The Old Road & Rye Canyon (County)	1.58	**F**	2.31	**F**	1.74	**F**	2.30	**F**
2. The Old Road & Magic Mountain (County)	.79	**C**	1.03	**F**	.78	**C**	1.06	**F**
3. The Old Road & Valencia (County)	0.85	D	0.95	E	0.84	D	0.95	E
4. The Old Road & McBean (County)	0.72	C	1.05	**F**	0.69	B	1.12	**F**
5. The Old Road & Pico Canyon (County)	1.05	**F**	1.08	**F**	0.93	E	0.99	E
6. Rye/Copper Hill & Newhall Ranch (City)	0.85	D	0.89	D	0.81	D	0.89	D
7. McBean & Newhall Ranch (City)	0.80	C	1.15	**F**	0.83	D	0.93	E
8. McBean & Magic Mountain (City)	0.87	D	1.21	**F**	0.97	E	1.24	**F**
9. McBean & Valencia (City)	0.70	B	0.89	D	0.71	C	0.94	E
10. Orchard Village & McBean (City)	0.91	E	1.23	**F**	0.94	E	1.26	**F**
11. Orchard Village & Wiley Canyon (City)	1.00	E	1.42	**F**	1.04	**F**	1.42	**F**
12. Valencia & Magic Mountain (City)	0.98	E	1.13	**F**	1.10	**F**	1.25	**F**
13. Bouquet Canyon & Plum Canyon (City)	0.80	C	0.76	C	0.80	C	0.77	C
14. Bouquet Canyon & Newhall Ranch	0.97	**E**	1.16	**F**	1.00	E	1.17	**F**

Intersection (Location)	Current Area Plan and General Plan				OVOV Area Plan and General Plan			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS
(City)								
15. Bouquet Canyon & Soledad Canyon (City)	0.80	C	.99	**E**	0.78	C	1.00	E
16. Railroad & Lyons (City)	0.71	C	0.94	E	0.60	A	0.83	D
17. Sierra Highway & Newhall (City)	1.31	**F**	1.29	**F**	1.14	**F**	1.23	**F**
18. Whites Canyon & Soledad Canyon (City)	0.89	D	0.92	E	0.86	D	0.91	E
19. Sierra Highway & Soledad Canyon (City)	0.90	D	1.23	**F**	0.86	D	1.10	**F**
20. Commerce Center & Magic Mountain (County)*	0.76	C	0.74	C	0.76	C	0.77	C
21. Pico Canyon & Valencia Boulevard (County) *	0.85	D	0.98	E	0.75	C	0.81	D
22. Magic Mountain & Via Princessa (City) *	0.57	A	0.80	C	0.61	A	0.81	D
23. Golden Valley & Via Princessa (City) *	0.91	E	0.83	D	0.88	D	0.76	C
Intersection Configurations Under Proposed Highway Plan								
1. The Old Road & Rye Canyon (County)	0.70	B	1.00	E	0.85	D	0.99	E
2. The Old Road & Magic Mountain (County)	0.79	C	0.84	D	0.78	C	0.86	D
3. The Old Road & Valencia (County)	0.85	D	0.92	E	0.84	D	0.95	E
4. The Old Road & McBean (County)	0.68	B	0.95	E	0.65	B	0.90	D
5. The Old Road & Pico Canyon (County)	0.96	E	1.07	**F**	0.85	D	0.97	E
6. Rye/Copper Hill & Newhall Ranch (City)	0.85	D	0.89	D	0.81	D	0.89	D
7. McBean & Newhall Ranch (City)	0.80	C	0.88	D	0.83	D	0.89	D
8. McBean & Magic Mountain (City)	0.75	C	0.93	E	0.77	C	0.95	E
9. McBean & Valencia (City)	0.66	B	0.85	D	0.70	B	0.87	D
10. Orchard Village & McBean (City)	0.79	C	0.97	E	0.78	C	0.98	E
11. Orchard Village & Wiley Canyon (City)	0.74	C	0.98	E	0.78	C	0.98	E
12. Valencia & Magic Mountain (City)	0.83	D	0.95	E	0.82	D	0.86	D
13. Bouquet Canyon & Plum Canyon (City)	0.80	C	0.76	C	0.80	C	0.77	C
14. Bouquet Canyon & Newhall Ranch (City)	0.84	D	0.87	D	0.86	D	0.89	D
15. Bouquet Canyon & Soledad Canyon (City)	0.80	C	0.90	D	0.78	C	0.90	D
16. Railroad & Lyons (City)	0.71	C	0.94	E	0.60	A	0.83	D
17. Sierra Highway & Newhall (City)	0.99	E	0.99	E	0.86	D	0.93	E

Intersection (Location)	Current Area Plan and General Plan				OVOV Area Plan and General Plan			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS
18. Whites Canyon & Soledad Canyon (City)	0.80	C	0.92	E	0.80	C	0.90	D
19. Sierra Highway & Soledad Canyon (City)	0.88	D	0.88	D	0.86	D	0.89	D
20. Commerce Center & Magic Mountain (County) *	0.76	C	0.74	C	0.76	C	0.77	C
21. Pico Canyon & Valencia Boulevard (County) *	0.85	D	0.98	E	0.75	C	0.81	D
22. Magic Mountain & Via Princessa (City) *	0.57	A	0.80	C	0.61	B	0.81	D
23. Golden Valley & Via Princessa (City) *	0.91	E	0.83	D	0.88	D	0.76	C

Source: Austin-Foust Associates, Inc. 2010.
** Denotes a future intersection.*

Plan to Plan Analysis

Vehicle Miles Traveled

The traffic forecasting process utilized by the SCVCTM also calculates vehicle miles travelled (VMT) based on the geographical placement of land uses within an area and the number of trips they generate. **Table 3.2-12, Trip Length and VMT Comparison – Existing County Area Plan and City General Plan Buildout vs. OVOV Buildout**, provides a comparison between total ADT, VMT and trip length under buildout of the existing and proposed County Area Plan and City General Plan. The table shows that the total number of vehicle trips under buildout of the proposed County Area Plan and City General Plan is approximately 1 percent lower than those under buildout of the existing County Area Plan and City General Plan. The table also shows that total VMT is reduced by approximately 15 percent and the average trip length is reduced by approximately 1.9 miles. The amount of VMT is reduced due to the land use designations between the existing Area Plan and City General Plan and the proposed Area Plan and General Plan. As described in **Section 3.1, Land Use and Planning**, the proposed Area Plan would decrease by 10,224 acres of rural land, increase 9,417 acres of urban residential (includes mixed uses), and would increase by 1,897 acres of commercial and industrial land uses.

Table 3.2-12
Trip Length and VMT Comparison – Existing County Area Plan and City General Plan Buildout vs. OVOV Buildout

Scenario	ADT	Total VMT	Average Trip Length (miles)
Existing County Area Plan and City General Plan at Buildout	1,874,000	25,373,000	13.5
Proposed County Area Plan and City General Plan at Buildout	1,860,000	21,532,000	11.6
Difference	-14,000	-3,841,000	-1.9
	-1%	-15%	-14%

Source: Santa Clarita Valley Consolidated Traffic Model (SCVCTM)
ADT = Average Daily Trips
VMT = Vehicle Miles Traveled (daily)

Analysis of Proposed Area Plan Policies

The technical analysis above provides a general overview of long-term impacts to various arterial roadway segments and principal intersections in the OVOV Planning Area. However, impacts on roadway segments and intersections would be assessed on a project by project basis as buildout of the proposed Area Plan occurs; the actual impacts are dependent on the uses proposed by each individual project. In order to ensure that impacts to roadway segments and intersections would be minimized, the proposed Area Plan contains several policies intended to increase mobility, ensure the funding of transportation improvements, and reduce vehicle trips.

The proposed Area Plan would promote transit-oriented development (**Policy C 1.2.1**), mixed-use development (**Policy C 1.2.5**), and walkable and bicycle-friendly communities (**Policies C 1.2.2** and **1.2.12**) that place housing and businesses in close proximity and connect such uses to alternative modes of transportation. Development would be oriented around public transit and pedestrian circulation via flexible roadway design and parking standards (**Policies C 1.2.4** and **C 1.2.6**), smaller blocks (**Policy C 1.2.7**), unified neighborhoods (**Policy C 1.2.10**) and the provision of the right-of-way for non-vehicular transportation modes (**Policy C 1.2.9**). Smart growth concepts would be followed to reduce VMT (**Policy C 1.2.11**). Additionally, the location, availability, and accessibility of transit would be considered in the evaluation of new development plans (**Policy C 1.2.12**), and new commercial and industrial development would be required to provide walkway connections to public sidewalks and transit stops, where available (**Policy C 1.2.3**).

Another objective of the proposed Area Plan is to ensure that funding and phasing of new transportation improvements as growth occurs in the County's Planning Area. The County would require that new development would construct or provide its fair share of the cost of transportation improvements, and that required improvements or in-lieu contributions are in place to support the development prior to occupancy (**Policy C 2.6.1**). The County would also consider implementation of a joint City/County transportation management system impact fee to better address traffic impacts that cannot be mitigated (**Policy C 2.6.2**). The County would work with other local, regional, state and federal agencies in identifying funding alternatives for the Santa Clarita Valley's transportation systems (**Policy C 2.6.3**). These policies would help maintain a functional and adequate transportation system throughout the Santa Clarita Valley.

To further reduce VMT, the proposed Area Plan would require trip reduction measures in evaluating new development projects (**Policy C 3.1.1:**), promote home-based business and live-work units as a means of reducing home-to-work trips (**Policy C 3.1.2**), promote the use of flexible work schedules (**Policy C 3.1.3**), promote employee incentives to encourage alternative travel modes to work (**Policy C 3.1.4**), promote the use of van pools and car pools (**Policy C 3.1.5**), promote the provision of showers within businesses to encourage bicycling to work (**Policy C 3.1.6**) and encourage special event center operators to advertise and offer discount passes with event tickets and carpooling patrons **(Policies C 3.1.7** and **C 3.1.8)**. All of these policies represent ways in which the County would promote the use of travel demand strategies to reduce vehicle trips.

Proposed Area Plan Policies

Policy C 1.2.1: Develop coordinated plans for land use, circulation, and transit to promote transit-oriented development that concentrates higher density housing, employment, and commercial areas in proximity to transit corridors.

Policy C 1.2.2: Create walkable communities, with paseos and walkways connecting residential neighborhoods to multi-modal transportation services such as bus stops and rail stations.

Policy C 1.2.3: Require that new commercial and industrial development provide walkway connections to public sidewalks and transit stops, where available.

Policy C 1.2.4: Consider location, availability, and accessibility of transit in evaluating new development plans.

Policy C 1.2.5: In mixed use projects, require compact development and a mix of land uses to locate housing, workplaces, and services within walking or bicycling distance of each other.

Policy C 1.2.6: Provide flexible standards for parking and roadway design in transit-oriented development areas to promote transit use, where appropriate.

Policy C 1.2.7: In pedestrian-oriented areas, provide a highly connected circulation grid with relatively small blocks to encourage walking.

Policy C 1.2.9: Emphasize providing right-of-way for non-vehicular transportation modes so that walking and bicycling are the easiest, most convenient modes of transportation available for short trips.

Policy C 1.2.10: Protect communities by discouraging the construction of facilities that sever residential neighborhoods.

Policy C 1.2.11: Reduce vehicle miles traveled (VMT) through the use of smart growth concepts.

Policy C 1.2.12: Balance the anticipated volume of people and goods movement with the need to maintain a walkable and bicycle friendly environment.

Policy C 2.6.1: Require that new development construct or provide its fair share of the cost of transportation improvements, and that required improvements or in-lieu contributions are in place to support the development prior to occupancy.

Policy C 2.6.2: Evaluate the feasibility of establishing a joint City/County Intelligent Transportation Management System (ITMS) impact fee for new development that is unable to otherwise mitigate its impacts to the roadway system through implementation of the adopted Highway Plan.

Policy C 2.6.3: Support local, regional, state and federal agencies in identifying and implementing funding alternatives for the Valley's transportation systems.

Policy C 3.1.1: In evaluating new development projects, require trip reduction measures as feasible to relieve congestion and reduce air pollution from vehicle emissions.

Policy C 3.1.2: Promote home-based businesses and live-work units as a means of reducing home-to-work trips.

Policy C 3.1.3: Promote the use of flexible work schedules and telecommuting to reduce home to work trips.

Policy C 3.1.4: Promote the use of employee incentives to encourage alternative travel modes to work.

Policy C 3.1.5: Promote the use of van pools, car pools, and shuttles to encourage trip reduction.

Policy C 3.1.6: Promote the provision of showers and lockers within businesses and employment centers, in order to encourage opportunities for employees to bicycle to work.

Policy C 3.1.7: Encourage special event center operators to advertise and offer discounted transit passes with event tickets.

Policy C 3.1.8: Encourage special event center operators to advertise and offer discount on-site parking incentives to carpooling patrons with four or more persons per vehicle.

Effectiveness of Proposed Area Plan Policies

The proposed Area Plan would promote denser, transit-oriented development in areas where transit use is already high. Emphasis is also placed on introducing mixed-use development in order to allow residents to reach services in ways that are not exclusively automobile-dependent, such as by walking, biking and transit. Grouping mixed uses together also reduces the need for residents to make multiple vehicle trips to obtain services and reach employment centers, resulting in a net reduction in the number of vehicles on the roadway. The proposed OVOV land uses also represent a reduction in residential dwelling units of approximately 4 percent and an increase in office square footage of approximately 21 percent in comparison to the current County Area Plan and City General Plan. This change results in an improved jobs-to-housing balance for the Santa Clarita Valley, which reduces the need for residents to commute outside of the Valley for employment. For these reasons, trip generation, VMT, and impacts on arterial roadways and intersections would be incrementally reduced with the proposed County Area Plan and City General Plan in place of the current County Area Plan and City General Plan. Therefore, impacts would be less than significant.

Impact 3.19-2 **Implementation of the proposed Area Plan could exceed, either individually or cumulatively, a level of service standard established by the County Congestion Management Agency for designated roads or highways.**

In conformance with the Los Angeles County CMP, the maximum acceptable level of service on CMP roadways within the OVOV Planning Area is LOS E. As previously stated, the following CMP roadways are located within the OVOV Planning Area:

Freeways

- I-5 Freeway
- SR-14 Freeway

Arterial Roadway Segments

- Sierra Highway from Newhall Avenue to the SR-14 freeway at Red Rover Mine Road
- Magic Mountain Parkway from the I-5 freeway to Railroad Avenue
- Railroad Avenue/Newhall Avenue from Magic Mountain Parkway to the SR-14 freeway

As shown in **Tables 3.2-8** and **3.2-9**, each of the three CMP arterial roadway segments would operate at LOS E or better under the proposed County Area Plan and City General Plan. Therefore, the following analysis evaluates impacts on the I-5 and SR-14 freeways. Caltrans has identified proposed improvements to the I-5 freeway through the Santa Clarita Valley. Caltrans currently proposes to add additional lanes to the I-5 freeway between the SR-14 interchange and the Parker Road interchange, a distance of approximately 13.6 miles. This includes extending the existing HOV lanes from the SR-14 interchange to just south of the Parker Road interchange, incorporating truck climbing lanes from the SR-14 interchange to the Pico Canyon Road/Lyons Avenue interchange, and constructing and/or extending auxiliary lanes between interchanges at six locations.

The North County Combined Highway Corridors Study, a joint study sponsored in part by Metro, Caltrans, the County of Los Angeles, and the City of Santa Clarita, identified the SR-14 freeway through the OVOV area as needing additional lanes to accommodate existing and anticipated increases in traffic volumes. The study identified a short-range plan to complete the mainline to a minimum of three lanes in each direction, and a long-range plan to complete the mainline to four lanes in each direction between the Newhall Avenue interchange and the Sand Canyon interchange, and to add a dedicated truck lane between the I-5 freeway and the Placerita Canyon Road interchange.

The study also identified a short-range plan to convert the existing HOV lanes to a reversible HOV lane configuration that would provide three HOV lanes in the peak travel direction. However, subsequent planning efforts by Caltrans and Metro have focused on utilizing two conventional (i.e., non-reversible) HOV lanes in each direction in-lieu of reversible HOV lanes. Caltrans is currently constructing HOV lane direct connectors between the existing SR-14 HOV lanes and the existing I-5 HOV lanes. This project is estimated to be completed by 2013.

A summary of ADT volumes, as well as AM and PM peak hour traffic volumes, is provided in **Table 3.2-13, Freeway Segment Level of Service** for six key freeway segments within the OVOV Planning Area. The freeway LOS ratings are presented for both the existing number of lanes and the planned number of lanes described above. As shown in the table, all six freeway segments, except for the I-5 freeway south of the Parker Interchange, would operate at LOS F during both peak hours under buildout of the current or proposed County Area Plan and City General Plan if the additional freeway lanes are not added. However, with incorporation of the additional freeway lanes described above, the number of segments operating at LOS F during both peak hours would be reduced to the following three segments under buildout of the existing County Area Plan and City General Plan:

- SR-14 south of Aqua Dulce Interchange;
- SR-14 south of Sierra Highway Interchange; and
- SR-14 north of I-5 Interchange.

Plan to Plan Analysis

Under buildout of the proposed County Area Plan and City General Plan, the number of segments operating at LOS F during both peak hours would be further reduced to the following two segments with incorporation of the additional freeway lanes.

- SR-14 south of Aqua Dulce Interchange; and
- SR-14 south of Sierra Highway Interchange.

Therefore, traffic impacts on each freeway segment would be incrementally lower under the proposed County Area Plan and City General Plan than the existing City General Plan and County Area Plan.

Table 3.2-13
Freeway Segment Level of Service

Segment	AM Peak Hour NB	AM Peak Hour SB	PM Peak Hour NB	PM Peak Hour SB
Existing Lane Configuration				
I-5 south of Parker Interchange				
Existing Conditions	A	A	B	B
Current GP	C	D	**F**	E
Proposed OVOV GP	C	D	**F**	E
I-5 south of Valencia Interchange				
Existing Conditions	C	C	D	D
Current GP	**F**	**F**	**F**	**F**
Proposed OVOV GP	E	**F**	**F**	**F**
I-5 north of SR-14 Interchange				
Existing Conditions	A	**F**	D	E
Current GP	**F**	**F**	**F**	**F**
Proposed OVOV GP	E	**F**	**F**	**F**
SR-14 south of Aqua Dulce Interchange				
Existing Conditions	A	C	C	B
Current GP	C	**F**	**F**	C
Proposed OVOV GP	B	**F**	**F**	B
SR-14 south of Sierra Highway Interchange				
Existing Conditions	A	C	D	B
Current GP	B	**F**	**F**	C
Proposed OVOV GP	B	**F**	**F**	C
SR-14 north of I-5 Interchange				
Existing Conditions	A	C	C	B
Current GP	C	**F**	**F**	C
Proposed OVOV GP	B	**F**	**F**	C
Planned Freeway Configuration				
I-5 south of Parker Interchange				
Current GP	C	C	D	D
Proposed OVOV GP	B	C	D	D
I-5 south of Valencia Interchange				
Current GP	D	E	E	E
Proposed OVOV GP	D	D	E	E

Segment	AM Peak Hour NB	AM Peak Hour SB	PM Peak Hour NB	PM Peak Hour SB
I-5 north of SR-14 Interchange				
Current GP	D	D	E	D
Proposed OVOV GP	C	C	D	D
SR-14 south of Aqua Dulce Interchange				
Current GP	B	**F**	**F**	C
Proposed OVOV GP	A	**F**	**F**	B
SR-14 south of Sierra Highway Interchange				
Current GP	B	**F**	**F**	C
Proposed OVOV GP	B	**F**	**F**	B
SR-14 north of I-5 Interchange				
Current GP	B	**F**	**F**	C
Proposed OVOV GP	B	E	E	B

Analysis of Proposed Area Plan Policies

The proposed Area Plan contains two policies that specifically address impacts to CMP arterial roadway and freeway segments. The County would continue to coordinate with Metro to implement the CMP for designated roadways (**Policy C 1.3.1**), and continue to coordinate with Caltrans on circulation and land use decisions that could affect I-5 and SR-14 (**Policy C 1.3.4**) to increase capacity and improve operations on these roadways.

Proposed Area Plan Policies

Policy C 1.3.1: Continue coordinating with the Metropolitan Transportation Authority (MTA or Metro) to implement the County's Congestion Management Program (CMP) for designated CMP roadways.

Policy C 1.3.4: Continue coordination with Caltrans on circulation and land use decisions that may affect Interstate 5, State Route 14, and State Route 126, and support programs to increase capacity and improve operations on these highways.

Effectiveness of Proposed Area Plan Policies

Adherence to the proposed Area Plan policies would ensure that the planned improvements to the I-5 and SR-14 freeways would be implemented. With these roadway improvements, operating conditions along both freeways would improve. These proposed policies would be supported by the increased

coordination between the County and City regarding land use and transportation improvements, an opportunity provided through the OVOV planning process.

As shown in **Tables 3.2-8** and **3.2-13**, operating conditions along CMP roadways would improve with buildout of the proposed County Area Plan and City General Plan in place of the current County Area Plan and City General Plan. However, roadway conditions would only improve with the implementation of roadway improvements. Therefore, impacts would remain potentially significant without mitigation.

Impact 3.2-3 **Implementation of the proposed Area Plan would not result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.**

The proposed Area Plan would result in a significant impact to air traffic patterns if it would cause an increase in air traffic levels or introduce incompatible land uses. Buildout of the proposed Area Plan would not result in the development of a new airport within the OVOV Planning Area nor would it introduce new land uses that could prevent safety hazards to air traffic. The proposed Area Plan contains a policy to ensure consistency with the County's Airport Land Use Plan as it pertains to the Agua Dulce Airport (**Policy C 1.3.5**).

Proposed Area Plan Policies

Policy C 1.3.5: Ensure consistency with the County's adopted Airport Land Use Plan as it pertains to the Agua Dulce Airport, in order to mitigate aviation-related hazards and protect airport operations from encroachment by incompatible uses.

Effectiveness of Proposed Area Plan Policies

The proposed Area Plan policy ensures consistency with the Airport Land Use Plan for the Agua Dulce Airport, the only airport that influences land use within the OVOV Planning Area. Since no other airport land use plans are applicable to development within the OVOV Planning Area, the above policy is considered effective. Impacts would be less than significant.

Impact 3.2-4 **Implementation of the proposed Area Plan would not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).**

The proposed Area Plan promotes changes to the designs of specific roadways that enhance their safety. These include increasing the number of lanes on major highways and other improvements under the

proposed Highway Plan (see **Appendix 3.2** for a detailed description of the Highway Plan). Hazards due to roadway design features would be evaluated on a project-by-project basis as buildout of the proposed Area Plan occurs. However, the proposed Area Plan does contain several policies that would reduce the potential for hazardous design.

The County would periodically monitor levels of service, traffic accident patterns, and physical conditions of the existing street system, and upgrade roadways as needed through the Capital Improvement Program (**Policy C 2.1.5**). Additionally, the County would apply consistent standards throughout the Santa Clarita Valley for street design to promote travel safety. It would accomplish this by designating roadways based on their functional classification (**Policy C 2.2.1**), adopting consistent standard street cross sections (**Policy C 2.2.2**), coordinating circulation plans of new development project with each other (**Policy C 2.2.3**), and adopting common standards for pavement width (**Policy C 2.2.5**). Within residential neighborhoods, "healthy streets" would be promoted through traffic-calming devices, shorter block length, and other considerations (**Policy C 2.2.6**). Where practical, the use of a grid or modified grid street system would be encouraged (**Policy 2.2.7**), and local street patterns would be designed to create logical and understandable travel paths for users and discourage cut-through traffic (**Policy C 2.2.8**). As set forth by **Policy C 2.2.10**, the street system design, including block length, width, horizontal and vertical alignments, curves, and other design characteristics, should function safely and effectively without the subsequent need for excessive traffic control devices to slow or deflect traffic. For intersections of collector or larger streets, four-way intersections would be preferred over offset intersection (**Policy C 2.2.11**), and private streets would typically be constructed to standards for public rights-of-way (**Policy C 2.2.12**).

Plan to Plan Analysis

Both the existing Area Plan and proposed Area Plan contain policies that would encourage safe roadway design and use. Impacts would be similar between both Area Plans.

Proposed Area Plan Policies

Policy C 2.1.5: Periodically monitor levels of service, traffic accident patterns, and physical conditions of the existing street system, and upgrade roadways as needed through the Capital Improvement Program.

Policy C 2.2.1: Designate roadways within the planning area based on their functional classification as shown on Exhibit C 2.

Policy C 2.2.2: Adopt consistent standard street cross sections for City and County roadways in the planning area, as shown on Exhibit C 3.

Policy C 2.2.3: Coordinate circulation plans of new development projects with each other and the surrounding street network, within both City and County areas.

Policy C 2.2.5: Adopt common standards for pavement width in consideration of capacity needs to serve projected travel demand, provided that a reduction in pavement width may be allowed in order to reduce traffic speeds, protect resources, enhance pedestrian mobility, or as otherwise deemed appropriate by the reviewing authority.

Policy C 2.2.6: Within residential neighborhoods, promote the design of "healthy streets" which may include reduced pavement width, shorter block length, provision of on-street parking, traffic-calming devices, bike routes and pedestrian connectivity, landscaped parkways, and canopy street trees.

Policy C 2.2.7: Where practical, encourage the use of grid or modified grid street systems to increase connectivity and walkability; where cul-de-sacs are provided, promote the use of walkways connecting cul-de-sac bulbs to adjacent streets and/or facilities to facilitate pedestrian access; where street connectivity is limited and pedestrian routes are spaced over 500 feet apart, promote the use of intermediate pedestrian connections through or between blocks.

Policy C 2.2.8: Local street patterns should be designed to create logical and understandable travel paths for users and to provide access between neighborhoods for local residents while discouraging cut-through traffic; cul-de-sac length should not exceed 600 feet, and "dog-leg" cul-de-sacs with one or more turns between the bulb and the outlet should be avoided where possible.

Policy C 2.2.10: The street system design, including block length, width, horizontal and vertical alignments, curves, and other design characteristics, should function safely and effectively without the subsequent need for excessive traffic control devices to slow or deflect traffic.

Policy C 2.2.11: For intersections of collector or larger streets, four-way intersections are preferred over offset intersections.

Policy C 2.2.12: Private streets, other than driveways and alleyways typically associated with multi-family development, should be constructed to standards for public rights-of-way, except as otherwise approved by the reviewing agency.

Effectiveness of Proposed Area Plan Policies

Implementation of the proposed Area Plan policies would establish several roadway design standards for future development within the County's Planning Area. They would promote standards pertaining to roadway width, block length, street parking, and other features to achieve safe design. Additionally, the County would monitor levels of service, traffic accident patterns, and the physical conditions of the existing street system, and upgrade roadways as needed. Since the proposed Area Plan would provide the framework to avoid roadway hazards, as opposed to increasing their occurrence, impacts would be less than significant.

Impact 3.2-5 Implementation of the proposed Area Plan would not result in inadequate emergency access.

Emergency access would be evaluated on a project-by-project basis as buildout of the proposed Area Plan occurs. However, the proposed Area Plan contains several policies intended to ensure that adequate emergency access is maintained throughout the Santa Clarita Valley. In order to promote mobility within the roadway network, the proposed Area Plan seeks to limit excessive cross traffic, access points, and turning movements on arterial highways; and enforce the appropriate spacing of traffic signals (**Policy C 2.1.1**), enhance connectivity of the roadway network through such methods as grade separations and bridges (**Policy C 2.1.2**), enhance the capacity of the roadway system by upgrading intersections when necessary (**Policy C 2.1.3**), ensure that the future dedication and acquisitions of roadways are based on projected demand (**Policy C 2.1.5**), and implement the construction of paved crossover points through medians for emergency vehicles (**Policy C 2.2.9**).

Additionally, the proposed Area Plan would facilitate consideration of the needs for emergency access in transportation planning. The County would maintain a current evacuation plan (**Policy C 2.5.1**), ensure that new development is provided with adequate emergency and/or secondary access, including two points of ingress and egress for most subdivisions (**Policy C 2.5.2**), require visible street name signage (**Policy C 2.5.3**), and provide directional signage to the I-5 and SR-14 freeways at key intersections to assist in emergency evacuation operations (**Policy C 2.5.4**).

Proposed Area Plan Policies

Policy C 2.1.1: Protect mobility on arterial highways by limiting excessive cross traffic, access points, and turning movements; traffic signals on arterial highways should be spaced at least ½-mile apart, and the minimum allowable separation should be at least ¼-mile.

Policy C 2.1.2: Enhance connectivity of the roadway network to the extent feasible given the constraints of topography, existing development patterns, and environmental resources, by constructing grade separations and bridges; connecting discontinuous streets; extending secondary access into areas where needed; prohibiting gates on public streets; and other improvements as deemed appropriate based on traffic analysis.

Policy C 2.1.3: Protect and enhance the capacity of the roadway system by upgrading intersections to meet level of service standards, widening and/or restriping for additional lanes, synchronizing traffic signals, and other means as appropriate.

Policy C 2.1.4: Ensure that future dedication and acquisition of right-of-way is based on the adopted Circulation Plan, proposed land uses, and projected demand.

Policy C 2.2.9: Medians constructed in arterial streets should be provided with paved crossover points for emergency vehicles, where deemed necessary by the Fire Department.

Policy C 2.5.1: Maintain a current evacuation plan as part of emergency response planning.

Policy C 2.5.2: Ensure that new development is provided with adequate emergency and/or secondary access for purposes of evacuation and emergency response; require two points of ingress and egress for every subdivision or phase thereof, except as otherwise approved for small subdivisions where physical constraints preclude a second access point.

Policy C 2.5.3: Require provision of visible street name signs and addresses on all development to aid in emergency response.

Policy C 2.5.4: Provide directional signage to Interstate 5 and State Route 14 at key intersections in the Valley, to assist emergency evacuation operations.

Effectiveness of Proposed Area Plan Policies

The proposed Area Plan policies are designed to maintain adequate emergency access throughout the County's Planning Area. They would promote mobility to allow for acceptable response times by emergency vehicles, and ensure emergency access to various types of properties. Additionally, the County would maintain a current evacuation plan. Since the proposed Area Plan would provide the framework to ensure adequate emergency access, impacts would be less than significant.

Plan to Plan Analysis

Both the existing Area Plan and proposed Area Plan contain policies that would provide for safe emergency access. Impacts would be similar between both Area Plans.

Impact 3.2-6 **Implementation of the proposed Area Plan would not generate a parking demand that exceeds municipal code–required parking capacity.**

Parking demand and capacity would be evaluated on a project-by-project basis as buildout of the proposed Area Plan occurs. However, the proposed Area Plan contains several policies intended to maintain adequate parking supply throughout the Santa Clarita Valley, while allowing flexibility where appropriate. The proposed Area Plan would facilitate the use of various parking management strategies. These include evaluating parking standards and reducing requirements where they exceed demand (**Policy C 3.3.1**), providing common parking facilities in pedestrian-oriented, mixed-use districts (**Policy C 3.3.2**), promoting shared use of parking between businesses (**Policy C 3.3.3**), providing lower parking requirements for transit-oriented development projects (**Policy C 3.3.4**), encouraging short-term parking in high-activity areas and all-day parking at the periphery of those areas (**Policy C 3.3.5**), the creation of parking benefit districts (**Policy C 3.3.7**) and establish performance pricing of street parking (**Policy C 3.3.8**). Additionally, the County would adopt regulations for truck parking on public streets (**Policy C 2.4.4**).

Proposed Area Plan Policies

Policy C 2.4.4: Adopt regulations for truck parking on public streets, to avoid impacts to residential neighborhoods.

Policy C 3.3.1: Evaluate parking standards and reduce requirements where appropriate, based on data showing that requirements are in excess of demand.

Policy C 3.3.2: In pedestrian-oriented, high density mixed use districts, provide for common parking facilities to serve the district, where appropriate.

Policy C 3.3.3: Promote shared use of parking facilities between businesses with complementary uses and hours, where feasible.

Policy C 3.3.4: Within transit-oriented development projects, provide incentives such as higher floor area ratio and/or lower parking requirements for commercial development that provides transit and ride-share programs.

Policy C 3.3.5: Encourage convenient short-term parking in high-activity areas, and all day parking at the periphery of the development areas.

Policy C 3.3.7: Create parking benefit districts which invest meter revenues in pedestrian infrastructure and other public amenities wherever feasible.

Policy C 3.3.8: Establish performance pricing of street parking so that the costs are enough to promote frequent turnover, with a goal to keep 15 percent of spaces empty at all times, whenever feasible.

Effectiveness of Proposed Area Plan Policies

Implementation of the proposed Area Plan policies would allow adjustments to the parking requirements for individual development projects, where appropriate. For example, to encourage transit-oriented development, the County may consider lowering the parking requirement if such development provides transit and ride-share programs. However, such exceptions to the parking requirements of the Los Angeles County Code would only be granted if those requirements are determined to exceed the project's demand. Otherwise, the code requirements, which would be continuously evaluated and, if necessary, updated, would continue to be enforced. For these reasons, implementation of the proposed Area Plan would not generate a parking demand that exceeds code requirements. Therefore, parking demand impacts would be less than significant.

Plan to Plan Analysis

Both the existing Area Plan and proposed Area Plan contain policies that would require for adequate parking consistent with the County of Los Angeles Municipal Code. Impacts would be similar between both Area Plans.

Impact 3.2-7 **Implementation of the proposed Area Plan would not conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).**

One of the primary goals of the proposed Area Plan is to promote policies, plans and programs that support alternative transportation to a greater extent than the existing Area Plan. The proposed Area Plan contains numerous policies to expand and improve alternative transportation systems. General polices include promoting expansion of alternative transportation options to all demographic and economic groups (**Policy C 1.1.2**), working with local and regional agencies and employers to promote an integrated, seamless transportation system (**Policy C 1.1.3**), planning for efficient links between circulation systems at bus-rail connections and pedestrian-bus connections (**Policy C 1.1.5**), encouraging multi-modal travel through provision of bus turnouts, bus rapid transit, bikeways, walkways, and linkages to trail systems (**Policy C 1.1.8**), acquiring right-of-way in transportation corridors to accommodate multiple travel modes (**Policy C 1.1.9**), providing for flexibility in the transportation system to accommodate new technologies (**Policy C 1.1.10**), providing adequate way-finding programs directing users to transit stations (**Policy C 1.1.11**), and promoting walking, and bicycling and circulator transit within activity centers (**Policy C 1.1.13**). The proposed Area Plan would coordinate land use and circulation planning to achieve greater accessibility and mobility for users of all travel modes. This includes providing opportunities and infrastructure to support the use of alternative fuel vehicles and travel devices (**Policy C 3.2.3** and **Policy 3.2.4**) and promoting multi-modal travel choices between Palmdale Regional Airport and the Santa Clarita Valley (**Policy C 1.3.6** and **Policy C 1.3.7**).

The proposed Area Plan also promotes rail service to meet regional and inter-regional needs for convenient, cost-effective travel alternatives. To maximize the effectiveness of Metrolink's commuter rail service, the proposed Area Plan includes policies to develop permanent Metrolink facilities with an expanded bus transfer station at the Via Princessa station, or at other locations (**Policy C 4.1.1**), facilitate extension of a passenger rail line from the Santa Clarita Station to Ventura County (**Policy C 4.1.2**), expand commuter services at all Metrolink stations (**Policy C 4.1.3**), preserve abandoned railroad right-of-way for future transportation facilities (**Policy C 4.1.4**), increase rail efficiency and public safety through street and track improvements and grade separations (**Policy C 4.1.5**), promote transit-oriented development near rail stations (**Policy C 4.1.6**), and facilitate coordination of planning for any future high speed regional rail systems (**Policy C 4.1.7**).

The proposed Area Plan promotes a high speed rail system connecting the Santa Clarita Valley with other regions, and other regional rail service connections. Policies including working with the Orange Line Development Authority and other agencies to develop a high speed transportation system (**Policies C**

4.2.1 and **Policy C 4.2.2**), and promoting the expansion of Amtrak Rail Service to the Santa Clarita Valley (**Policy C 4.2.3**).

In addition to promoting improved rail service, the proposed Area Plan also promotes improved bus service for the Santa Clarita Valley. The proposed Area Plan seeks to ensure that street patterns and design standards accommodate bus transit needs. The County would require that new subdivisions provide for two means of access into and out of the development, in order to provide for transit access, where feasible (**Policy C 5.1.1**). For private gated communities, the County would require that the developer accommodate bus access through the entry gate or provide bus waiting facilities at the project entry (**Policy C 5.1.2**). Bus operations would be considered when determining acceptable street designs (**Policy C 5.1.3**), and bus stops would be located within 0.25 mile of residential neighborhoods (**Policy C 5.1.4**). The proposed Area Plan would promote locating and designing bus turnouts such that they would limit traffic obstruction and would provide sufficient merging length for the bus to re-enter the traffic flow (**Policy C 5.1.5**). The feasibility of giving buses priority at signalized intersections to maintain transit service level standards would be evaluated (**Policy 5.1.6**). Additional strategies would be considered, including the provision for bicycles on buses, bicycle parking at transit centers, and park-and-ride lots at transit stops (**Policy C 5.2.5**).

Second, the proposed Area Plan seeks to explore opportunities to improve and expand bus transit service. Supporting policies include providing fixed route service to significant activity areas, and serving low-density and rural areas with dial-a-ride, flexible fixed routes, or other transit services as deemed appropriate (**Policy C 5.3.1**). The County would promote concentrated development patterns in coordination with transit planning to maximize service efficiency and ridership (**Policy C 5.3.2**), evaluate the feasibility of providing "fly-away" bus transit service to various airports (**Policy C 5.3.3**), and evaluate the feasibility of providing bus rapid transit for key transit corridors when light-rail is not feasible (**Policy C 5.3.4**).

To provide adequate funding for the expansion of transit services, the County would incorporate funding for all modes of transportation in the capital improvement program (**Policy C 1.1.9**), establish transit impact fee rates that are based on the actual impacts of new development on the transit system (**Policy C 5.4.1**), evaluate the feasibility of establishing a joint City/County transit impact fee (**Policy C 5.4.2**), and seek funding for transit system improvement from local, state, and federal programs and grants (**Policy C 5.4.3**).

Proposed Area Plan Policies

Policy C 1.1.2: Promote expansion of alternative transportation options to increase accessibility to all demographic and economic groups throughout the community, including mobility-impaired persons, senior citizens, low-income persons, and youth.

Policy C 1.1.3: Work with local and regional agencies and employers to promote an integrated, seamless transportation system that meets access needs, including local and regional bus service, dial-a-ride, taxis, rail, van pools, car pools, bus pools, bicycling, walking, and automobiles.

Policy C 1.1.5: Plan for efficient links between circulation systems at appropriate locations, including but not limited to bus-rail connections and pedestrian-bus connections.

Policy C 1.1.6: Provide adequate facilities, including but not limited to bicycle parking and storage, expansion of park-and-ride lots, and provision of adequate station and transfer facilities in appropriate locations.

Policy C 1.1.8: Acquire and/or reserve adequate right-of-way in transportation corridors to accommodate multiple travel modes, including bus turnouts, bus rapid transit (BRT), bikeways, walkways, and linkages to trail systems.

Policy C 1.1.9: Incorporate funding for all modes of transportation in the capital improvement program, and seek funding from all available sources for multi-modal system development.

Policy C 1.1.10: Provide for flexibility in the transportation system to accommodate new technology as it becomes available, in order to reduce trips by vehicles using fossil fuels where feasible and appropriate.

Policy C 1.1.11: Promote use of multi-modal facilities by providing adequate and attractive way-finding programs directing users to transit stations, park-and-ride lots, bicycle storage, and other facilities.

Policy C 1.1.13: Design new activity centers and improve existing activity centers to prioritize walking, bicycling and circulator transit for internal circulation of person-travel.

Policy C 1.3.6: Support the expansion of Palmdale Regional Airport and the extension of multi-modal travel choices between the airport and the Santa Clarita Valley, in conformance with regional planning efforts.

Policy C 1.3.7: Apply for regional, State, and federal grants for bicycle and pedestrian infrastructure projects.

Policy C 3.2.3: When available and feasible, provide opportunities and infrastructure to support use of alternative fuel vehicles and travel devices.

Policy C 3.2.4: The City and County will encourage new commercial and retail developments to provide prioritized parking for electric vehicles and vehicles using alternative fuels.

Policy C 4.1.1: Develop permanent Metrolink facilities with an expanded bus transfer station and additional park-and-ride spaces at the Via Princessa station, or other alternative location as deemed appropriate to meet the travel needs of residents on the Valley's east side.

Policy C 4.1.2: Coordinate with other agencies to facilitate extension of a passenger rail line from the Santa Clarita Station to Ventura County, which may be used for Metrolink service.

Policy C 4.1.3: Continue to expand and improve commuter services, including park-and-ride lots, bicycle parking and storage, and waiting facilities, at all Metrolink stations.

Policy C 4.1.4: Encourage the preservation of abandoned railroad right-of-way for future transportation facilities, where appropriate.

Policy C 4.1.5: Work with other agencies to increase rail efficiency and public safety through street and track improvements and grade separations, where needs are identified.

Policy C 4.1.6: Provide incentives to promote transit-oriented development near rail stations.

Policy C 4.1.7: Facilitate coordination of planning for any future high speed regional rail systems in the Valley with Metrolink services.

Policy C 4.2.1: Continue to work with the Orange Line Development Authority (OLDA) to plan for development of an environmentally sensitive high speed transportation system with a route through the Santa Clarita Valley, including a regional transit hub with associated infrastructure that would provide connections to the Los Angeles Basin, Palmdale Regional Airport, and other

Policy C 4.2.2: Coordinate with other agencies as needed to facilitate planning for other high-speed rail alternatives in the Santa Clarita Valley.

Policy C 4.2.3: Promote and encourage the expansion of Amtrak Rail Service to the Santa Clarita Valley.

Policy C 5.1.1: Require that new subdivisions provide for two means of access into and out of the development, in order to provide for transit access, where feasible.

Policy C 5.1.2: For private gated communities, require the developer to accommodate bus access through the entry gate, or provide bus waiting facilities at the project entry with pedestrian connections to residential streets, where appropriate.

Policy C 5.1.3: Consider the operational characteristics of buses when determining acceptable street designs, including grades and turning radii.

Policy C 5.1.4: Provide for location of bus stops within ¼-mile of residential neighborhoods, and include paved bus waiting areas in street improvement plans wherever appropriate and feasible.

Policy C 5.1.5: Locate and design bus turnouts to limit traffic obstruction and to provide sufficient merging length for the bus to re-enter the traffic flow.

Policy C 5.1.6: Evaluate the feasibility of giving buses priority at signalized intersections to maintain transit service level standards, where appropriate.

Policy C 5.2.5: Complementary transportation modes should be interconnected at intermodal transit centers, including provisions for bicycles on buses, bicycle parking at transit centers, and park-and-ride at transit stops.

Policy C 5.3.1: Continue to provide fixed route service to significant activity areas and neighborhoods with moderate to high density, and serve low-density and rural

areas with dial-a-ride, flexible fixed routes, or other transit services as deemed appropriate.

Policy C 5.3.2: Promote concentrated development patterns in coordination with transit planning to maximize service efficiency and ridership.

Policy C 5.3.3: Evaluate the feasibility of providing "fly-away" bus transit service to airports located at Burbank, Palmdale, and Los Angeles, and implement this program when warranted by demand.

Policy C 5.3.4: Evaluate the feasibility of providing bus rapid transit (BRT) for key transit corridors when light-rail is not feasible or cost effective.

Policy C 5.4.1: Establish transit impact fee rates that are based on the actual impacts of new development on the transit system, and regularly monitor and adjust these fees as needed to ensure adequate mitigation.

Policy C 5.4.2: Evaluate the feasibility of establishing a joint City/County transit impact fee to equitably distribute the capital costs of transit system expansion to meet the needs of new development in both County and City areas of the Valley.

Policy C 5.4.3: Seek funding for transit system expansion and improvement from all available sources, including local, state, and federal programs and grants.

Effectiveness of Proposed Area Plan Policies

The proposed Area Plan policies address the deficiencies in the existing alternative transportation system, and provide direction for the expansion and improvement of alternative transportation throughout the Santa Clarita Valley. Several policies encourage the provision of infrastructure to accommodate alternative modes of transportation, links between bus, rail and pedestrian hubs, and the support of new transportation technology, among others. Several policies specifically address rail and bus transit service in the Santa Clarita Valley to ensure new facilities can be adequately accommodated. For example, the policies seek to provide bus service to locations that are not presently served due to various barriers, including terrain, infrastructure, street design, and grade separations, and provide for the location of bus stops with 0.25 mile of residential neighborhoods. Therefore, implementation of the proposed Area Plan would encourage and enhance, as opposed to conflict with, plans supporting alternative transportation and impacts would be less than significant.

Plan to Plan Analysis

Both the existing Area Plan and proposed Area Plan contain policies that promote alternative transportation systems. However the proposed Area Plan promotes alternative modes of transportation more substantively by providing more policies which address the issue. Additionally, the proposed Area Plan proposes more dense land uses on the Valley floor which would use or be located in closer proximity to alternative modes of transportation including but not limited to buses, bikeways, and trains.

Impact 3.2-8 **Implementation of the proposed Area Plan would not cause a hazard or barrier for pedestrians or bicyclists.**

As discussed above, the proposed Area Plan strongly supports alternative modes of transportation, including walking and bicycling, to reduce total VMT. Additionally, the proposed Area Plan establishes several policies to ensure the safety and mobility of pedestrians and bicyclists. The County would provide safe and convenient access to safe transit, bikeways, and walkways (**Policies C 1.1.1** and **C 1.1.4**), consider the safety and convenience of pedestrians and cyclists in the design and development of transportation systems (**Policy C 1.1.7** and **C 1.3.7**), provide safe pedestrian connections across barriers such as major traffic corridors, drainage and flood control facilities, and grade separations (**Policy C 1.2.8**), adopt consistent standards for implementation of Americans with Disabilities Act requirements (**Policy C 2.2.15**), and in the development review process prioritize direct pedestrian access between building entrances, sidewalks and transit stops (**Policy C 3.3.6**).

The proposed Area Plan seeks to develop a unified and well-maintained bikeway system by adopting and implementing a coordinated master plan for bikeways for the Santa Clarita Valley. The County would develop Class 1 bike paths linking neighborhoods to open space and activity areas (**Policy C 6.1.1**), provide striped Class 2 bike lanes within the right-of-way for bicycle commuters (**Policy C 6.1.2**), acquire right-of-way needed to complete the bicycle circulation system (**Policy C 6.1.3**), provide signage for Class 3 bike routes or designate alternative routes (**Policy C 6.1.4**), and plan for continuous bikeways to serve major destinations (**Policy C 6.1.5**).

The proposed Area Plan encourages the provision of equipment and facilities to support the use of bicycles as an alternative means of travel. The County would require bicycle parking at commercial sites and multi-family housing complexes (**Policy C 6.2.1**), bicycle racks on transit vehicles (**Policy C 6.2.2**), and services for bicycle commuters, such as showers and changing rooms, as part of the review process for new or substantially altered development (**Policy C 6.2.3**).

The proposed Area seeks to develop walkable communities through an integrated system of pedestrian walkways, paseos and trails. The County would consider pedestrian connections within and between developments in reviewing development proposals (**Policy C 7.1.1**), promote the extension of pedestrian access to connect existing walled subdivisions to transit and services (**Policy C 7.1.2**), consider grade separated facilities to provide pedestrian connections across barriers (**Policy C 7.1.3**), develop an improvement program to connect existing walkways and paseos to transit and services (**Policy C 7.1.4**), provide for pedestrian walkways from transit stops and parking areas to businesses, and avoid placement of uses that would obstruct pedestrian pathways (**Policy C 7.1.5**), encourage sidewalk access to building entrances (**Policy C 7.1.6**), promote use of pedestrian-oriented scale and design features (**Policy C 7.1.7**), upgrade streets that are not pedestrian-friendly (**Policy C 7.1.8**), promote pedestrian-oriented street design through traffic-calming measures (**Policy C 7.1.9**), and improve the Santa Clarita Valley's multi-use trail system (**Policy C 7.1.10**).

Proposed Area Plan Policies

Policy C 1.1.1: Reduce dependence on the automobile, particularly single-occupancy vehicle use, by providing safe and convenient access to transit, bikeways, and walkways.

Policy C 1.1.4: Promote public health through provision of safe, pleasant, and accessible walkways, bikeways, and multi-purpose trail systems for residents.

Policy C 1.1.7: Consider the safety and convenience of the traveling public, including pedestrians and cyclists, in design and development of all transportation systems.

Policy C 1.2.8: Provide safe pedestrian connections across barriers, which may include but are not limited to major traffic corridors, drainage and flood control facilities, utility easements, grade separations, and walls.

Policy C 2.2.15: Adopt consistent standards for implementation of Americans with Disabilities Act requirements such as curb ramp design and accessible pedestrian signals.

Policy C 3.3.6: In the development review process, prioritize direct pedestrian access between building entrances, sidewalks and transit stops, by placing parking behind buildings where possible, to the sides of buildings when necessary, and always away from street intersections.

Policy C 6.1.1: For recreational riders, continue to develop Class 1 bike paths, separated from the right-of-way, linking neighborhoods to open space and activity areas.

Policy C 6.1.2: For long-distance riders and those who bicycle to work or services, provide striped Class 2 bike lanes within the right-of-way, with adequate delineation and signage, where feasible and appropriate.

Policy C 6.1.3: Continue to acquire or reserve right-of-way and/or easements needed to complete the bicycle circulation system as development occurs.

Policy C 6.1.4: Where inadequate right-of-way exists for Class 1 or 2 bikeways, provide signage for Class 3 bike routes or designate alternative routes as appropriate.

Policy C 6.1.5: Plan for continuous bikeways to serve major destinations, including but not limited to regional shopping areas, college campuses, public buildings, parks, and employment centers.

Policy C 6.2.1: Require bicycle parking, which can include bicycle lockers and sheltered areas, at commercial sites and multi-family housing complexes for use by employees and residents, as well as customers and visitors.

Policy C 6.2.2: Provide bicycle racks on transit vehicles to give bike-and-ride commuters the ability to transport their bicycles.

Policy C 6.2.3: Promote the inclusion of services for bicycle commuters, such as showers and changing rooms, as part of the review process for new development or substantial alterations of existing commercial or industrial uses, where appropriate.

Policy C 7.1.1: In reviewing new development proposals, consider pedestrian connections within and between developments as an integral component of the site design, which may include seating, shading, lighting, directional signage, accessibility, and convenience.

Policy C 7.1.2: For existing walled subdivisions, extend pedestrian access to connect these neighborhoods to transit and services through public education and by facilitating retrofitted improvements where feasible.

Policy C 7.1.3: Where feasible and practical, consider grade separated facilities to provide pedestrian connections across arterial streets, flood control channels, utility easements, and other barriers.

Policy C 7.1.4: Identify and develop an improvement program to connect existing walkways and paseos to transit and services, where needed and appropriate.

Policy C 7.1.5: In new commercial development, provide for direct, clearly delineated, and preferably landscaped pedestrian walkways from transit stops and parking areas to building entries, and avoid placement of uses (such as drive-through facilities) in locations that would obstruct pedestrian pathways.

Policy C 7.1.6: Encourage placement of building entries in locations accessible to public sidewalks and transit.

Policy C 7.1.7: Utilize pedestrian-oriented scale and design features in areas intended for pedestrian use.

Policy C 7.1.8: Upgrade streets that are not pedestrian-friendly due to lack of sidewalk connections, safe street crossing points, vehicle sight distance, or other design deficiencies.

Policy C 7.1.9: Promote pedestrian-oriented street design through traffic-calming measures where appropriate, which may include but are not limited to bulb-outs or chokers at intersections, raised crosswalks, refuge islands, striping, and landscaping.

Policy C 7.1.10: Continue to expand and improve the Valley's multi-use trail system to provide additional routes for pedestrian travel.

Effectiveness of Proposed Area Plan Policies

The proposed Area Plan policies would encourage the creation of walkable communities and neighborhoods within the Santa Clarita Valley by considering pedestrian access in all phases of development planning, including site design, subdivision design, and public improvement projects. Intersections would be made more pedestrian-friendly through the installation of traffic calming features such as striping, landscaping, and pedestrian islands, or construction of pedestrian bridges. Additionally, the policies seek to create a unified and well-maintained bikeway system, which includes connection of the gaps in the existing system. The proposed Area Plan has been designed to reduce, as opposed to

cause, hazards and barriers to pedestrians and bicyclists, therefore impacts are considered less than significant.

Plan to Plan Analysis

Both the existing Area Plan and proposed Area Plan contain policies that encourage walkable communities. Both the proposed and existing Area Plans have similar policies concerning this issue and potential impacts are similar.

MITIGATION FRAMEWORK

The following mitigation measures shall be implemented for activities that would occur under the proposed plan.

3.2.1 Both the County of Los Angeles and the of Santa Clarita shall work with Caltrans as they add additional lanes to the I-5 freeway between the SR-14 interchange and the Parker Road interchange. This improvement includes extending the existing HOV lanes from the SR-14 interchange to just south of the Parker Road interchange, incorporating truck climbing lanes from the Pico Canyon Road/Lyons Avenue interchange to the SR-14 interchange and constructing or extending auxiliary lanes between interchanges at six locations.

3.2.2 The County of Los Angeles shall continue to participate in implementing short-term measures of the North County Combined Highway Corridors Study, including adding additional lanes to the SR-14 to create a minimum of three lanes in each direction. Participation for long-term measures includes the completion of SR-14 to four lanes in each direction between the Newhall Avenue interchange and the Sand Canyon Interchange and to add a dedicated truck lane between the I-5 freeway and the Placerita Canyon Road interchange.

3.2.3 The County shall continue to monitor potential impacts on roadway segments and intersections on a project-by-project basis as buildout occurs by requiring traffic studies for all projects that could significantly impact traffic and circulation patterns.

SIGNIFICANCE OF IMPACT WITH MITIGATION FRAMEWORK

No significant and unavoidable impacts would occur.

3.3 AIR QUALITY

EXECUTIVE SUMMARY

The One Valley One Vision (OVOV) Planning Area is located within the South Coast Air Basin (SoCAB) (see **Figure 3.3-1, South Coast Air Basin**), which is bounded by the Pacific Ocean and Ventura County to the west, the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east, and San Diego County to the south. This section describes the existing air quality conditions within the SoCAB (Basin) and the OVOV Planning Area, the regulations and adopted plans that have been designed to improve regional air quality, the agencies responsible for implementing the regulations and plans, potential air quality impacts of the proposed City General Plan and County Area Plan, and an assessment of the effectiveness of the proposed goals, objectives, and policies.

The air quality analysis is a regional analysis for the OVOV Planning Area. The County and City Planning Areas together comprise the OVOV Planning Area. The County's Planning Area consists of the unincorporated land outside of the City's boundaries and the City's adopted Sphere of Influence (SOI) but within the OVOV Planning Area boundaries. The City's Planning Area consists of its incorporated boundaries and adopted SOI. The impact analysis evaluates the proposed Area Plan policies and proposed General Plan goals, objectives, and policies for their effectiveness in reducing potential air quality impacts. While the policies would reduce air pollutant emissions, the potential for impacts on air quality from implementation of the proposed Area Plan and General Plan would remain significant and unavoidable. Impacts would be considered potentially significant and mitigation measures are required. Nonetheless, after mitigation, impacts to air quality are potentially significant and unavoidable.

EXISTING CONDITIONS

Climate

The topic of climate is relevant to the topic of air quality because air quality is affected by temperature, wind, humidity, and cloud cover.

- Temperature is important to the creation of inversion layers in the SoCAB that can temporarily trap pollutants near the ground surface and prevent vertical mixing and dispersion of air pollutants.
- The importance of wind to air pollution is considerable. The direction and speed of the wind determines the horizontal dispersion and transport of air pollutants. Low mixing heights and light winds are conducive to the accumulation of air pollutants.

- High relative humidity not only restricts visibility, it contributes to the conversion of sulfur dioxide (SO_2) to sulfate (SO_4), which increases the acidity of the atmosphere, forming acid rain.

- The degree of cloud cover in reducing the amount of sunlight on the earth's surface is also important because sunlight affects photochemical reactions in the atmosphere that contribute to the production of ozone (O_3). The higher the temperature and the more direct the sunlight, the more ozone is produced.

Other conditions possibly affecting regional climate conditions include global warming. This condition is discussed in **Section 3.4, Global Climate Change**, of this environmental impact report (EIR).

Regional Climate

Southern California lies in a semi-permanent high-pressure zone of the Eastern Pacific region. Summertime weather is dominated by the movement and intensity of a semi-permanent high-pressure system that is normally centered several hundred miles southwest of California. In the spring, summer, and fall, the climate is heavily influenced by marine air; light winds in the region allow marine air to regulate temperatures and airflow during these periods. In the winter, low-pressure weather systems originating in the northern Pacific Ocean bring clouds, wind, and rain into Southern California. Santa Ana winds, caused by high pressure in the high plateau region located northeast of California, intermittently occur during winter and fall.

The climate of the SoCAB is semi-arid, and characterized by warm summers, mild winters, infrequent seasonal rainfall, moderate daytime onshore breezes, and moderate humidity. Annual average temperatures throughout the region vary from the low to middle 60 degrees Fahrenheit (°F). However, due to decreased marine influence, the eastern portion of the Basin shows greater variability in average annual minimum and maximum temperatures. January is the coldest month throughout the Basin, with average minimum temperatures of 47 °F in downtown Los Angeles and 36°F in San Bernardino. All portions of the Basin have recorded maximum temperatures above 100°F.

Although the climate of the Basin can be characterized as semi-arid, the air near the land surface is quite moist on most days because of the presence of a marine layer. This shallow layer of sea air is an important modifier of Basin climate. The marine layer is an excellent environment for the conversion of SO_2 to SO_4, especially during the spring and summer months. The annual average relative humidity is 71 percent along the coast and 59 percent inland. Because the ocean effect is dominant, periods of heavy early morning fog are frequent and low stratus clouds are a characteristic feature. These effects decrease with distance from the coast.

In general, more than 90 percent of the Basin's rainfall occurs from November through April (see **Table 3.3-1**, **Average Monthly Temperatures and Precipitation for Dry Canyon Reservoir, CA, 1921–1990**). Dry Canyon Reservoir is located north of the terminus of Seco Canyon Road within the City's Plan Area. Annual average rainfall varies from approximately 9 inches in Riverside to 14 inches in downtown Los Angeles. Monthly and yearly rainfall totals are extremely variable. Summer rainfall usually consists of widely scattered thundershowers near the coast and slightly heavier shower activity in the eastern portion of the region and near the mountains. Rainy days comprise 5 to 10 percent of all days in the Basin, with the frequency being higher near the coast. The influence of rainfall on the contaminant levels in the Basin is minimal. Although some washout of pollution would be expected with winter rains, air masses that bring precipitation of consequence are very unstable and provide excellent dispersion that masks wash-out effects. Summer thunderstorm activity affects pollution only to a limited degree. If the inversion is not broken by a major weather system, high contaminant levels can persist even in areas of light showers. However, heavy clouds associated with summer storms minimize O_3 production because of reduced sunshine and cooler temperatures.

Table 3.3-1
Average Monthly Temperatures and Precipitation for
Dry Canyon Reservoir, CA, 1921–1990

Month	Mean Daily Temperatures (°F)		Mean Monthly Precipitation
	Maximum	Minimum	
January	63	36	2.54
February	65	38	2.66
March	68	39	2.34
April	72	43	1.27
May	78	47	0.32
June	85	51	0.03
July	94	56	0.02
August	94	56	0.13
September	90	53	0.28
October	81	47	0.42
November	71	42	1.46
December	65	38	2.27
Annual	77	46	13.74 (total)

Source: California Climate Data Archive, National Weather Service Cooperative Network, Dry Canyon Reservoir, California, Station 042516.

Due to the generally clear weather, about 75 percent of available sunshine is received in the Basin. Clouds absorb the remaining 25 percent. The ultraviolet portion of this abundant radiation is a key factor in photochemical reactions. On the shortest day of the year there are approximately 10 hours of possible

sunshine, and approximately 14 hours on the longest day of the year. The percentage of cloud cover during daylight hours varies from 47 percent at Los Angeles International Airport (LAX) to 35 percent at Sandberg, a mountain location. The number of clear days also increases with distance from the coast: 145 days at LAX and 186 days at Burbank.[1] The Basin typically receives much less sunshine during the first six months of the year than the last six months. This difference is attributed to the greater frequency of deep marine layers and the subsequent increase in stratus clouds during the spring and to the fact that the rainy season begins late in the year (November) and continues through early spring.

During the late autumn to early spring rainy season, the Basin is subject to wind flows associated with traveling storms moving through the region from the northwest. This period also brings 5 to 10 periods of strong, dry offshore winds (locally termed "Santa Anas") each year. During the dry season, which coincides with the months of maximum photochemical smog concentrations, the wind flow is bimodal, typified by a daytime onshore sea breeze and a nighttime offshore drainage wind. Summer wind flows are created by the pressure differences between the relatively cold ocean and the unevenly heated and cooled land surfaces that modify the general northwesterly wind circulation over Southern California. Nighttime drainage begins with the radiational cooling of the mountain slopes. Heavy, cool air descends the slopes and flows through the mountain passes and canyons as it follows the lowering terrain toward the ocean. Another characteristic wind regime in the Basin is the "Catalina Eddy," a low-level cyclonic (counterclockwise) flow centered over Santa Catalina Island, which results in an offshore flow to the southwest. On most spring and summer days, some indication of an eddy is apparent in coastal sections.

The vertical dispersion of air pollutants in the Basin is frequently restricted by the presence of a persistent temperature inversion in the atmospheric layers near the earth's surface. Normally, the temperature of the atmosphere decreases with altitude. However, when the temperature of the atmosphere increases with altitude, the phenomenon is termed an inversion. An inversion condition can exist at the surface or at any height above the ground. The bottom of the inversion, known as the mixing height, is the height of the base of the inversion.

In the Basin, there are two distinct temperature inversion structures that control vertical mixing of air pollution. During the summer, warm, high-pressure descending (subsiding) air is undercut by a shallow layer of cool marine air. The boundary between these two layers of air is a persistent marine subsidence/inversion. This boundary prevents vertical mixing that effectively acts as an impervious lid to pollutants over the entire Basin. The mixing height for this inversion structure is normally situated 1,000 to 1,500 feet above mean sea level.

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1 National Oceanic and Atmospheric Administration. *1999 Local Climatological Data*, "Annual Summary with Comparative Data, Los Angeles, California, International Airport."

A second inversion-type forms in conjunction with the drainage of cool air off the surrounding mountains at night followed by the seaward drift of this pool of cool air. The top of this layer forms a sharp boundary with the warmer air aloft and creates nocturnal radiation inversions. These inversions occur primarily in the winter when nights are longer and onshore flow is weakest. They are typically only a few hundred feet above mean sea level. These inversions effectively trap pollutants, such as oxides of nitrogen (NO_X) and carbon monoxide (CO) from vehicles, as the pool of cool air drifts seaward. Winter is, therefore, a period of high levels of primary pollutants along the coastline.

In general, inversions in the Basin are lower before sunrise than during the daylight hours. As the day progresses, the mixing height normally increases as the warming of the ground heats the surface air layer. As this heating continues, the temperature of the surface layer approaches the temperature of the base of the inversion layer. When these temperatures become equal, the inversion layer's lower edge begins to erode and, if enough warming occurs, the layer breaks up. The surface layers are gradually mixed upward, diluting the previously trapped pollutants. The breakup of inversion layers frequently occurs during mid to late afternoon on hot summer days. Winter inversions usually break up by mid-morning.

Local Climate

The OVOV Planning Area, with the Sierra Pelona Mountains on the north, and the Santa Susana and San Gabriel Mountains to the south, east, and west, is in a transitional microclimatic zone located between two climatic types, termed "valley marginal" and "high desert." The OVOV Planning Area is situated far enough from the ocean to escape coastal damp air and fog, and also far enough from the high desert to escape extremely hot summers and harsh winters. As a result, summers are dry and warm, with daytime temperatures ranging from 70 to 100°F. Winters are temperate, semi-moist, and sunny, with daytime temperatures ranging from 40 to 65°F. Rainfall averages 13 to 24 inches a year, with the rainy season running primarily from October to April.

The topography surrounding the OVOV Planning Area has resulted in two separate wind flow patterns through the southern and northern parts of the Santa Clarita Valley. Diurnal winds in the southern part of the Valley flow northerly from the San Fernando Valley through the Newhall Pass. These daytime wind flows are oftentimes enhanced by localized up-valley or mountain pass winds, and are most dominant during summer, which is the peak smog season. Diurnal winds in the northern part of the Valley flow easterly from Ventura County through the Santa Clara River Valley. During the night, mountain, desert, and valley air cools and flows southerly and westerly back towards the ocean, producing a gentle "drainage wind." On most days, these two flow patterns meet and form a convergence zone, usually in the northern half of the Valley, during which wind speeds accelerate.

During the spring and the early part of summer, the diurnal wind patterns disperse air pollutants through and out of the Santa Clarita Valley. However, this dispersion is less pronounced during the late summer and winter months because of lighter wind speeds, except during an occasional winter storm or during strong Santa Ana wind conditions when winds flow southerly and southwesterly from the desert of the Great Basin through canyons to the northeast and Tejon Pass to the north. The Santa Ana winds are usually warm, always very dry, and often carry great amounts of dust. The winds are particularly strong in mountain passes and at the mouths of canyons. On the average, Santa Ana winds occur five to ten times per year and can last up to several days per occurrence.

Regional Air Basins

As a branch of the California Environmental Protection Agency (Cal/EPA), the California Air Resources Board (CARB) oversees air quality monitoring, planning, and control throughout California. In order to effectively do this, CARB has divided the state into regional air basins according to topographic features. The OVOV Planning Area is located within the SoCAB (see **Figure 3.3-1, South Coast Air Basin**). The South Central Coast Air Basin (SCCAB) lies to the immediate west of the OVOV Planning Area.

Wind speed and direction play an important role in the dispersion and transport of air pollutants. Ozone and inhalable particulates (particulate matter 10 microns or less in diameter [PM_{10}] and particulate matter 2.5 microns or less in diameter [$PM_{2.5}$]) are classified as regional pollutants because they can be transported away from the emission source before concentrations peak. Pollutant transport is known to occur between the SoCAB and the SCCAB; therefore, although the Planning Area is within the SoCAB, development in the Planning Area has the potential to affect air quality in the Oxnard Plain airshed, which is a subarea of the SCCAB.

South Coast Air Basin

The SoCAB is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD),[2] and is bounded by the Pacific Ocean and Ventura County to the west, the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east, and San Diego County to the south.

[2] Overall, the SCAQMD has jurisdiction over Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino counties), the Riverside County portions of the Salton Sea Air Basin (SSAB), and Mojave Desert Air Basin (MDAB), totaling approximately 10,743 square miles.

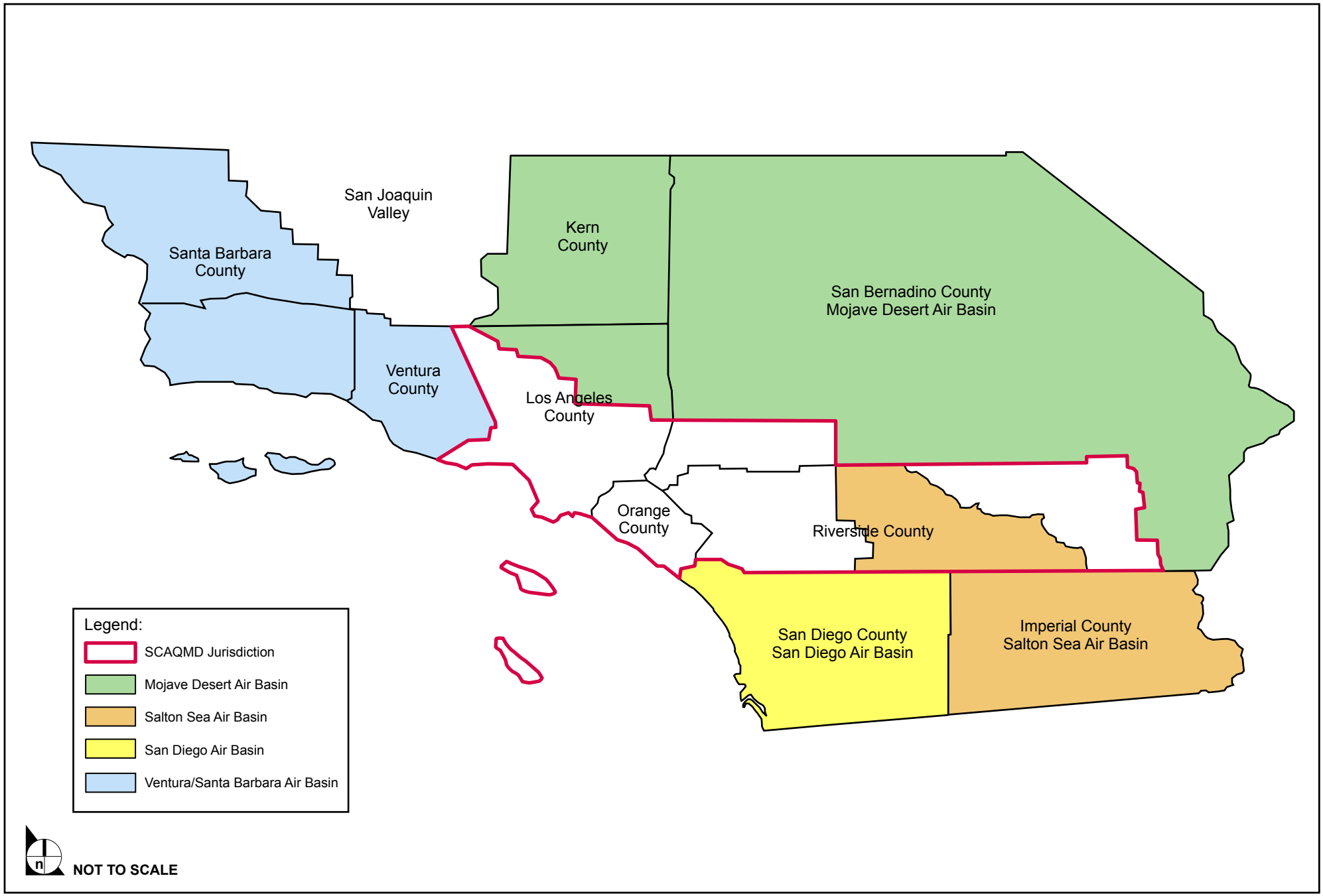

FIGURE **3.3-1**

South Coast Air Basin

112-023•04/09

The SoCAB consistently generates the highest levels of smog in the United States. Smog is a general term based on the words smoke and fog, and is used to describe dense, visible air pollution. The brownish haze in the air that is characteristic of smog is formed when O_3 mixes with particulates, such as dust vehicle exhaust particulates, CO, and other compounds. Ozone, itself, is formed when combustion emissions and gaseous emissions, such as volatile organic compounds (VOC) and NO_x, undergo photochemical reactions in sunlight. In the upper atmosphere, O_3 helps to shield the earth from harmful radiation; however, in the lower atmosphere where people live, it poses health risks and damages crops, rubber, and other materials. Because of these hazards, SCAQMD monitors and regulates the emissions of VOC and NO_x, which are referred to as "ozone precursors."

The topography and climate of the SoCAB make it vulnerable to smog formation. During the summer months, a warm air mass frequently descends over the lower, cool, moist marine air layer in the basin. The warm upper layer forms a cap over the marine layer and inhibits the air pollutants generated near the ground from dispersing upward. Light summer winds and the surrounding mountains further limit the horizontal disbursement of the pollutants. Therefore, the summertime concentration of pollutants in the basin allows the summer sunlight to generate high levels of O_3 and, therefore, smog. "Smog episode" warnings are issued when an occurrence of high concentrations of O_3 is predicted that could endanger or cause harm to the public.[3] During the winter months, however, cool ground temperatures and very light winds cause extremely low inversions, allowing pollutants to disperse upwards during the late night and early morning hours. On days when no inversions occur, or when winds average 25 miles per hour or more, there are no important smog effects.

South Central Coast Air Basin

To the west of the OVOV Planning Area is the SCCAB, which is composed of Ventura, Santa Barbara, and San Luis Obispo Counties. The area of interest in this impact analysis is a subarea of the SCCAB located in Ventura County: the Oxnard Plain airshed. The Oxnard Plain experiences the mild, Mediterranean climate typical of Southern California. Average temperatures in the Oxnard area are a high of 71°F, a low of 50°F, and an overall mean temperature of 60°F. Precipitation averages 14 inches per year, with the majority of rainfall occurring from November through March. Prevailing winds along the Ventura coast and Oxnard Plain are from the west and northwest. During the fall, Santa Ana winds reverse the prevailing airflow and bring dry, hot gusts that often have greater air movement. The topography and climate of the Oxnard Plain also make it an area of significant smog potential. Temperature inversions

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[3] Various levels of smog episodes are reported for the pollutant ozone. The declaration of a first, second or third stage smog alert is based on the degree of health risk. When the levels of ozone exceed a certain standard, a first-stage smog alert is made indicating that the air is unhealthy for everyone. A second-stage smog alert indicates the air is hazardous and exercise should be avoided entirely.

frequently occur at approximately 800 to 1,000 feet above mean sea level in Ventura County, and are most persistent during late summer and early fall.

The primary sources of air emissions from Ventura County include power plants, oil extraction, and oil refining operations, which emit substantial amounts of ozone precursors. Transportation and agricultural activities also contribute emissions.[4]

Topography and wind patterns link the Oxnard airshed with the SoCAB. Pollutants from the SoCAB can be blown offshore and carried to the coastal cities of the airshed. Pollutants can also impact the airshed by way of an inland route from the San Fernando Valley in Los Angeles County.

The Santa Clara River Valley is also a transport corridor between Ventura County and the Santa Clarita Valley. The Ventura County Air Pollution Control District (VAPCD) monitors concentrations of O_3 and PM_{10} in the river valley at a station located in the community of Piru.

Pollutants of Concern

The air pollutants within the SoCAB are generated by both stationary and mobile sources.

Stationary Source Emissions

Stationary sources are grouped under the following categories: fuel combustion; waste disposal; cleaning and surface coatings; petroleum production and marketing; industrial processes; solvent evaporation; and other miscellaneous processes. Stationary sources are the major contributors to PM_{10} and $PM_{2.5}$ emissions in the SoCAB.

One type of stationary source is known as a "point source," which has one or more emission sources at a single facility. Point sources occur at an identified location and are usually associated with manufacturing and industry. Examples are boilers or combustion equipment that produce electricity or generate heat. Point sources are usually associated with manufacturing and industrial uses, and include sources that produce electricity or process heat, such as refinery boilers or combustion equipment, but may also include commercial establishments, like gasoline stations, dry cleaners, or charbroilers in restaurants.

The other type of stationary source is the "area source," which is widely distributed and produces many small emissions. Area sources are widely distributed and produce many small emissions. Examples of area sources include residential and commercial water heaters, painting operations, portable generators, lawn mowers, agricultural fields, landfills, and consumer products such as barbeque lighter fluid and

4 California Air Resources Board, *Ozone Transport: 2001 Review*, April 2001, 49.

hair spray. Construction activities such as excavation and grading also contribute to area source emissions.

Mobile Source Emissions

Mobile sources refer to operational and evaporative emissions from on- and off-road motor vehicles, including tailpipe and evaporative emissions. On-road mobile sources include light-duty passenger vehicles; light-, medium-, and heavy-duty trucks; motorcycles; urban buses; school buses; and motor homes, all of which may be legally operated on roadways and highways. Off-road mobile sources include mobile gasoline, diesel, and "other" commercial and industrial equipment; off-road utility vehicles; construction equipment; lawn and garden equipment; farm and logging equipment; aircraft, and airport service equipment and vehicles; locomotives and railway maintenance equipment; and all motorized marine vessels.

Mobile sources account for the majority of CO, oxides of sulfur (SO_x), NO_x, and VOC emissions within the SoCAB.

Other Emissions Sources

Air pollutants can also be generated by the natural environment, such as when fine dust particles are pulled off the ground surface and suspended in the air during high winds.

Criteria Pollutants and Toxic Air Contaminants

Pollutants that impact air quality are generally divided into two categories: criteria pollutants (those for which health standards have been set), and toxic air contaminants (those that cause cancer or have adverse human health effects other than cancer).

Criteria Pollutants

Both the federal and state governments have established ambient air quality standards for outdoor concentrations of criteria air pollutants in order to protect public health. The criteria pollutants relevant to the project and of concern in the air basin that the project is located – the South Coast Air Basin – are briefly described below. While VOCs are not considered to be criteria pollutants, they are widely emitted from land use development projects and participate in photochemical reactions in the atmosphere to form O_3; therefore, VOCs are relevant to the project and are of concern in the SoCAB.

- **Ozone (O_3).** O_3 is a gas that is formed when VOCs and NO_x, both byproducts of internal combustion engine exhaust and other sources undergo slow photochemical reactions in the presence of sunlight.

Ozone concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable to the formation of this pollutant.

- **Volatile Organic Compounds (VOCs).** VOCs are compounds comprised primarily of atoms of hydrogen and carbon. Internal combustion associated with motor vehicle usage is the major source of hydrocarbons. Adverse effects on human health are not caused directly by VOCs, but rather by reactions of VOCs to form secondary air pollutants, including ozone. VOCs are also referred to as reactive organic compounds (ROCs) or reactive organic gases (ROGs). VOCs themselves are not "criteria" pollutants; however, they contribute to formation of O_3.

- **Nitrogen Dioxide (NO_2).** NO_2 is a reddish-brown, highly reactive gas that is formed in the ambient air through the oxidation of nitric oxide (NO). NO_2 is also a byproduct of fuel combustion. The principle form of NO_2 produced by combustion is NO, but NO reacts quickly to form NO_2, creating the mixture of NO and NO_2 referred to as NO_X. NO_2 acts as an acute irritant and, in equal concentrations, is more injurious than NO. At atmospheric concentrations, however, NO_X is only potentially irritating. NO_2 absorbs blue light, the result of which is a brownish-red cast to the atmosphere and reduced visibility.

- **Carbon Monoxide (CO).** CO is a colorless, odorless gas produced by the incomplete combustion of fuels. CO concentrations tend to be the highest during the winter morning, with little to no wind, when surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines, unlike ozone, and motor vehicles operating at slow speeds are the primary source of CO in the basin, the highest ambient CO concentrations are generally found near congested transportation corridors and intersections.

- **Sulfur dioxide (SO_2).** SO_2 is a colorless, extremely irritating gas or liquid. It enters the atmosphere as a pollutant mainly as a result of burning high-sulfur-content fuel oils and coal and from chemical processes occurring at chemical plants and refineries. When sulfur dioxide oxidizes in the atmosphere, it forms sulfates (SO_4).

- **Respirable Particulate Matter (PM_{10}).** PM_{10} consists of extremely small, suspended particles or droplets 10 microns or smaller in diameter. Some sources of PM_{10}, like pollen and windstorms, are naturally occurring. However, in populated areas, most PM_{10} is caused by road dust, diesel soot, combustion products, abrasion of tires and brakes, and construction activities.

- **Fine Particulate Matter ($PM_{2.5}$).** $PM_{2.5}$ refers to particulate matter that is 2.5 micrometers or smaller in size. The sources of $PM_{2.5}$ include fuel combustion from automobiles, power plants, wood burning, industrial processes, and diesel-powered vehicles such as buses and trucks. These fine particles are also formed in the atmosphere when gases such as sulfur dioxide, NO_X, and VOCs are transformed in the air by chemical reactions.

- **Lead (Pb).** Pb occurs in the atmosphere as particulate matter. The combustion of leaded gasoline is the primary source of airborne lead in the basin. The use of leaded gasoline is no longer permitted for on-road motor vehicles, so most such combustion emissions are associated with off-road vehicles such as racecars that use leaded gasoline. Other sources of Pb include the manufacturing and recycling of batteries, paint, ink, ceramics, ammunition, and secondary lead smelters.

National Ambient Air Quality Standards

The federal Clean Air Act (CAA) requires the US Environmental Protection Agency (US EPA) to set ambient (outdoor) air quality standards for the nation for pollutants that are considered harmful to public health and the environment. These pollutants are referred to by the US EPA as criteria pollutants, and include: CO, NO_2, O_3, SO_2, PM_{10}, $PM_{2.5}$, and lead.[5]

The US EPA Office of Air Quality Planning and Standards has set primary and secondary National Ambient Air Quality Standards (NAAQS) for these pollutants. Primary standards are considered the maximum levels of ambient (outdoor) air pollutants considered safe, with an adequate margin of safety, to protect the public health and welfare. Secondary standards were set to protect against decreased visibility, damage to animals, crops, vegetation, and buildings. The secondary standards are the same as the primary standards, with the exception of CO and SO_2. There is no secondary standard for CO and the secondary standard for SO_2 is less restrictive than is the primary standard.

California Ambient Air Quality Standards

California Health and Safety Code (Section 39606) authorizes CARB to set state ambient air quality standards to protect public health, safety, and welfare. The California Ambient Air Quality Standards (CAAQS) are for the federal criteria pollutants, as well as for sulfates, visibility-reducing particles, hydrogen sulfide, and vinyl chloride. In general, California standards are more restrictive than national standards.

The determination of whether a region's air quality is healthful or unhealthful is determined by comparing contaminant levels in ambient air samples to national and state standards. It is SCAQMD's responsibility to ensure that state and federal ambient air quality standards are met and maintained in the Basin. Health-based air quality standards established by California and the federal government applies to O_3, CO, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and lead. These standards were established to protect exposed sensitive receptors from adverse health effect with a margin of safety. California standards are more stringent than the federal standards, and in the case of PM_{10} and SO_2, California standards are much more stringent. California has also established standards for sulfates, visibility reducing particles, hydrogen

[5] The term "criteria air pollutant" derives from the requirement that the US EPA must describe the characteristics and potential health and welfare effects of these pollutants. This term is used by both the US EPA and CARB.

sulfide, and vinyl chloride.[6] The state and national ambient air quality standards for each of the monitored pollutants and their effects on health are summarized in **Table 3.3-2, Ambient Air Quality Standards**.

Table 3.3-2
Ambient Air Quality Standards

Air Pollutant	Concentration/Averaging Time		Most Relevant Health Effects[2]
	State Standard	Federal Primary Standard	
Ozone[1]	0.09 ppm, 1-hr. avg.; 0.070 ppm, 8-hr avg.	0.075 ppm, 8-hr avg. (three-year average of annual 4th-highest daily maximum)	(a) Pulmonary function decrements and localized lung edema in humans and animals; (b) Risk to public health implied by alterations in pulmonary morphology and host defense in animals; (c) Increased mortality risk; (d) Risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans; (e) Vegetation damage; and (f) Property damage
Nitrogen Dioxide[2]	0.18 ppm, 1-hr avg.; 0.030 ppm, annual arithmetic mean	0.100 ppm, 1-hr avg.; 0.053 ppm, annual arithmetic mean	(a) Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; (b) Risk to public health implied by pulmonary and extrapulmonary biochemical and cellular changes and pulmonary structural changes; and (c) Contribution to atmospheric discoloration
Respirable Particulate Matter (PM_{10})	50 μg/m^3, 24-hr avg.; 20 μg/m^3, annual arithmetic mean	150 μg/m^3, 24-hr avg.	(a) Exacerbation of symptoms in sensitive patients with respiratory or cardiovascular disease; (b) Declines in pulmonary function growth in children; and (c) Increased risk of premature death from heart or lung diseases in the elderly

6 California Air Resources Board, "Area Designations (Activities and Maps)," http://www.arb.ca.gov/desig/desig.htm. 2010. According to California Health and Safety Code, Section 39608, "state board, in consultation with the districts, shall identify, pursuant to subdivision (e) of Section 39607, and classify each air basin which is in attainment and each air basin which is in nonattainment for any state ambient air quality standard." Section 39607(e) states that the State shall "establish and periodically review criteria for designating an air basin attainment or nonattainment for any state ambient air quality standard set forth in Section 70200 of Title 17 of the California Code of Regulations. California Code of Regulations, Title 17, Section 70200 does not include vinyl chloride; therefore, CARB does not make area designations for vinyl chloride.

Air Pollutant	Concentration/Averaging Time		Most Relevant Health Effects[2]
	State Standard	Federal Primary Standard	
Fine Particulate Matter ($PM_{2.5}$)	12 μg/m^3, annual arithmetic mean	35 μg/m^3, 24-hr avg. (three-year average of 98th percentile); 15 μg/m^3, annual arithmetic mean (3-year average)	(a) Exacerbation of symptoms in sensitive patients with respiratory or cardiovascular disease; (b) Declines in pulmonary function growth in children; and (c) Increased risk of premature death from heart or lung diseases in the elderly
Carbon Monoxide	20 ppm, 1-hr avg.; 9.0 ppm, 8-hr avg.	35 ppm, 1-hr avg.; 9 ppm, 8-hr avg.	(a) Aggravation of angina pectoris and other aspects of coronary heart disease; (b) Decreased exercise tolerance in persons with peripheral vascular disease and lung disease; (c) Impairment of central nervous system functions; and (d) Possible increased risk to fetuses
Sulfur Dioxide[3]	0.25 ppm, 1-hr. avg.; 0.04 ppm, 24-hr avg.	0.075 ppm, 1-hr avg.	Bronchoconstriction accompanied by symptoms, which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in person with asthma
Lead[4,5]	1.5 μg/m^3, 30-day avg.	1.5 μg/m^3, calendar quarter; 0.15 μg/m^3, three month rolling average	(a) Increased body burden, and (b) Impairment of blood formation and nerve conduction
Visibility-Reducing Particles	Reduction of visual range to less than 10 miles at relative humidity less than 70%, 8-hour avg. (10:00 AM–6:00 PM)	None	Visibility impairment on days when relative humidity is less than 70 percent.

Air Pollutant	Concentration/Averaging Time: State Standard	Concentration/Averaging Time: Federal Primary Standard	Most Relevant Health Effects[2]
Sulfates	25 μg/m³, 24-hr avg.	None	(a) Decrease in ventilatory function, (b) Aggravation of asthmatic symptoms, (c) Aggravation of cardio-pulmonary disease, (d) Vegetation damage, (e) Degradation of visibility, and (f) Property damage
Hydrogen Sulfide	0.03 ppm, 1-hr avg.	None	Odor annoyance
Vinyl Chloride[4]	0.01 ppm, 24-hr avg.	None	Known carcinogen

μg/m³ = microgram per cubic meter.
ppm = parts per million by volume.
Sources:
California Air Resources Board. "California Ambient Air Quality Standards (CAAQS)." July 2010. http://www.arb.ca.gov/research/aaqs/aaqs2.pdf.
United States Environmental Protection Agency. "National Ambient Air Quality Standards (NAAQS)." July 2010. http://www.epa.gov/air/criteria.html.
Notes:
1 *On March 12, 2008, the US EPA revised the federal ozone standard from 0.08 ppm to 0.075 ppm. The standard became effective on May 27, 2008.*
2 *On January 25, 2010, the US EPA promulgated a new 1-hour NO_2 standard. The new 1-hour standard is 0.100 parts per million (188 micrograms per cubic meter) and became effective on April 12, 2010.*
3 *On June 3, 2010, the US EPA issued a new 1-hour SO_2 standard. The new 1-hour standard is 0.075 parts per million (196 micrograms per cubic meter). The US EPA also revoked the existing 24-hour and annual standards citing a lack of evidence of specific health impacts from long-term exposures. The new 1-hour standard is effective August 23, 2010.*
4 *CARB has identified lead and vinyl chloride as "toxic air contaminants" with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.*
4 *On October 15, 2008, the US EPA revised the federal lead standard to include 0.15 μg/m3 based on a three-month rolling average.*

Toxic Air Contaminants

Toxic air contaminants (TACs) are airborne substances that are capable of causing chronic (i.e., of long duration) and acute (i.e., severe, but of short duration) adverse effects on human health. They include both organic and inorganic chemical substances that may be emitted from a variety of common sources, including gasoline stations, motor vehicles, dry cleaners, industrial operations, painting operations, and research and teaching facilities. Toxic air contaminants are different from the "criteria" pollutants previously discussed in that no ambient air quality standards have been established for them (with the exception of lead and vinyl chloride, for which there are state standards). This is largely due to the fact that there are hundreds of air toxics and their effects on health tend to be local rather than regional.

The following information has been obtained primarily from the SCAQMD's Multiple Air Toxics Exposure Study III (MATES III), described below. TACs typically emitted in the Basin include the

contaminants listed in **Table 3.3-3, 2005 Annual Average Day Toxic Emissions for the South Coast Air Basin**. The data in **Table 3.3-3** are the most current data available.

Cancer Risk

One of the primary health risks of concern due to exposure to TACs is the risk of contracting cancer. The carcinogenic potential of TACs is a particular public health concern because it is currently believed by many scientists that there is no "safe" level of exposure to carcinogens. In other words, any exposure to a carcinogen poses some risk of causing cancer. Health statistics show that one in four people will contract cancer over their lifetime, or 250,000 in 1 million, from all causes, including diet, genetic factors, and lifestyle choices. Approximately 2 percent of cancer deaths in the United States may be due to TACs.[7]

As part of the District's environmental justice initiatives adopted in late 1997, the SCAQMD conducted the Multiple Air Toxics Exposure Study III (MATES III) between April 2004 and March 2006, which was a follow-up to previous MATES I and II air toxics studies conducted in the South Coast Air Basin. The MATES III Final Report was issued in September 2008.

The MATES III study, based on actual monitored data throughout the Basin, consisted of several elements. These included a monitoring program, an updated emissions inventory of toxic air contaminants, and a modeling effort to characterize carcinogenic risk across the South Coast Air Basin from exposure to toxic air contaminants. The MATES III study applied a 2-kilometer (1.24-mile) grid over the South Coast Air Basin and reported carcinogenic risk within each grid space (covering an area of 4 square kilometers or 1.54 square miles). The study concluded that the average of the modeled air toxics concentrations measured at each of the monitoring stations in the South Coast Air Basin equates to a background cancer risk of approximately 1,200 in 1,000,000 primarily due to diesel exhaust. The MATES III study also concluded lower ambient concentrations of most of the measured air toxics compared to the levels measured in the previous MATES II study conducted during 1998 and 1999. Specifically, benzene and 1,3-butadiene, pollutants generated mainly from vehicles, were down 50 percent and 73 percent, respectively.[8] The reductions were attributed to air quality control regulations and improved emission control technologies.

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7 Doll and Peto. Journal of the National Cancer Institute. "*The Causes of Cancer: Qualitative Estimates of Avoidance of Risks of Cancer in the United States Today.*" (1981).

8 South Coast Air Quality Management District, *Multiple Air Toxics Exposure Study in the South Coast Air Basin (MATES III) – Draft Report*, (September 2008) ES-2.

Table 3.3-3
2005 Annual Average Day Toxic Emissions for the South Coast Air Basin[1]

Pollutant	Emissions (pounds per day)				
	On-Road	Off-Road	Point	Area	Total
Acetaldehyde[2]	4,857.0	8,622.4	125.8	505.1	14,110.3
Acetone[3]	4,020.5	7,189.1	552.4	28,904.9	40,666.9
Benzene	13,244.8	7,808.3	906.5	609.3	22,568.9
Butadiene [1,3]	2,723.1	1,755.6	537.1	108.7	5,124.5
Carbon tetrachloride	0.0	0.0	11.2	0.0	11.2
Chloroform	0.0	0.0	206.9	0.0	206.9
Dichloromethane [1,1]	0.0	0.0	0.5	0.0	0.5
Dioxane [1,4]	0.0	0.0	0.8	0.7	1.5
Ethylene dibromide	0.0	0.0	2.2	0.0	2.2
Ethylene dichloride	0.0	0.0	67.2	0.0	67.2
Ethylene oxide	0.0	0.0	16.1	52.6	68.7
Formaldehyde[2]	12,596.6	19,889.0	1,488.8	1,302.0	35,276.4
Methyl Ethyl Ketone[2]	745.6	1,366.0	1,244.3	6,466.7	9,822.6
Methylene chloride	0.0	0.0	325.1	13,548.3	13,873.4
Methyl tertiary butyl ether (MTBE)	0.0	4.4	89.6	0.0	93.9
Naphthalene	573.4	376.8	16.6	568.1	1,534.9
p-Dichlorobenzene	0.0	0.0	115.4	5,553.9	5,669.3
Perchloroethylene	0.0	0.0	940.4	9,685.3	10,625.7
Propylene oxide	0.0	0.0	2.2	0.1	2.3
Styrene	681.7	326.3	1,332.5	76.5	2,417.0
Toluene	37,707.9	15,369.2	8,724.3	21,029.4	82,830.8
Trichloroethylene	0.0	0.0	587.1	633.0	1,220.1
Vinyl chloride	0.0	0.0	51.1	0.0	51.1
Arsenic	0.2	3.9	13.4	24.8	42.3
Cadmium	1.5	2.1	3.2	7.2	14.0
Chromium	21.1	9.2	49.2	77.3	156.8
Diesel particulate	22,164.5	37,406.2	489.5	618.3	60,678.5
Elemental carbon[4]	10,498.2	9,337.4	4,850.4	14,197.3	38,883.3
Hexavalent chromium	1.1	0.6	0.6	0.5	2.8
Lead	2.4	4.8	13.7	180.9	201.8
Nickel	15.3	5.8	44.2	23.4	88.7
Organic carbon	19,972.7	18,073.3	371.0	69,230.1	107,647.1
Selenium	0.5	0.5	41.4	2.2	44.6
Silicon[3,4]	838.7	136.5	1,211.9	218,527.2	220,714.3

Source: South Coast Air Quality Management District, Multiple Air Toxics Exposure Study III*, (September 2008) 3-8. This document is available for review at http://www.aqmd.gov/prdas/matesIII/matesIII.html.*

Notes:

[1] *Please refer to Chapter 3, Development of the Toxics Emissions Inventory, of MATES III for a discussion on how each portion of the inventory was developed.*

[2] *Primarily emitted emissions. These materials are also formed in the atmosphere as a result of photochemical reactions.*

[3] *Acetone and silicon are not toxic compounds. Their emissions are included in this table because they were measured in the sampling program and were subsequently modeled for the purpose of model evaluation.*

[4] *Includes elemental carbon from all sources (including diesel particulate).*

Non-Cancer Health Risks

For exposures to compounds that do pose a health risk, but not a cancer risk, it is believed that there is a threshold level of exposure to the compound below which it will not pose a health risk. The Cal/EPA and California Office of Environmental Health Hazard Assessment (OEHHA) have developed reference exposure levels (REL) for non-carcinogenic TACs that are health-conservative estimates of the levels of exposure at or below which health effects are not expected. Comparing the estimated level of exposure to the REL assesses the non-cancer health risk due to exposure to a TAC. The comparison is expressed as the ratio of the estimated exposure level to the REL, referred to as the hazard index.[9]

Toxic Air Contaminants Inventory

The SCAQMD's first emissions inventory for stationary sources only was compiled for 30 TACs for the year 1982. In response to AB 2588, the SCAQMD conducted MATES I from 1986 to 1987 wherein data on 20 of the original 30 pollutants were updated. Of the 20 toxics studied from 1,244 point sources, benzene emissions and hexavalent chromium appeared to have the greatest potential health impact in the Basin.

In addition to the stationary sources of these emissions, MATES II compiled mobile source emissions for 12 of the 20 toxic pollutants were compiled for on-road motor vehicles. The MATES III study was a follow up to the previous MATES I and II studies and utilized an updated emissions inventory of toxic air contaminants. A summary of the 2005 emissions inventory was presented in **Table 3.3-3**, which provides the estimated toxic emissions for selected compounds, by source category.

Ambient Air Quality

In conjunction with local air pollution control districts (APCDs) and air quality management districts (AQMDs), private contractors, and the National Park Service, CARB has established and maintains a network of air quality monitoring stations referred to as the State and Local Air Monitoring Stations (SLAMS) network. The stations are strategically placed in source receptor areas (SRAs), and provide air quality monitoring data, including real time meteorological data and ambient pollutant levels, as well as historical data.

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9 Office of Environmental Health Hazard Assessment, *Air Toxic Hot Spots Program Risk Assessment Guidelines*, Part III, "Technical Support Document for the Determination of Noncancer Chronic Reference Exposure Levels," (February 2000), 9.

South Coast Air Basin

The Planning Area is located within SRA 13, which encompasses the Santa Clarita Valley west to the Ventura County line.[10] The only air quality monitoring station for this SRA (CARB No. 70090), located at 12th Street and Placerita Canyon Road in the City of Santa Clarita,[11] presently monitors pollutant concentrations of O_3, CO, NO_2, and PM_{10}.[12] The nearest station in the SoCAB that monitors $PM_{2.5}$ is located at 18330 Gault Street in Reseda (CARB No. 70074), while the nearest station in the SoCAB that monitors SO_2 is SRA 7 located at 228 West Palm Avenue in Burbank (CARB No. 70069).

Table 3.3-4, Ambient Pollutant Concentrations, Santa Clarita/Placerita Monitoring Station and Nearest Monitoring Stations, lists the measured ambient pollutant concentrations and the violations of state and federal standards that have occurred at the monitoring station from 2006 through 2008, the most recent years in which data is available from the SCAQMD. As shown, the monitoring station has registered values above state and federal standards for O_3, the state standard for PM_{10}, and the federal standard for $PM_{2.5}$. Values for lead and sulfate are not presented in the table below since ambient concentrations are well below the state standards. Hydrogen sulfide, vinyl chloride, and visibility reducing particles were not monitored by CARB or the SCAQMD in Los Angeles County during the period of 2006 to 2008.

Table 3.3-4
Ambient Pollutant Concentrations, Santa Clarita/Placerita Monitoring Station and Nearest Monitoring Stations

Pollutant	Standards[1]	Year 2006	2007	2008
OZONE (O_3)				
Maximum 1-hour concentration monitored (ppm)		0.160	0.135	0.160
Maximum 8-hour concentration monitored (ppm)		0.120	0.110	0.131
Number of days exceeding state 1-hour standard	0.09 ppm	62	31	54
Number of days exceeding state 8-hour standard	0.070 ppm	64	64	81
Number of days exceeding federal 8-hour standard[2]	0.075 ppm	40	44	60
NITROGEN DIOXIDE (NO_2)				
Maximum 1-hour concentration monitored (ppm)		0.08	0.08	0.07
Annual average concentration monitored (ppm)		0.018	0.019	0.017
Number of days exceeding state 1-hour standard	0.18 ppm	0	0	0

10 SRA 15, which covers the San Gabriel Mountains area, overlies a portion of the Planning Area; however, ambient air quality conditions are not monitored in SRA 15. Therefore, the air pollutant concentrations identified at the Santa Clarita/Placerita Monitoring Station are considered representative of the Planning Area.

11 The specific address is 22224 Placerita Canyon Road in Santa Clarita.

12 As late as 1991, this station also monitored SO2 pollutant concentrations for the Santa Clarita Valley.

Pollutant	Standards[1]	Year 2006	2007	2008
Maximum 1-hour concentration monitored (ppm)		2	2	2
Maximum 8-hour concentration monitored (ppm)		1.3	1.2	1.1
Number of days exceeding 1-hour standard	20 ppm	0	0	0
Number of days exceeding 8-hour standard	9.0 ppm	0	0	0
SULFUR DIOXIDE (SO_2)				
Maximum 1-hour concentration monitored (ppm)		0.01	0.01	0.01
Maximum 24-hour concentration monitored (ppm)		0.004	0.003	0.003
Number of days exceeding state 1-hour standard	0.25 ppm	0	0	0
Number of days exceeding state 24-hour standard	0.04 ppm	0	0	0
RESPIRABLE PARTICULATE MATTER (PM_{10})				
Maximum 24-hour concentration monitored ($\mu g/m^3$)		53	131	91
Annual average concentration monitored ($\mu g/m^3$)		23.4	29.9	25.8
Number of samples exceeding state standard	50 $\mu g/m^3$	1	5	2
Number of samples exceeding federal standard	150 $\mu g/m^3$	0	0	0
FINE PARTICULATE MATTER ($PM_{2.5}$)				
Maximum 24-hour concentration monitored ($\mu g/m^3$)		44.1	43.3	50.5
Annual average concentration monitored ($\mu g/m^3$)		12.9	13.1	11.9
Number of samples exceeding federal standard	35 $\mu g/m^3$	1	1	2

Sources: South Coast Air Quality Management District, "Historical Data by Year," http://www.aqmd.gov/smog/historicaldata.htm. 2010; California Air Resources Board, "Air Quality Data Statistics," http://www.arb.ca.gov/adam/. 2010.

[1] *Parts by volume per million of air (ppm), micrograms per cubic meter of air ($\mu g/m^3$), or annual arithmetic mean (aam).*

[2] *The 8-hour federal O_3 standard was revised from 0.08 ppm to 0.075 ppm in March 2008. The statistics shown are based on the 2008 standard of 0.075 ppm.*

South Central Coast Air Basin

The Ventura County Air Pollution Control District monitors air pollutant concentrations in the Santa Clara River Valley at a station on Pacific Avenue in the community of Piru (CARB No. 56450). This station is located approximately 5.5 miles west of the Los Angeles/Ventura County line and monitors emission levels of O_3 and $PM_{2.5}$, both of which are subject to regional transport.

Table 3.3-5, Ambient Pollutant Concentrations, Piru Monitoring Station, lists the measured ambient pollutant concentrations and the violations of state and federal standards that have occurred at the monitoring station from 2006 through 2008. As shown, the monitoring station registered values above state and federal standards for O_3 for all years represented in the table.

Table 3.3-5
Ambient Pollutant Concentrations, Piru Monitoring Station

Pollutant	Standards[1]	Year 2006	2007	2008
OZONE (O_3)				
Maximum 1-hour concentration monitored (ppm)		0.117	0.096	0.097
Maximum 8-hour concentration monitored (ppm)		0.094	0.083	0.084
Number of days exceeding state 1-hour standard	0.09 ppm	8	2	1
Number of days exceeding state 8-hour standard	0.070 ppm	44	13	29
Number of days exceeding federal 8-hour standard[2]	0.075 ppm	21	4	11
PARTICULATE MATTER ($PM_{2.5}$)				
Maximum 24-hour concentration monitored ($\mu g/m^3$)[3]		28.0	34.3	29.4
Annual average concentration monitored ($\mu g/m^3$)		9.3	10.1	9.7
Number of samples exceeding federal standard	35 $\mu g/m^3$	0	0	0

Source: California Air Resources Board, "Air Quality Data Statistics," http://www.arb.ca.gov/adam/. 2010.

[1] *Parts by volume per million of air (ppm), micrograms per cubic meter of air ($\mu g/m^3$), or annual arithmetic mean (aam).*

[2] *The 8-hour federal O_3 standard was revised from 0.08 ppm to 0.075 ppm in March 2008. The statistics shown are based on the 2008 standard of 0.075 ppm.*

[2] *Based on samplers using federal reference or equivalent methods.*

Air Quality Attainment Designations

The US EPA is responsible for enforcing the federal CAA and the NAAQS. CARB is the state agency charged with coordinating efforts to attain and maintain the NAAQS and the CAAQS. Both agencies designate air basins as being in "attainment" or "nonattainment" for each of the criteria pollutants. The determination of whether an area meets the state and federal standards is based on long-term air quality monitoring data.

Attainment Areas

Attainment areas are those with air quality that is better than the standards shown in **Table 3.3-2**. Under the CCAA, an area is in attainment for a particular pollutant if the CAAQS for that pollutant was not violated at any site in the area during a three-year period.[13] Under the CAA, an area is in attainment for a

13 California Air Resources Board. "Area Designations." http://www.arb.ca.gov/desig/ adm/Define.htm. 2003.

particular pollutant if the area meets the national primary or secondary ambient air quality standard for that pollutant[14].

Nonattainment Areas

Under the CCAA, an area is in nonattainment for a particular pollutant if there was at least one violation of the CAAQS for that pollutant in the area. [15] Under the CAA, a nonattainment area for a pollutant is any area that does not meet (or that contributes to ambient air quality in a nearby area that does not meet) the primary or secondary NAAQS for that pollutant.[16] Air basins designated as nonattainment for the ozone-8 hour NAAQS are ranked as marginal, moderate, serious, severe, or extreme depending on the area's 8-hour design value calculated using the most recent three years of data. Air basins designated as nonattainment for the CO NAAQS are ranked as not classified, moderate, or serious.[17]

CARB has another subcategory referred to as nonattainment/transitional. This designation refers to nonattainment areas that are close to attaining the CAAQS for the pollutant in nonattainment.[18]

Maintenance Areas

Maintenance areas are former nonattainment areas with air quality that meets the ambient air quality standards and meets the Clean Air Act deadline and are required to have in place a Maintenance Plan to demonstrate to the US EPA that the former nonattainment area can continue to maintain air quality below the standards. The plan is very similar to an Attainment Plan, in that it must use an analysis of data to show that the prior years were not an anomaly.

Unclassified Areas

Some areas are unclassified, which means there is insufficient monitoring data for supporting an attainment or nonattainment designation. Unclassified areas are typically treated as being in attainment.

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14 United States Environmental Protection Agency. "Green Book Designations." http://www.epa.gov /airprogm/oar/oaqps/greenbk/define.html. 2008a.

15 California Air Resources Board. "Area Designations." http://www.arb.ca.gov/desig/ adm/Define.htm. 2003.

16 United States Environmental Protection Agency. "Green Book Designations." http://www.epa.gov/airprogm /oar/oaqps/greenbk/define.html. 2008a.

17 United States Environmental Protection Agency. 2008a. "Green Book Designations." http://www.epa.gov /airprogm/oar/oaqps/greenbk/define.html. 2008a.

18 California Air Resources Board. "Area Designations." http://www.arb.ca.gov/desig/ adm/Define.htm. 2003.

Nonattainment Classifications

Nonattainment areas are classified according to the degree of severity of the air quality violation. In general, areas that exceed the NAAQS by a substantial margin are given more time under the CAA to attain the standard. The classifications are based on design values established for the nonattainment area for each nonattainment pollutant. As discussed in the next paragraph, the Basin is designated as nonattainment/extreme for the ozone NAAQS and nonattainment/serious for the PM_{10} NAAQS. The nonattainment/extreme ozone designation means that the area has a design value of 0.187 parts per million (ppm) and above and has until 2024 to attain the standard. However, as discussed later in this section, the SCAQMD requested US EPA's approval of a voluntary "bump-up" to the "extreme" nonattainment classification for the Basin even though its design value was less than 0.187 ppm. This would allow for the attainment demonstration to rely on emission reductions from measures that anticipate the development of new technologies or improvement of existing control technologies. A voluntary bump-up is permissible under the CAA and means that the SCAQMD is required to impose more stringent control measures and regulations consistent with the extreme classification. The nonattainment/serious PM_{10} designation means that the area would likely face difficulty in attaining the standard according to the US EPA (PM_{10} only has moderate and serious classifications).

South Coast Air Basin Attainment Status

Table 3.3-6, South Coast Air Basin Attainment Status, NAAQS, and **Table 3.3-7, South Coast Air Basin Attainment Status, CAAQS**, identifies the Basin's attainment status relative to the primary NAAQS and the CAAQS, respectively. Because the attainment/nonattainment designation is pollutant-specific, an area may be classified as nonattainment for one pollutant and attainment for another. Similarly, because the state and federal ambient air quality standards differ, an area could be classified as attainment under the federal standards and as nonattainment under the state standards for the same pollutant. As shown in **Table 3.3-6**, the SoCAB is in nonattainment for the federal standards for ozone, PM_{10}, and $PM_{2.5}$. As shown in **Table 3.3-7**, the air basin is in nonattainment for the state standards of ozone, NO_2, PM_{10}, $PM_{2.5}$, and lead.

States with basins that are not in attainment with the NAAQS are required to submit a State Implementation Plan (SIP) that describes how the air basin will achieve the federal standards by specified dates.

Table 3.3-6
South Coast Air Basin Attainment Status, NAAQS
(Los Angeles County)

Pollutant	Designation/Classification
Ozone (O_3)	Nonattainment/Extreme
Carbon Monoxide (CO)	Attainment/Maintenance
Nitrogen Dioxide (NO_2)	Attainment/Maintenance
Sulfur Dioxide (SO_2)	Attainment
Respirable Particulate Matter (PM_{10})	Nonattainment/Serious
Fine Particulate Matter ($PM_{2.5}$)	Nonattainment
Lead (Pb)	Attainment

Source: US Environmental Protection Agency, "Region 9: Air Programs, Air Quality Maps," http://www.epa.gov/region9/air/maps/maps_top.html. 2010.

Table 3.3-7
South Coast Air Basin Attainment Status, CAAQS

Pollutant	Designation/Classification
Ozone (O_3)	Nonattainment[1]
Carbon Monoxide (CO)	Attainment
Nitrogen Dioxide (NO_2)	Nonattainment
Sulfur Dioxide (SO_2)	Attainment
Respirable Particulate Matter (PM_{10})	Nonattainment
Fine Particulate Matter ($PM_{2.5}$)	Nonattainment
Lead (Pb)	Nonattainment
Sulfates (SO_4)	Attainment
Hydrogen Sulfide (H_2S)	Unclassified
Vinyl Chloride	Unclassified
Visibility-Reducing Particles	Unclassified

Source: California Air Resources Board, "Area Designations Maps/State and National," http://www.arb.ca.gov/desig/adm/adm.htm. 2010.

[1] *CARB has not issued area classifications based on the new state 8-hour standard. The previous classification for the 1-hour ozone standard was Severe.*

Sensitive Receptors

Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. Any facilities that house these sensitive receptors are considered sensitive land uses. In its *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning* (May 6, 2005), SCAQMD identifies the following sensitive land uses:

- schools, playgrounds, and childcare centers,
- long-term health care facilities,
- rehabilitation centers,
- convalescent centers,
- hospitals,
- retirement homes, and
- residences.

In its *Final Localized Significance Threshold Methodology*, SCAQMD defines sensitive receptors to be a receptor, such as residence, hospital, convalescent facility, where it is possible that an individual could remain for 24 hours. Commercial and industrial facilities and other land uses may be considered sensitive receptors for criteria pollutants with shorter averaging times (e.g., the 1-hour NO_2 or the 1- and 8-hour CO standards) if it is possible that an individual could remain in a particular location for the aforementioned lengths of time.[19]

REGULATORY FRAMEWORK

Air quality within the Basin is addressed through the efforts of various federal, state, regional, and local government agencies. These agencies work jointly, as well as individually, to improve air quality through legislation, regulations, planning, policymaking, education, and a variety of programs. The agencies primarily responsible for improving the air quality within the Basin are discussed below along with their individual responsibilities.

[19] South Coast Air Quality Management District, *Final Localized Significance Threshold Methodology* (July 2008), 3-2.

Regulations Governing Criteria Pollutants, Hazardous Air Pollutants, and Toxic Air Contaminants

The CAA is a federal law that requires the US EPA to develop and enforce regulations to protect the general public from exposure to airborne contaminants that are known to be hazardous to human health. As part of this requirement, the US EPA set the NAAQS, and has regulatory and enforcement jurisdiction over emission sources beyond state waters (outer continental shelf), and those that are under the exclusive authority of the federal government, such as aircraft, locomotives, and interstate trucking.

The CAA was originally adopted in 1970, but was amended most recently in 1990 with regulations that better protect the public's health and create more efficient methods of lowering pollutant emissions. The major areas of improvement resulting from the amendments include air basin designations (discussed previously), automobile/heavy-duty engine emissions, and toxic air pollutants. The amendments established more stringent standards for hydrocarbons, NO_X, and CO emissions in order to reduce O_3 and CO levels in heavily populated areas. Fuels became more strictly regulated, requiring new fuels to be less volatile, contain less sulfur (regarding diesel fuels), and have higher levels of oxygenates (oxygen-containing substances to improve fuel combustion). The 1990 amendments also require the US EPA to regulate 188 hazardous air pollutants (HAPs), which are carcinogenic, mutagenic, and/or reproductive toxicants. The air toxics program under the CAA involves locating all major (greater than 10 tons/year [tpy]) and area emission sources in order to implement Maximum Achievable Control Technology (MACT) to reduce HAP emissions and their associated health impacts.

The California Clean Air Act (CCAA) was signed into law in 1988 and, for the first time, clearly spelled out in statute California's air quality goals, planning mechanisms, regulatory strategies, and standards of progress. Health and Safety Code section 39606b specified the CAAQS as the maximum level and time of exposure in the outdoor air for a given air pollutant and which is protective of human health and public welfare. The CCAA also established a legal mandate for air basins to achieve the CAAQS by the earliest practical date.

As a branch of the Cal/EPA, CARB oversees air quality monitoring, planning, and control throughout California. It is primarily responsible for implementing the CCAA, ensuring conformance with CAA requirements, and for regulating emissions from motor vehicles and consumer products within the state. In addition, CARB sets the CAAQS and control measures for TACs. CARB approves the regional air quality management/attainment plans for incorporation into the SIP and is responsible for preparing those portions of the SIP related to mobile source emissions. CARB establishes new standards for vehicles

sold in California and for various types of equipment available commercially. It also sets fuel specifications to further reduce vehicular emissions.

CARB also makes area designations for O_3, CO, NO_2, SO_2, PM_{10}, $PM_{2.5}$, sulfates, lead, hydrogen sulfide, and visibility-reducing particles. Health and Safety Code Section 39607(e) requires CARB to establish and periodically review area designation criteria. These designation criteria provide the basis for CARB to designate areas of the state as "attainment," "nonattainment," or "unclassified" according to state standards. In addition, Health and Safety Code Section 39608 requires CARB to use the designation criteria to classify areas of the state and to annually review those area designations.

California Health and Safety Code (Section 39606) authorizes CARB to set the CAAQS and the California Clean Air Act (CCAA) established a legal mandate for air basins to achieve the CAAQS by the earliest practical date. The NAAQS and CAAQS are required to be periodically revised based on the latest health-based research, and several revisions to the NAAQS have occurred over the past several years, with the most recent being revisions to the ozone and $PM_{2.5}$. In 2002, CARB adopted recommendations for revisions to the PM_{10} standard and established a new $PM_{2.5}$ annual standard. CARB also reviewed and recommended revisions to the ozone and NO_2 standards, which were adopted and went into effect on May 17, 2006 and March 20, 2008, respectively.

Along with setting and enforcing the CAAQS, CARB also sets the standards and control measures for TACs; approves the regional air quality management/attainment plans for incorporation into the SIP; establishes new standards for vehicles sold in California and for various types of commercially available equipment; and sets fuel specifications to further reduce vehicular emissions.

Regulations Governing Non-Attainment Areas

States with basins that are not in attainment with the NAAQS are required to submit a SIP that describes how the air basin will achieve the federal standards by specified dates. The SIP includes strategies and control measures to attain the NAAQS by deadlines established by the CAA. SIPs are not single documents, but are a compilation of state regulations, air quality management/attainment plans, programs, and air district rules that are continuously revised to meet CAA amendment requirements.

The air quality management/attainment plans for areas that are not in attainment with the NAAQS are authored by CARB, the local air districts, and other agencies. In general, the plans describe ambient air data and trends; provide a baseline emissions inventory; and project future year air emissions, which account for growth projections and already adopted control measures. The plans also include a

comprehensive control strategy of measures needed to reach attainment, which may include interim milestones for progress toward attainment.

Upon completion, the plans are submitted to CARB for final review and approval. Once the plans are approved, CARB forwards them to the US EPA as a SIP revision. The US EPA reviews the plans to determine if they conform to the 1990 amendments and if would achieve the air quality goals of the nonattainment area. After the US EPA approves the plans, they are published in the Federal Register. The preparation of attainment plans, review, and approval are an ongoing process within the state of California, as well as in other states with nonattainment areas.

Regional Regulations Governing Air Emissions

South Coast Air Quality Management District

The management of air quality in the South Coast Air Basin is the responsibility of the SCAQMD. This responsibility was given to SCAQMD by the state legislature's adoption of the 1977 Lewis-Presley Air Quality Management Act, which merged four county air pollution control bodies into one regional district. Under the Lewis-Presley Air Quality Act, SCAQMD is responsible for bringing air quality in the areas under its jurisdiction into conformity with federal and state air quality standards. Specifically, SCAQMD is responsible for monitoring ambient air pollutant levels throughout the Basin and for developing and implementing attainment strategies to ensure that future emissions will be within federal and state standards. The SCAQMD primarily regulates emissions from stationary sources, such as manufacturing and power generation. Mobile sources, such as buses, automotive vehicles, trains, and airplanes, are largely out of the SCAQMD's jurisdiction and are up to CARB and the US EPA to regulate. In order to achieve air quality standards, the SCAQMD adopts an Air Quality Management Plan (AQMP) that serves as a guideline to bring pollutant concentrations into attainment with federal and state standards. The SCAQMD determines if certain rules and control measures are appropriate for their specific region according to technical feasibility, cost effectiveness, and the severity of nonattainment. Once the SCAQMD has adopted the proper rules, control measures, and permit programs, it is responsible to implement and enforce compliance with those rules, control measures, and programs.

SCAQMD CEQA Guidance Documents

In 1993, the SCAQMD prepared its *California Environmental Quality Act (CEQA) Air Quality Handbook* to assist local government agencies and consultants in preparing environmental documents for projects subject to CEQA. Minor revisions to the document were made in November 1993. The SCAQMD is in the process of developing an *Air Quality Analysis Guidance Handbook* to replace the *CEQA Air Quality*

Handbook.[20] The handbook describes the criteria that SCAQMD uses when reviewing and commenting on the adequacy of environmental documents. The handbook recommends thresholds of significance in order to determine if a project will have a significant adverse environmental impact. Other important contents are methodologies for predicting project emissions and mitigation measures that can be taken to avoid or reduce air quality impacts. Although the Governing Board of the SCAQMD has adopted the *CEQA Air Quality Handbook*, and is in the process of developing a replacement handbook, it does not, nor does it intend to, supersede a local jurisdiction's CEQA procedures.[21]

While the *Air Quality Analysis Guidance Handbook* is being developed, supplemental information has been adopted by the SCAQMD. These include revisions to the air quality significance thresholds and a new procedure referred to as "localized significance thresholds," which has been added as a significance threshold under the *Final Localized Significance Threshold Methodology*.[22] According to the SCAQMD, the localized significance thresholds "are applicable at the project-specific level and generally are not applicable to regional projects such as local General Plans unless specific projects are identified in the General Plans."[23] Therefore, this analysis does not explicitly assess compliance with the localized significance thresholds; however, implementing projects developed within the Planning Area would assess compliance in accordance with the Lead Agency's discretionary authority.

The SCAQMD has recommended that lead agencies not use the screening tables in the *CEQA Air Quality Handbook's* Chapter 6 because the tables were derived using an obsolete version of CARB's mobile source emission factor inventory and are also based on outdated trip generation rates from a prior edition of the Institute of Transportation Engineer's Trip Generation Handbook.[24] The SCAQMD has also recommended that lead agencies not use the on-road mobile source emission factors in Table A9-5-J1 through A9-5-L as they are obsolete, and instead recommends using on-road mobile source emission factors approved by the CARB.[25] The outdated and obsolete information were not used in this analysis.

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20 South Coast Air Quality Management District, "Air Quality Analysis Guidance Handbook," http://www.aqmd.gov/CEQA/hdbk.html. 2009.

21 South Coast Air Quality Management District, "Frequently Asked CEQA Questions," http://www.aqmd.gov/ceqa/faq.html. 2007.

22 South Coast Air Quality Management District, *Final Localized Significance Threshold Methodology*, (2008).

23 South Coast Air Quality Management District. "Final Localized Significance Threshold Methodology." (June 2008) 1-1. http://www.aqmd.gov/ceqa/handbook/lst/lst.html.

24 South Coast Air Quality Management District. "CEQA Air Quality Handbook." (1993). http://www.aqmd.gov/ceqa/oldhdbk.html. 2007.

25 South Coast Air Quality Management District. "EMFAC 2007 (v2.3) Emission Factors (On-Road)." http://www.aqmd.gov/CEQA/handbook/onroad/onroad.html. 2008.

The SCAQMD offers further guidance to jurisdictions in its *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning* (May 6, 2005). This guidance document provides suggested policies that local governments can use to prevent or reduce potential air pollution impacts and protect public health in their General Plans or through local planning. The objective of the document is to facilitate collaboration between the local governments and the SCAQMD.

The applicable portions of the *CEQA Air Quality Handbook*, the *Air Quality Analysis Guidance Handbook* supplemental information, and *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning* were used in preparing the air quality analysis in this section.

SCAQMD Air Quality Management Plan

The SCAQMD is required to produce plans describing how air quality will be improved. The CCAA requires that these plans be updated triennially in order to incorporate the most recent available technical information. In addition, the US EPA requires that transportation conformity budgets be established based on the most recent planning assumptions (i.e., within the last five years). Plan updates are necessary to ensure continued progress toward attainment and to avoid a transportation conformity lapse and associated federal funding losses. A multi-level partnership of governmental agencies at the federal, state, regional, and local levels implement the programs contained in these plans. Agencies involved include the US EPA, CARB, local governments, the Southern California Association of Governments (SCAG), and the SCAQMD.

The SCAQMD is the agency responsible for preparing the AQMP for the Basin. Since 1979, a number of AQMPs have been prepared. The SCAQMD adopted the Final 2007 Air Quality Management Plan (2007 AQMP) on June 1, 2007. CARB approved the 2007 AQMP as the comprehensive SIP component for the basin on September 27, 2007. Because the 2007 AQMP has been approved by the SCAQMD and CARB, it is an "applicable regional plan" in terms of CEQA requirements for assessing plan consistency. Federal approval is only relevant as to the federal CAA components of the 2007 AQMP. Like previous basin AQMPs, the 2007 AQMP includes elements that exceed federal requirements.

The 2007 AQMP for the Basin (and those portions of the Salton Sea Air Basin under the SCAQMD's jurisdiction) is a comprehensive program that will lead these areas into compliance with the NAAQS and CAAQS for ozone and $PM_{2.5}$. In addition, as part of the 2007 AQMP, the SCAQMD requested US EPA's approval of a "bump-up" to the "extreme" nonattainment classification for the basin, which would extend the attainment date to 2024 and allow for the attainment demonstration to rely on emission reductions from measures that anticipate the development of new technologies or improvement of

existing control technologies. The US EPA approved the voluntary extreme nonattainment redesignation request on April 15, 2010.

Although $PM_{2.5}$ plans for nonattainment areas were due in April 2008, the O_3 and $PM_{2.5}$ plans are still being processed with the US EPA. Nonetheless, the 2007 AQMP also focuses on attainment strategies for the $PM_{2.5}$ standard through stricter control of sulfur oxides, directly emitted $PM_{2.5}$, NO_X, and VOCs. The need to commence $PM_{2.5}$ control strategies is due to the attainment date for $PM_{2.5}$ (2015) being much earlier than that for ozone (2024 for the extreme designation). Control measures and strategies for $PM_{2.5}$ will also help control ozone generation in the region because $PM_{2.5}$ and ozone share similar precursors (e.g., NO_X). The District has integrated $PM_{2.5}$ and ozone reduction control measures and strategies in the 2007 AQMP. In addition, the AQMP focuses on reducing VOC emissions, which have not been reduced at the same rate as NO_X emissions in the past. Hence, the Basin has not achieved the reductions in ozone as were expected in previous plans. The AQMP was based on assumptions provided by both CARB and SCAG in the 2007 Emission Factors (EMFAC2007) motor vehicle model and the most recent demographics information, respectively.

SCAQMD Rules and Regulations

The SCAQMD is responsible for limiting the amount of emissions that can be generated throughout the Basin by various stationary, area, and mobile sources. Specific rules and regulations have been adopted by the SCAQMD Governing Board which limit the emissions that can be generated by various uses/activities and identify specific pollution reduction measures that must be implemented in association with various uses and activities. These rules not only regulate the emissions of the federal and state criteria pollutants but also TACs and acutely hazardous materials. The rules are also subject to ongoing refinement by SCAQMD.

Among the SCAQMD rules that are noteworthy and would be applicable to many land use projects that could be developed within the Planning Area are Rule 403 (Fugitive Dust), Rule 1113 (Architectural Coatings), and Rule 1403 (Asbestos Emissions from Demolition/Renovation Activities). Rule 403 requires the use of stringent best available control measures (BACM) to minimize PM_{10} emissions during grading and construction activities. Rule 1113 will require reductions in the VOC content of coatings, with a substantial reduction in the VOC content limit for flat coatings in July 2008. Compliance with SCAQMD Rule 1403 requires that the owner or operator of any demolition or renovation activity to have an asbestos survey performed prior to demolition and provide notification to the SCAQMD prior to commencing demolition activities.

Other rules will apply on a case-by-case basis; however, Rules 403 and 1113 typically apply to all development; Rule 1403 typically applies to redevelopment projects where demolition of pre-1978 structures is involved.

Additional details regarding these rules and other potentially applicable rules are presented below. Other rules may also be applicable to land uses developed within the Planning Area on a case-by-case basis.

- **Rule 403 (Fugitive Dust)** – This rule requires fugitive dust sources to implement BACM for all sources and all forms of visible particulate matter are prohibited from crossing any property line. SCAQMD Rule 403 is intended to reduce PM_{10} emissions from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust (see also Rule 1186).

- **Rule 1113 (Architectural Coatings)** – This rule requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce VOC emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories.

- **Rule 1121 (Control of Nitrogen Oxides from Residential Type, Natural Gas-Fired Water Heaters)** – This rule prescribes NO_X emission limits for natural gas-fired water heaters with heat input rates less than 75,000 Btu per hour. It applies to manufacturers, distributors, retailers, and installers of natural gas-fired water heaters. In lieu of meeting these NO_X limits, this rule allows emission mitigation fees to be collected from water heater manufacturers to fund stationary and mobile source emission reduction projects targeted at offsetting NO_X emissions from water heaters that do not meet Rule 1121 emission standards.

- **Rule 1146.2 (Emissions of Oxides** of **Nitrogen from Large Water Heaters and Small Boilers and Process Heaters)** – This rule requires manufacturers, distributors, retailers, refurbishers, installers and operators of new and existing units to reduce NO_X emissions from natural gas-fired water heaters, boilers, and process heaters as defined in this rule.

- **Rule 1186 (PM_{10} Emissions from Paved and Unpaved Roads, and Livestock Operations)** – This rule applies to owners and operators of paved and unpaved roads and livestock operations. The rule is intended to reduce PM_{10} emissions by requiring the cleanup of material deposited onto paved roads, use of certified street sweeping equipment, and treatment of high-use unpaved roads (see also Rule 403).

- **Rule 1403 (Asbestos Emissions from Demolition/Renovation Activities)** – This rule requires owners and operators of any demolition or renovation activity and the associated disturbance of asbestos-containing materials, any asbestos storage facility, or any active waste disposal site to implement work practice requirements to limit asbestos emissions from building demolition and renovation activities, including the removal and associated disturbance of asbestos-containing materials.

Stationary emissions sources subject to these rules are regulated through SCAQMD's permitting process. Through this permitting process, SCAQMD also monitors the amount of stationary emissions being

generated and uses this information in developing AQMPs. The project would be subject to SCAQMD rules and regulations to reduce specific emissions and to mitigate potential air quality impacts.

Southern California Association of Governments

SCAG is a council of governments for the Counties of Ventura, Los Angeles, Orange, Riverside, San Bernardino, and Imperial. As a regional planning agency, SCAG serves as a forum for regional issues relating to transportation, the economy, community development, and the environment. SCAG also serves as the regional clearinghouse for projects requiring environmental documentation under federal and state law. In this role, SCAG reviews projects to analyze their impacts on SCAG's regional planning efforts.

Although SCAG is not an air quality management agency, it is responsible for several air quality planning issues. Specifically, as the designated Metropolitan Planning Organization (MPO) for the Southern California region, it is responsible, pursuant to Section 176(c) of the 1990 CAA Amendments, for providing current population, employment, travel, and congestion projections for regional air quality planning efforts and for determining conformity with the applicable air quality management plan. It is required to quantify and document the demographic and employment factors influencing expected transportation demand, including land use forecasts. Pursuant to California Health and Safety Code Section 40460 (b), SCAG is also responsible for preparing and approving portions of the basin's air quality management plans relating to demographic projections, and integrated regional land use, housing, employment, and transportation programs, measures, and strategies. Though the most recent population, housing, and transportation measures and strategies are contained in the 2004 Regional Transportation Plan, the current air quality management plan was adopted in 2003 and was based on the Growth Management Chapter of SCAG's Regional Comprehensive Plan and Guide (RCPG).

Local Level Control of Air Emissions

Local governments, such as the City of Santa Clarita and County of Los Angeles, share the responsibility to implement or facilitate some of the control measures of the AQMP. These governments have the authority to reduce air pollution through their police power and land use decision-making authority. Specifically, local governments are responsible for the mitigation of emissions resulting from land use decisions and for the implementation of transportation control measures as outlined in the AQMP. The AQMP assigns local governments certain responsibilities to assist the Basin in meeting air quality goals and policies. In general, the first step towards assigning a local government's responsibility is accomplished by identifying the air quality goals, policies, and implementation measures in its general

plan. The City of Santa Clarita has done this through its proposed *General Plan* Conservation and Open Space Element and the County of Los Angeles has done this through its proposed *Santa Clarita Valley Area Plan* Conservation and Open Space Element,

Through capital improvement programs, local governments can fund infrastructure that contributes to improved air quality, by requiring improvements such as bus turnouts, energy-efficient streetlights, and synchronized traffic signals. In accordance with CEQA requirements and the CEQA review process, local governments assess air quality impacts, require mitigation of potential air quality impacts by conditioning discretionary permits, and monitor and enforce implementation of such mitigation.

THRESHOLDS OF SIGNIFICANCE

Based on the thresholds of significance identified in Appendix G of the 2005 *CEQA Guidelines* and the City of Santa Clarita Environmental Guidelines, a project would have a significant effect on the environment if it would:

(a) conflict with or obstruct implementation of the applicable air quality plan;

(b) violate any air quality standard or contribute substantially to an existing or projected air quality violation;

(c) result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);

(d) expose sensitive receptors to substantial pollutant concentrations; and/or

(e) create objectionable odors affecting a substantial number of people.

Both the City of Santa Clarita and County of Los Angeles typically refer to the thresholds recommended by the SCAQMD in its *CEQA Air Quality Handbook*. The following discusses the thresholds utilized in this analysis for both construction and operational emissions.

Construction Emission Thresholds

The SCAQMD recommends that projects with construction-related emissions that exceed any of the following emissions thresholds should be considered significant:[26]

- 75 pounds per day of VOC

[26] South Coast Air Quality Management District, *CEQA Air Quality Handbook*, (1993) 6-4.

- 100 pounds per day of NO_X
- 550 pounds per day of CO
- 150 pounds per day of SO_X
- 150 pounds per day of PM_{10}
- 55 pounds per day of $PM_{2.5}$

In addition to the above listed emission-based thresholds, the SCAQMD also recommends that the potential impacts on ambient air concentrations due to construction emissions from project-level proposed projects be evaluated.[27]

Operational Emissions

The SCAQMD recommends that projects with operational-related emissions that exceed any of the following emissions thresholds should be considered significant:

- 55 pounds per day of VOC
- 55 pounds per day of NO_X
- 550 pounds per day of CO
- 150 pounds per day of SO_X
- 150 pounds per day of PM_{10}
- 55 pounds per day of $PM_{2.5}$

For the proposed Area Plan and General Plan, the analysis compares the air emissions from the proposed plans to emissions from the existing conditions. In addition to the operational emission significance thresholds, the SCAQMD has prepared **Additional Indicators of Potential Air Quality Impacts** to determine the significance of a proposed development.

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27 LSTs are not applicable regional projects such as general plans. South Coast Air Quality Management District, *Final Localized Significance Threshold Methodology* (July 2008) 1-1.

Additional Indicators of Potential Air Quality Impacts

The SCAQMD recommends that projects meeting any of the following criteria also be considered to have significant air quality impacts.[28]

- Project could interfere with the attainment of the federal or state ambient air quality standards by either violating or contributing to an existing or projected air quality violation.
- Project could result in population increases within an area which would be in excess of that projected by SCAG in the AQMP, or increase the population in an area where SCAG has not projected that growth for the project's buildout year.
- Project could generate vehicle trips that cause a CO hotspot or project could be occupied by sensitive receptors that are exposed to a CO hotspot.
- Project will have the potential to create, or be subjected to, an objectionable odor that could impact sensitive receptors.
- Project will have hazardous materials on site and could result in an accidental release of toxic air emissions or acutely hazardous materials posing a threat to public health and safety.
- Project could emit a TAC regulated by SCAQMD rules or that is on a federal or state air toxic list.
- Project could be occupied by sensitive receptors within 0.25 mile of an existing facility that emits air toxics identified in SCAQMD Rule 1401.
- Project could emit carcinogenic or TACs that individually or cumulatively exceed the maximum individual cancer risk of 10 in 1 million.

Cumulative Emission Significance Thresholds

In large part, the SCAQMD 2003 and 2007 AQMPs were prepared to accommodate growth, to meet state and federal air quality standards, and to minimize the fiscal impact that pollution control measures have on the local economy. The *CEQA Air Quality Handbook* identifies three possible methods to determine the cumulative significance of land use projects.[29] These include:

- Reduce the rate of growth in average daily trips or vehicle miles traveled compared to rate of population growth
- 1 percent per year reduction in project emissions of VOC, NO_X, CO, SO_X, and PM_{10} (*method no longer supported by the SCAQMD*)

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28 South Coast Air Quality Management District, *CEQA Air Quality Handbook*, (1993) 6-2 to 6-3.

29 South Coast Air Quality Management District, *CEQA Air Quality Handbook*, (1993) 9-12; Written communication with Steve Smith, Program Supervisor, South Coast Air Quality Management District, November 20, 2003.

- 1.5 average vehicle ridership, or average vehicle occupancy, if a transportation project (*underlying SCAQMD regulation repealed*)

These methods are based on performance standards and emission reduction targets necessary to attain the federal and state air quality standards identified in the AQMP. However, the second method is no longer recommended and supported by the SCAQMD and the third method is not applicable as the SCAQMD repealed the underlying regulation after the *CEQA Air Quality Handbook* was published. Therefore, the only viable SCAQMD method is based on whether the rate of growth in average daily trips exceeds the rate of growth in population (first item above).

IMPACT ANALYSIS

This impact analysis section evaluates the potential effects of the proposed County Area Plan policies and proposed City General Plan goals, objectives, and policies on air quality within the OVOV Planning Area, relative to each of the recommended significance criteria identified above.

URBEMIS2007 Version 9.2.4, a computer model designed to estimate regional air emissions from new development projects in California, was used to estimate construction and operational emissions from future development in the OVOV Planning Area under the County's existing Area Plan and the City's existing General Plan and from future development in the OVOV Planning area under the County's proposed Area Plan and the City's proposed General Plan. Construction emissions calculations are based on URBEMIS2007 defaults for the SoCAB. The amount of redevelopment and demolition that would occur during OVOV Planning Area buildout is unknown and demolition emissions are not estimated. Vehicle trip rates used to calculate project operational emissions are from the project traffic study. Detailed calculations of the operational emissions are found in **Appendix 3.3**.

Construction Impacts

Impact 3.3-1: **Buildout of the proposed Area Plan and General Plan would result in potentially significant construction emission impacts if it would violate any air quality standards or contribute substantially to an existing or projected air quality violation.**

Future development in the OVOV Planning Area would require site clearing and waste hauling; trenching for utilities and excavation; pavement and asphalt installation; building and hardscape construction; and architectural coatings. Construction emissions would principally be VOCs, NO_x, CO,

SO_X, PM_{10}, and $PM_{2.5}$ from heavy-duty construction equipment exhaust; PM_{10} and $PM_{2.5}$ fugitive dust from site clearing, trenching, and excavation; and VOCs from asphalt paving and architectural coating.

Off-site emissions during the construction phase normally consist of exhaust emissions and entrained paved road dust (PM_{10} and $PM_{2.5}$) from construction equipment delivery, demolition and construction waste hauling to separation and/or disposal facilities, material delivery, and construction worker commute trips if not mitigated.

Exposure to asbestos and/or lead paint during demolition would result in a significant air quality impact. Frequently encountered types of asbestos-containing materials (ACM) used in building construction include floor tile and mastic, textured ceiling plaster, wallboard and joint compound, insulation, and many other building materials in common use prior to 1981. Materials that contain over 1 percent asbestos fibers are considered regulated asbestos-containing material (ACM) and must be handled according to US EPA and Occupational Safety and Health Administration (OSHA) regulations. It is also regulated by SCAQMD's Rule 1403. In 1978, the federal government limited the use of lead-based paint, particularly in residential applications. Although usage was allowed to continue in many commercial settings, use of lead paint has declined. Buildings developed prior to the generally accepted 1978 lead-based paint determination date have the potential for lead-based paint if not mitigated.

Construction emissions were estimated using the URBEMIS2007 model. A number of variables are input into the URBEMIS2007 model including the construction schedule, the type of construction equipment required to build the project, emission factors for each piece of equipment, grading amounts, soil hauling amounts, and asphalt paving amounts. Because the proposed project encompasses development over an extended period, it is not possible to have specific information regarding the exact types of equipment that would be used and the actual amount of construction activity that would take place. Therefore, it was assumed that construction would be ongoing in a relatively evenly distributed building schedule.

In cases where other specific information is not available, the SCAQMD and CARB have recommended that default variables be used in the URBEMIS2007 model. The emission factors for each type of construction equipment were obtained from CARB's EMFAC2007 model and OFFROAD2007 model, both of which are incorporated as part of the URBEMIS2007 model. The EMFAC2007 model generates emissions factors for on-road mobile sources (e.g., passenger vehicles and on-road trucks) and the OFFROAD2007 model generates emission factors for off-road sources (e.g., construction equipment). Other emission factors, such as for fugitive dust emissions, are based on SCAQMD-approved factors, which are also incorporated into the URBEMIS2007 model. Emissions due to worker and vendor trips are based on the amount of building square footage and the number of residential units under construction.

The emission calculations assume the use of standard construction practices such as compliance with SCAQMD Rule 403 (Fugitive Dust). Compliance with Rule 403 is mandatory for all construction projects. In the URBEMIS2007 model, the emission calculations take into account compliance with Rule 403 by incorporating the watering of exposed surfaces and unpaved. Rule 403 contains other best available control measures that would reduce fugitive dust emissions; however, they are not accounted for in the available URBEMIS2007 modeling options. The results of the URBEMIS2007 modeling are shown in **Table 3.3-8, Estimated Maximum Construction Emissions Under Proposed Area Plan and General Plan (Unmitigated)**.

Table 3.3-8
Estimated Maximum Construction Emissions
Under Proposed Area Plan and General Plan (Unmitigated)

Construction Year	Emissions in Pounds per Day					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Maximum Daily Emissions in Any Year	2,100	12,960	21,570	30	32,100	7,120
SCAQMD Threshold	75	100	550	150	150	55
Exceeds Threshold?	**YES**	**YES**	**YES**	NO	**YES**	**YES**

*Source: Impact Sciences, Inc. Emissions calculations are provided in **Appendix 3.3**.*
Totals in the table may not appear to add exactly due to rounding in the computer model calculations.

As shown in **Table 3.3-8**, the estimated maximum construction emissions for buildout of the proposed Area Plan and General Plan would exceed the SCAQMD's construction thresholds for VOC, NO_X, CO, PM_{10}, and $PM_{2.5}$. Construction air quality impacts would be considered potentially significant.

Goals LU 1, **C 3**, and **CO 8** would reduce air emissions by discouraging urban sprawl into rural areas and infrastructure construction; reducing vehicle trips and emissions through effective management of travel demand, transportation systems, and parking; promoting parking management strategies; and ensuring development considers location efficiency, and environmental preservation. These goals are supported by (**Objectives LU 1.1**, **C 3.3**, and **CO 8.3** and **Policies LU 1.1.3**, **LU 1.1.5**, **C 3.3.1**, and **CO 8.3.1**).

Goals LU 2 and C 3 would reduce VOCs emissions from off-gassing from pavement during construction by encouraging parking alternatives in mixed-use developments and by reducing parking requirements where appropriate (**Objectives LU 2.3** and **C 3.3**; **Policies LU 2.3.6** and **C 3.3.1**).

Objective LU 6.1 and **Policy LU 6.1.3** would reduce fugitive dust emissions during construction by requiring compatible hillside management techniques that limit site disturbance.

Goal CO 1 is to achieve a balance between social and economic needs of Santa Clarita Valley residents and protection of the natural environment**. Objective CO 1.4** and **Policy CO 1.4.1** would minimize the long-term impacts posed by harmful chemical and biological materials and in cooperation with appropriate agencies identify pollution sources and adopt strategies to reduce emissions into air and water bodies.

Goal CO 1 would reduce emissions from processing of raw materials by promoting use of recycled content building materials during construction (**Objective CO 1.3**; **Policy CO 1.3.2**).

Proposed Area Plan Policies and Proposed General Plan Goals, Objectives, and Policies

The policies provided below are similar for the County's Area Plan and City's General Plan. The County is evaluating its Area Plan policies while the City is evaluating its General Plan goals, objectives, and policies.

Goal LU 1: An interconnected Valley of Villages providing diverse lifestyles, surrounded by a greenbelt of natural open space.

Objective LU 1.1: Maintain an urban form for the Santa Clarita Valley that preserves an open space greenbelt around the developed portions of the Valley, protects significant resources from development, and directs growth to urbanized areas served with infrastructure.

Policy LU 1.1.3: Discourage urban sprawl into rural areas by limiting non-contiguous, "leap-frog" development outside of areas designated for urban use.

Policy LU 1.1.5: Increase infill development and re-use of underutilized sites within and adjacent to developed urban areas to achieve maximum benefit from existing infrastructure and minimize loss of open space, through redesignation of vacant sites for higher density and mixed use, where appropriate.

Goal LU 2: A mix of land uses to accommodate growth, supported by adequate resources and maintaining community assets.

Objective LU 2.3: Increase mixed-use development to create more livable neighborhoods, walkable business districts, and to reduce vehicle trips, while ensuring land use compatibility, through the following policies:

Policy LU 2.3.6: Provide parking alternatives in mixed-use developments, including subterranean parking and structured parking to limit the amount of surface area devoted to vehicle storage.

Objective LU 6.1: Maintain the natural beauty of the Santa Clarita Valley's hillsides, significant ridgelines, canyons, oak woodlands, rivers and streams.

Policy LU 6.1.3: Ensure that new development in hillside areas is designed to protect the scenic backdrop of foothills and canyons enjoyed by Santa Clarita Valley communities, through requiring compatible hillside management techniques that may include but are not limited to density-controlled development (clustering) subject to the limitations in Policy LU 1.3.5; contouring and landform grading; revegetation with native plants; limited site disturbance; avoidance of tall retaining and build-up walls; use of stepped pads; and other techniques as deemed appropriate.

Goal C 3: Reduction of vehicle trips and emissions through effective management of travel demand, transportation systems, and parking.

Objective C 3.3: Make more efficient use of parking and maximize economic use of land, while decreasing impervious surfaces in urban areas, through parking management strategies.

Policy C 3.3.1: Evaluate parking standards and reduce requirements where appropriate, based on data showing that requirements are in excess of demand.

Goal CO 1: A balance between the social and economic needs of Santa Clarita Valley residents and protection of the natural environment, so that these needs can be met in the present and in the future.

Objective CO 1.3: Conserve and make more efficient use of non-renewable resource systems, such as fossil fuels, minerals, and materials.

Policy CO 1.3.2: Promote reducing, reusing, and recycling in all Land Use designations and cycles of development.

Objective CO 1.4: Minimize the long-term impacts posed by harmful chemical and biological materials on environmental systems.

Policy CO 1.4.1: In cooperation with other appropriate agencies, identify pollution sources and adopt strategies to reduce emissions into air and water bodies.

Goal CO 8: Development designed to improve energy efficiency, reduce energy and natural resource consumption, and reduce emissions of greenhouse gases. (Guiding Principle #11)

Objective CO 8.3: Encourage green building and sustainable development practices on private development projects, to the extent reasonable and feasible.

Policy CO 8.3.1: Evaluate development proposals for consistency with the ordinances developed through the County's Green Building Program.

Effectiveness of Proposed Area Plan Policies

The proposed Area Plan policies listed above are designed to reduce air emissions during construction by reducing the amount of infrastructure that would be required, reducing VOCs emissions from pavement, reducing fugitive dust emissions, encouraging use of recycled content building materials, and by cooperating with other appropriate agencies to identify pollution sources and adopt strategies to reduce their emissions. Implementation of these policies would reduce potential Area Plan air quality impacts under this criterion. However, individual project emissions could potentially exceed the thresholds.

Effectiveness of Proposed General Plan Goals, Objectives, and Policies

The proposed General Plan goals, objectives, and policies are designed to reduce air emissions during construction by reducing the amount of infrastructure that would be required, reducing VOCs emissions from pavement, reducing fugitive dust emissions, encouraging use of recycled content building materials, and by cooperating with other appropriate agencies to identify pollution sources and adopt strategies to reduce their emissions. Implementation of these goals, objectives, and policies would reduce potential General Plan air quality impacts under this criterion. However, individual project emissions could potentially exceed the thresholds.

Plan to Plan Analysis

The existing Area Plan and the proposed OVOV Area Plan incorporate goals, objectives and policies that would reduce air emissions through effective land use planning, or in the case of OVOV, implementation of Greenhouse Gas policies that would further reduce associated air quality impacts (i.e., measures that reduce greenhouse gas emissions usually have co-benefits of reducing criteria pollutant emissions). However, both Plans would potentially exceed emission during construction.

Operational Impacts

Impact 3.3-2 **The proposed Area Plan and General Plan would result in a potentially significant impact if they would conflict with or obstruct implementation of the Final 2007 Air Quality Management Plan.**

The proposed Area Plan and General Plan would result in a significant impact under this impact criterion if they cause population increases in excess of that projected by SCAG. The projected population of unincorporated OVOV Planning Area at Area Plan buildout (237,387) would not exceed the year 2035 population forecast (434,773) for the unincorporated North Los Angeles County subregion. The projected population of the City at General Plan buildout (275,000) is consistent with SCAG's year 2035 population forecast for the City (239,923); the difference of 35,077 residents is attributed to the population of the annexed SOI and to growth that would occur in the City's Planning Area after 2035. As a result, the population increases as a result of Area Plan and General Plan buildout would not be in excess of that projected by SCAG and impacts under this criterion would be less than significant.

Furthermore, with respect to SCAQMD's threshold to determine cumulative air quality impacts, the projected rate of population growth from **Section 3.19, Population and Housing**, was compared to the rate of ADT growth using information from the project traffic study (**Appendix 3.2**). Population growth

for the OVOV Planning Area is projected to increase from approximately 252,000 to 459,148 at buildout (a growth rate of approximately 75 percent), while the number of trip ends is expected to increase from 1,487,994 to 3,288,386 (a growth rate of approximately 120 percent). Since the rate of trip ends growth is greater than the rate of population growth, building of the proposed Area Plan and General Plan would result in a significant cumulative air quality impact.

Impacts under this criterion would be significant. **Goal CO 7**, clean air to protect human health and support healthy ecosystems, would further ensure that the Area Plan and General Plan would not conflict with or obstruct implementation of the Final 2007 Air Quality Management Plan. This would be ensured by promoting the mixed land use patterns and multi-modal circulation policies set forth in the Land Use and Circulation Element thereby limiting air emissions from transportation sources, by separating sensitive land uses from sources of toxic air emissions, and by coordinating with local, regional, state, and federal agencies to develop and implement regional air quality policies and programs (**Objectives CO 7.1**, **CO 7.2**, and **CO 7.3**; **Policies CO 7.1.1**, **CO 7.2.1**, and **CO 7.3.1**).

Proposed Area Plan Policies and Proposed General Plan Goals, Objectives, and Policies

The policies listed below are the same for the County's Area Plan and City's General Plan. The City is evaluating its General Plan goals, objectives, and policies while the County is evaluating its Area Plan policies.

Goal CO 7: Clean air to protect human health and support healthy ecosystems.

Objective CO 7.1: Reduce air pollution from mobile sources.

Policy CO 7.1.1: Through the mixed land use patterns and multi-modal circulation policies set forth in the Land Use and Circulation Elements, limit air pollution from transportation sources.

Policy CO 7.1.2: Support the use of alternative fuels.

Policy CO 7.1.3: Support alternative travel modes and new technologies, including infrastructure to support alternative fuel vehicles, as they become commercially available.

Objective CO 7.2: Apply guidelines to protect sensitive receptors from sources of air pollution as developed by the California Air Resources Board (CARB), where appropriate.

Policy CO 7.2.1: Ensure adequate spacing of sensitive land uses from the following sources of air pollution: high traffic freeways and roads; distribution centers; truck stops; chrome plating facilities; dry cleaners using perchloroethylene; and large gas stations, as recommended by CARB.

Objective CO 7.3: Coordinate with other agencies to plan for and implement programs for improving air quality in the South Coast Air Basin.

Policy CO 7.3.1: Coordinate with local, regional, state, and federal agencies to develop and implement regional air quality policies and programs.

Effectiveness of Proposed Area Plan Policies

Implementation of the above policies would further ensure that the Area Plan would not conflict with or obstruct implementation of the Final 2007 Air Quality Management Plan, and that air quality impacts under this criterion would be less than significant.

Effectiveness of Proposed General Plan Goals, Objectives, and Policies

Implementation of the aforementioned goals, objectives, and policies would further ensure that the General Plan would not conflict with or obstruct implementation of the Final 2007 Air Quality Management Plan and that air quality impact under this criterion would be less than significant.

Plan to Plan Analysis

The existing Area Plan and the proposed OVOV Area Plan incorporate policies that would ensure that either Plan would not conflict with the Air Quality Management Plan. Therefore, both Plans would be similar and have less than significant impacts.

Impact 3.3-3 **Buildout of the proposed Area Plan and General Plan would result in a potentially significant air quality impact if they contributed substantial emissions of O_3 and $PM_{2.5}$, and PM_{10} - emissions of which currently exceed state and/or federal standards, and by causing a cumulatively considerable net increase of O_3 (1 and 8 hour), PM_{10}, and $PM_{2.5}$ for which the project region is nonattainment.**

Operational air emissions would result from stationary and mobile sources. Stationary sources include "point sources," which have one or more fixed emission sources at a single facility, and "area sources," which include many small point sources from many different land uses. Point sources are usually associated with manufacturing and industrial uses, examples of which include refinery boilers or combustion equipment that produces electricity or processes heat. No large stationary sources are anticipated as part of the buildout of the plan area. Individually, an area source may have a less than significant impact on air quality; however, area sources could collectively have a significant impact. Examples of area sources include residential water heaters, painting operations, landscape maintenance equipment, and consumer products, such as barbecue lighter fluid or hair spray. "Mobile sources" refer to operational and evaporative emissions from motor vehicles. Mobile sources account for approximately 59 percent of the VOC emissions, 90 percent of the NO_X emissions, 95 percent of the CO emissions, 55 percent of the SO_X emissions, 15 percent of the PM_{10} emissions, and 34 percent of the $PM_{2.5}$ emissions found within the SoCAB.[30] Vehicle trips generated by the daily operational activities of the proposed development as presented in the project traffic study (**Appendix 3.2**) would contribute to mobile source emissions within the SoCAB.

Operational Emissions from Existing Conditions

Operational emissions under this scenario are for existing conditions modeled for year 2010 (see **Table 3.3-9, Operational Emissions from Existing Conditions**). The URBEMIS2007 model was used to quantify stationary and mobile source emissions of VOC, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$. The URBEMIS2007 model also takes into account the planned uses, which include a wide array of land uses. The EMFAC2007 model, which is incorporated into URBEMIS2007, was used to quantify mobile source emissions. The average daily trips provided by the traffic impact analysis[31] was used in the EMFAC2007 model to quantify the mobile source emissions from the existing conditions. Area source emissions were

30 California Air Resources Board, "2008 Estimated Annual Average Emissions – South Coast Air Basin," http://www.arb.ca.gov/ei/maps/basins/abscmap.htm. 2009.

31 Austin-Foust Associates, Inc., *One Valley One Vision Valley-Wide Traffic Study*, (2010).

calculated based on SCAQMD emission factors for natural gas combustion, hearths, landscaping, consumer products, and architectural coatings incorporated in the URBEMIS2007 model.

The figures in **Table 3.3-9** do not reflect the emissions reductions that would occur as a result of the new Title 24 Building Energy Efficiency Standards for residential and non-residential buildings (Part 6 of the California Code of Regulations) that went into effect January 1, 2010. CEC estimates that implementation of the new standards will improve new construction energy performance by an average of 21 percent.

Table 3.3-9
Operational Emissions from Existing Conditions

Emissions Source	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Summertime Emissions in Pounds per Day						
Operational (Mobile) Sources	13,080	16,400	147,580	150	24,420	4,760
Area Sources	5,220	1,500	3,030	0	10	10
Total Emissions	**18,300**	**17,900**	**150,610**	**150**	**24,430**	**4,770**
Wintertime Emissions in Pounds per Day						
Operational (Mobile) Sources	14,610	19,750	142,090	120	24,420	4,760
Area Sources	16,210	2,450	32,380	90	4,900	4,720
Total Emissions	**30,820**	**22,200**	**174,470**	**210**	**29,320**	**9,480**

Source: Impact Sciences, Inc. Emissions calculations are provided in ***Appendix 3.3.***
Values have been rounded to the nearest 10 pounds.

Operational Emissions from OVOV Planning Area Buildout

As stated above, the URBEMIS2007 model was used to quantify stationary and mobile source emissions of VOC, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$. The average daily trips provided by the traffic impact analysis[32] was used in the EMFAC2007 model to quantify the mobile source emissions from the proposed Plan. Area source emissions were calculated based on SCAQMD emission factors for natural gas combustion, hearths (natural gas only consistent with SCAQMD Rule 445), landscaping, consumer products, and architectural coatings incorporated in the URBEMIS2007 model.

Table 3.3-10, Estimated Maximum Operational Emissions Under Proposed Area Plan and General Plan (Unmitigated), shows that operational emissions of VOCs, SO_X, PM_{10}, and $PM_{2.5}$ would result in an increase over existing emissions by 12 to 105 percent. Emissions of NO_X and CO are expected to decline in the future even with an increase in vehicle miles traveled due to newer automobile combustion emission

32 Austin-Foust Associates, Inc., *One Valley One Vision Valley-Wide Traffic Study*, (2010).

standards and fleet turnover (i.e., older more polluting automobiles being replaced by new models that meet more stringent emission standards). Operational air quality impacts would be considered potentially significant.

Table 3.3-10
Estimated Maximum Operational Emissions
Under Proposed Area Plan and General Plan (Unmitigated)

Emissions Source	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Summertime Emissions in Pounds per Day						
Existing Emissions[1]	**18,300**	**17,900**	**150,610**	**150**	**24,430**	**4,770**
OVOV Emissions						
Operational (Mobile) Sources	10,290	9,000	100,620	300	48,970	9,500
Area Sources	10,200	2,490	5,020	0	10	10
Total OVOV Emissions	**20,490**	**11,490**	**105,640**	**300**	**48,980**	**9,510**
Net Increase in Emissions[2]	**2,190**	**-6,410**	**-44,970**	**150**	**24,550**	**4,740**
Percent Increase in Emissions	**12%**	**-36%**	**-30%**	**100%**	**100%**	**99%**
SCAQMD Threshold	55	55	550	150	150	55
Exceeds Threshold?	**YES**	**NO**	**NO**	**YES**	**YES**	**YES**
Wintertime Emissions in Pounds per Day						
Existing Emissions[1]	**30,820**	**22,200**	**174,470**	**210**	**29,320**	**9,480**
OVOV Emissions						
Operational (Mobile) Sources	11,060	10,820	95,090	250	48,970	9,500
Area Sources	32,880	4,410	65,990	180	10,050	9,670
Total OVOV Emissions	**43,940**	**15,230**	**161,080**	**430**	**59,020**	**19,170**
Net Increase in Emissions[2]	**13,120**	**-6,970**	**-13,390**	**220**	**29,700**	**9,690**
Percent Increase in Emissions	**43%**	**-31%**	**-8%**	**105%**	**101%**	**102%**
SCAQMD Threshold	55	55	550	150	150	55
Exceeds Threshold?	**YES**	**NO**	**NO**	**YES**	**YES**	**YES**

*Source: Impact Sciences, Inc. Emissions calculations are provided in **Appendix 3.3**.*
[1] *See **Table 3.3-9, Operational Emissions from Existing Conditions**.*
[2] *Total Emissions minus existing operational emissions from **Table 3.3-9, Operational Emissions from Existing Conditions**.*
Values have been rounded to the nearest 10 pounds.

Using the SCAQMD's threshold to determine cumulative air quality impacts, the projected rate of population growth from **Section 3.19, Population and Housing**, was compared to the rate of trip ends growth using information from the project traffic study (**Appendix 3.2**). Population growth for the OVOV Planning Area is projected to increase from approximately 252,000 to 459,148 at buildout (a growth rate of

approximately 75 percent), while the number of trip ends is expected to increase from 1,487,994 to 3,288,386 (a growth rate of approximately 120 percent). Since the rate of trip ends growth is greater than the rate of population growth, buildout of the proposed Area Plan and General Plan would result in a significant cumulative air quality impact.

Several of the General Plan goals promote reduced mobile sources of these emissions by emphasizing reduced trips and trip lengths through an interconnected Valley of Villages (**Goal LU 1**), a mix of land uses (**Goal LU 2**), an emphasis on neighborhoods that are healthy and safe (**Goal LU 3**), a healthy economy (**Goal LU 4**), alternative transportation choices (**Goal LU 5**), and equitable and convenient access to services and facilities (**Goal LU 8**) that are provided in a timely manner and in appropriate locations (**Goal LU 9**). These goals are further supported by **Circulation Goals C 1** to **C 7** that include an inter-connected network of circulation facilities, a well-maintained network of streets and highways, reduction of vehicle trips and emissions, rail service, bus transit, bikeway system, and walkable communities. **Goal C 4** would provide rail service to meet regional and inter-regional needs for convenient, cost-effective travel alternatives, which will be fully integrated into the Valley's circulation system and land use patterns. **Goal CO 7** and **Goal CO 8** would support alternative transportation modes and alternative fuel vehicles. Achievement of these goals would be accomplished through the implementation of **Objective LU 1.1**, **Policies LU 1.1.3**, **LU 1.1.5; Objective LU 1.2**, **Policy LU 1.2.13; Objective LU 2.1**, **Policy LU 2.1.2**; **Objective LU 2.3**, **Policies LU 2.3.2**, **LU 2.3.5; Objective LU 3.1**, **Policies LU 3.1.3**, **LU 3.1.7; Objective LU 3.2**, **Policies LU 3.2.1**, **LU 3.2.2; Objective LU 4.1**, **Policies LU 4.1.3; Objective LU 4.2**, **Policies LU 4.2.1**, **LU 4.2.2**; **Objective LU 4.4**, **Policy LU 4.4.3; Objective LU 4.5**, **Policy LU 4.5.4; Objective LU 5.1**, **Policies LU 5.1.3, LU 5.1.4, LU 5.1.5; Objective LU 5.2**, **Policies LU 5.2.1, LU 5.2.2, LU 5.2.3, LU 5.2.4, LU 5.2.5; Objective LU 8.1**, **Policies LU 8.1.2**, **LU 8.1.3; Objective LU 9.1**, **Policy LU 9.1.7; Objective C 1.1**, **Policies C 1.1.1, C 1.1.2, C 1.1.3, C 1.1.4, C 1.1.6, C 1.1.10, C 1.1.11, C 1.1.12, C 1.1.13; Objective C 1.2**, **Policies C 1.2.1, C 1.2.2, C 1.2.3, C 1.2.4, C 1.2.5, C 1.2.6, C 1.2.7, C 1.2.8, C 1.2.9, C 1.2.10, C 1.2.11, C 1.2.12; Objective C 1.3**, **Policies C 1.3.2**, **C 1.3.6; Objective C 2.2**, **Policies C 2.2.6, C 2.2.7; Objective C 2.3**, **Policy C 2.3.3; Objective C 3.1**, **Policies C 3.1.1**, **C 3.1.2**, **C 3.1.3**, **C 3.1.4, C 3.1.5, C 3.1.6, C 3.1.7; Objective C 3.2**, **Policies C 3.2.1**, **C 3.2.2, C 3.2.3, C 3.2.4; Objective C 3.3**, **Policies C 3.3.2**, **C 3.3.3, C 3.3.4, C 3.3.6, C 3.3.7; Objective C 4.1**, **Policies C 4.1.1, C 4.1.2, C 4.1.3, C 4.1.6, C 4.1.7; Objective C 4.2**, **Policy C 4.2.1, C 4.2.2, C 4.2.3; Objective C 5.1**, **Policies C 5.1.2**, **C 5.1.4; Objective C 5.2**, **Policies C 5.2.1**, **C 5.2.4, C 5.2.5; Objective C 5.3**, **Policies C 5.3.3**, **C 5.3.4; Objective C 5.4**, **Policy C 5.4.3; Objective C 6.1**, **Policy C 6.1.5; Objective C 6.2**, **Policies C 6.2.1, C 6.2.2, C 6.2.3; Objective C 7.1**, **Policies C 7.1.1, C 7.1.2, C 7.1.3, C 7.1.4, C 7.1.5, C 7.1.6, C 7.1.7, C 7.1.8, C 7.1.9, C 7.1.10; Objective CO 1.2, Policy CO 1.2.1; Objective CO 1.5**, **Policy CO 1.5.7**, **Objective CO 7.1, Policies CO 7.1.1, CO 7.1.2, CO 7.1.3;** and **Objective CO 8.2, Policies CO 8.2.7** and **CO 8.2.13**.

Furthermore, **Goals LU 4**, **LU 7**, **CO 1**, **CO 3**, **CO 4**, **CO 7**, **CO 8**, and **CO 10** would reduce stationary sources of these emissions predominantly through energy conservation. These goals would be achieved through **Objective LU 4.5**, **Policy LU 4.5.3; Objective LU 7.1**, **Policies LU 7.1.2**, **LU 7.1.3, LU 7.1.4; Objective CO 1.1**, **Policy CO 1.1.1**; **Objective CO 1.2**, **Policy CO 1.2.1; Objective CO 1.3**, **Policies CO 1.3.1**, **CO 1.3.3**, **CO 1.3.4; Objective CO 1.4, Policy CO 1.4.1; Objective CO 1.5**, **Policy CO 1.5.1**, **CO 1.5.7; Objective CO 3.1**, **Policy CO 3.1.11; Objective CO 3.6**, **Policy CO 3.6.1; Objective CO 4.1**, **Policy 4.1.6; Objective CO 4.3**, **Policy CO 4.3.4; Objective CO 7.2**, **Policy CO 7.2.1; Objective CO 7.3**, **Policy CO 7.3.1; Objective CO 8.1**, **Policies CO 8.1.1**, **CO 8.1.3**, **CO 8.1.4, CO 8.1.5**; **Objective CO 8.2**, **Policies CO 8.2.1**, **CO 8.2.2**, **CO 8.2.3**, **CO 8.2.5**, **CO 8.2.6**, **CO 8.2.8**, **CO 8.2.9**, **CO 8.2.10, CO 8.2.12, CO 8.2.14; Objective CO 8.3**, **Policies CO 8.3.1**, **CO 8.3.2**, **CO 8.3.3**, **CO 8.3.4**, **CO 8.3.5**, **CO 8.3.6**, **CO 8.3.7**, **CO 8.3.8**, **CO 8.3.9, CO 8.3.10, CO 8.3.12**; **Objective CO 10.1, Policy CO 10.1.17;** and **Objective CO 10.2; Policy CO 10.2.1.**

Proposed Area Plan Policies and Proposed General Plan Goals, Objectives and Policies

Goal LU 1: An interconnected Valley of Villages providing diverse lifestyles, surrounded by a greenbelt of natural open space.

Objective LU 1.2: Maintain the distinctive community character of villages and neighborhoods throughout the planning area by establishing uses, densities, and design guidelines appropriate to the particular needs and goals of each area, including but not limited to the following:

Policy LU 1.2.13: Encourage use of the Specific Plan process to plan for cohesive, vibrant, pedestrian-oriented communities with mixed uses, access to public transit, and opportunities for living and working within the same community.

Goal LU 2: A mix of land uses to accommodate growth, supported by adequate resources and maintaining community assets.

Objective LU 2.1: Provide adequate, suitable sites for housing, employment, business, shopping, public facilities, public utility facilities, and community services to meet current needs and the anticipated needs of future growth.

Policy LU 2.1.2: On the Land Use Map, integrate land use designations in a manner that promotes healthy, walkable communities, by providing an appropriate mix of residential and service uses in proximity to one another.

Objective LU 2.3: Increase mixed-use development to create more livable neighborhoods, walkable business districts, and to reduce vehicle trips, while ensuring land use compatibility, through mixed-use zoning:

Policy LU 2.3.2: Either vertical or horizontal integration of uses shall be allowed in a mixed use development, with an emphasis on tying together the uses with appropriate pedestrian linkages.

Policy LU 2.3.5: Mixed use developments shall be designed to create a pedestrian-scale environment through appropriate street and sidewalk widths, block lengths, relationship of buildings to streets, and use of public spaces.

Goal LU 3: Healthy and safe neighborhoods for all residents.

Objective LU 3.1: Provide for a diversity of housing types available to provide safe and suitable homes for all economic levels, household sizes, age groups, and special needs groups within the community.

Policy LU 3.1.3: Promote opportunities for live-work units to accommodate residents with home-based businesses.

Policy LU 3.1.7: Promote development of housing for students attending local colleges, in consideration of access to campuses to the extent practicable.

Objective LU 3.2: Promote walkable neighborhoods that provide safe access to community services and essential services.

Policy LU 3.2.1: Require provision of adequate walkways in urban residential neighborhoods that provide safe and accessible connections to destinations such as schools, parks, and neighborhood commercial centers.

Policy LU 3.2.2: In planning residential neighborhoods, include pedestrian linkages, landscaped parkways with sidewalks, and separated trails for pedestrians and bicycles, where appropriate and feasible.

Goal LU 4: A diverse and healthy economy.

Objective LU 4.1: Promote creation of strong regional and local economies.

Policy LU 4.1.3: Direct business creation and expansion for larger companies within and adjacent to existing and planned business centers and major transportation corridors.

Objective LU 4.2: Promote job creation, focusing on employment generators in the technical and professional sectors.

Policy LU 4.2.1: Pursue business attraction and expansion programs for clean industries that provide job opportunities for local residents, particularly in the areas of film/entertainment, biotechnology, aerospace, and technology.

Policy LU 4.2.2: Achieve a balanced ratio of jobs to housing through business expansion and economic development programs, with a goal of at least 1.5 jobs per household.

Objective LU 4.4: Expand infrastructure to attract and sustain new business.

Policy LU 4.4.3: Evaluate the feasibility of connecting business activity centers throughout the Santa Clarita Valley with light rail, to provide increased mobility and access for customers and employees between the Valencia Town Center, Whittaker Bermite property, Newhall, Valencia Industrial Center, Magic Mountain and Entrada, Newhall Ranch, and other areas as deemed appropriate.

Objective LU 4.5: Ensure creation of attractive and technology-friendly business environments to attract tenants and employees.

Policy LU 4.5.3: Promote the inclusion of state-of-the-art technology within business complexes for telecommunications, heating and cooling, water and energy conservation, and other similar design features.

Policy LU 4.5.4: Encourage the provision of support services for employees within business park areas, such as dining and personal services where appropriate, to reduce vehicle trips and promote pedestrian-friendly work environments.

Goal LU 5: Enhanced mobility through alternative transportation choices and land use patterns.

Objective LU 5.1: Provide for alternative travel modes linking neighborhoods, commercial districts, and job centers.

Policy LU 5.1.1: Require safe, secure, clearly-delineated, adequately illuminated walkways and bicycle facilities in all commercial and business centers.

Policy LU 5.1.2: Require connectivity between walkways and bikeways serving neighborhoods and nearby commercial areas, schools, parks, and other supporting services and facilities.

Policy LU 5.1.3: Ensure that adequate bus turnouts, served by walkways and comfortable, safe, and convenient waiting facilities, are provided for transit users within residential, shopping, and business developments.

Objective LU 5.2: Coordinate land use designations with support services and public transit in order to encourage vehicle trip reduction.

Policy LU 5.2.1: Designate higher-density residential uses in areas served by public transit and a full range of support services.

Policy LU 5.2.2: Provide for location of neighborhood commercial uses in proximity to the neighborhoods they serve, to encourage cycling and walking to local stores.

Policy LU 5.2.3: Promote location of non-polluting businesses providing employment opportunities in proximity to neighborhoods, to encourage walking to work.

Policy LU 5.2.4: Encourage transit-oriented development (TOD) through designation of land uses that allow compact, mixed-use development in proximity to rail stations and multi-modal transit facilities, in conformance with applicable policies.

Policy LU 5.2.5: Encourage the mix of compatible uses in areas where, though not served by rail or transit, mixed uses will achieve more walkable neighborhoods and trip reduction, in conformance with applicable policies.

Goal LU 7: Environmentally responsible development through site planning, building design, waste reduction, and responsible stewardship of resources.

Objective LU 7.1: Achieve greater energy efficiency in building and site design.

Policy LU 7.1.2: Promote the use of solar panels and other renewable energy sources in all projects.

Policy LU 7.1.3: Encourage development of energy-efficient buildings, and discourage construction of new buildings for which energy efficiency cannot be demonstrated.

Policy LU 7.1.4: Support the establishment of energy-efficient industries in the Santa Clarita Valley.

Goal LU 8: Equitable and convenient access to social, cultural, educational, civic, medical, and recreational facilities and opportunities for all residents.

Objective LU 8.1: Work with service providers to plan for adequate community facilities and services to meet the needs of present and future residents.

Policy LU 8.1.2: Implement a master plan for trails throughout the Santa Clarita Valley to serve all residents.

Policy LU 8.1.3: Implement a master plan for parks, with special focus on provision of additional playfields for youth sports in locations accessible to underserved neighborhoods.

Goal LU 9: Adequate public facilities and services, provided in a timely manner and in appropriate locations to serve existing and future residents and businesses.

Objective LU 9.1: Coordinate land use planning with provision of adequate public services and facilities to support development.

Policy LU 9.1.7: Provide for location of additional waste transfer stations and other facilities to promote recycling and reuse of materials within Industrial designations on the Land Use Map, subject to the provisions of the County Zoning Ordinance.

Goal C 1: An inter-connected network of circulation facilities that integrates all travel modes, provides viable alternatives to automobile use, and conforms with regional plans.

Objective C 1.1: Provide multi-modal circulation systems that move people and goods efficiently while protecting environmental resources and quality of life.

Policy C 1.1.1: Reduce dependence on the automobile, particularly single-occupancy vehicle use, by providing safe and convenient access to transit, bikeways, and walkways.

Policy C 1.1.2: Promote expansion of alternative transportation options to increase accessibility to all demographic and economic groups throughout the community, including mobility-impaired persons, senior citizens, low-income persons, and youth.

Policy C 1.1.3: Work with local and regional agencies and employers to promote an integrated, seamless transportation system that meets access needs, including local and regional bus service, dial-a-ride, taxis, rail, van pools, car pools, bus pools, bicycling, walking, and automobiles.

Policy C 1.1.4: Promote public health through provision of safe, pleasant, and accessible walkways, bikeways, and multi-purpose trail systems for residents.

Policy C 1.1.6: Provide adequate facilities for multi-modal travel, including but not limited to bicycle parking and storage, expanded park-and-ride lots, and adequate station and transfer facilities in appropriate locations.

Policy C 1.1.10: Provide for flexibility in the transportation system to accommodate new technology as it becomes available, in order to reduce trips by vehicles using fossil fuels where feasible and appropriate.

Policy C 1.1.11: Promote use of multi-modal facilities by providing adequate and attractive way-finding programs directing users to transit stations, park-and-ride lots, bicycle storage, and other facilities.

Policy C 1.1.12: Encourage the City of Santa Clarita to implement recommendations of its Non-Motorized Transportation Plan to expand opportunities for alternative travel modes.

Policy C 1.1.13: Design new activity centers and improve existing activity centers to prioritize walking, bicycling and circulator transit for internal circulation of person-travel.

Objective C 1.2: Coordinate land use and circulation planning to achieve greater accessibility and mobility for users of all travel modes.

Policy C 1.2.1: Develop coordinated plans for land use, circulation, and transit to promote transit-oriented development that concentrates higher density housing, employment, and commercial areas in proximity to transit corridors.

Policy C 1.2.2: Create walkable communities, with paseos and walkways connecting residential neighborhoods to multi-modal transportation services such as bus stops and rail stations.

Policy C 1.2.3: Require that new commercial and industrial development provide walkway connections to public sidewalks and transit stops, where available.

Policy C 1.2.4: Consider location, availability, and accessibility of transit in evaluating new development plans.

Policy C 1.2.5: In mixed use projects, require compact development and a mix of land uses to locate housing, workplaces, and services within walking or bicycling distance of each other.

Policy C 1.2.6: Provide flexible standards for parking and roadway design in transit-oriented development areas to promote transit use, where appropriate.

Policy C 1.2.7: In pedestrian-oriented areas, provide a highly connected circulation grid with relatively small blocks to encourage walking.

Policy C 1.2.8: Provide safe pedestrian connections across barriers, which may include but are not limited to major traffic corridors, drainage and flood control facilities, utility easements, grade separations, and walls.

Policy C 1.2.9: Emphasize providing right-of-way for non-vehicular transportation modes so that walking and bicycling are the easiest, most convenient modes of transportation available for short trips.

Policy C 1.2.10: Protect communities by discouraging the construction of facilities that sever residential neighborhoods.

Policy C 1.2.11: Reduce vehicle miles traveled (VMT) through the use of smart growth concepts.

Policy C 1.2.12: Balance the anticipated volume of people and goods movement with the need to maintain a walkable and bicycle friendly environment.

Objective C 1.3: Ensure conformance of the Circulation Plan with regional transportation plans.

Policy C 1.3.2: Through trip reduction strategies and emphasis on multi-modal transportation options, contribute to achieving the air quality goals of the South Coast Air Quality Management District Air Quality Management Plan.

Policy C 1.3.6: Support the expansion of Palmdale Regional Airport and the extension of multi-modal travel choices between the airport and the Santa Clarita Valley, in conformance with regional planning efforts.

Policy C 1.3.7: Apply for regional, State, and Federal grants for bicycle and pedestrian infrastructure projects.

Goal C 2: A unified and well-maintained network of streets and highways which provides safe and efficient movement of people and goods between neighborhoods, districts, and regional centers, while maintaining community character.

Objective C 2.2: Adopt and apply consistent standards throughout the Santa Clarita Valley for street design and service levels, which promote safety, convenience, and efficiency of travel.

Policy C 2.2.6: Within residential neighborhoods, promote the design of "healthy streets" which may include reduced pavement width, shorter block length, provision of on-street parking, traffic-calming devices, bike routes, and pedestrian connectivity, landscaped parkways, and canopy street trees.

Policy C 2.2.7: Where practical, encourage the use of grid or modified grid street systems to increase connectivity and walkability; where cul-de-sacs are provided, promote the use of walkways connecting cul-de-sac bulbs to adjacent streets and/or facilities to facilitate pedestrian access; where street connectivity is limited and pedestrian routes are spaced over 500 feet apart, promote

the use of intermediate pedestrian connections through or between blocks.

Objective C 2.3: Balance the needs of congestion relief with community values for aesthetics and quality of life.

Policy C 2.3.3: When evaluating road widening projects, consider the impacts of additional traffic, noise, and fumes on adjacent land uses and use context-sensitive design techniques where appropriate.

Objective C 2.4: Allow trucks to utilize only major and secondary highways as through routes, to minimize impacts of truck traffic on surface streets and residential neighborhoods.

Policy C 2.4.2: Establish adequate setbacks from major and secondary highways for sensitive receptors and sensitive uses, so as to adverse impacts on these individuals and uses from noise and air pollution caused by truck traffic.

Goal C 3: Reduction of vehicle trips and emissions through effective management of travel demand, transportation systems, and parking.

Objective C 3.1: Promote the use of travel demand management strategies to reduce vehicle trips.

Policy C 3.1.1: In evaluating new development projects, require trip reduction measures as feasible to relieve congestion and reduce air pollution from vehicle emissions.

Policy C 3.1.2: Promote home-based businesses and live-work units as a means of reducing home-to-work trips.

Policy C 3.1.3: Promote the use of flexible work schedules and telecommuting to reduce home to work trips.

Policy C 3.1.4: Promote the use of employee incentives to encourage alternative travel modes to work.

Policy C 3.1.5: Promote the use of van pools, car pools, and shuttles to encourage trip reduction.

Policy C 3.1.6: Promote the provision of showers and lockers within businesses and employment centers, in order to encourage opportunities for employees to bicycle to work.

Policy C 3.1.7: Encourage special event center operators to advertise and offer discounted transit passes with event tickets.

Objective C 3.2: Encourage reduction in airborne emissions from vehicles through use of clean vehicles and transportation system management.

Policy C 3.2.1: Adopt clean vehicle purchase policies for City and County fleets.

Policy C 3.2.2: Continue to enhance signal timing and synchronization to allow for free traffic flow, minimizing idling and vehicle emissions.

Policy C 3.2.3: When available and feasible, provide opportunities and infrastructure to support use of alternative fuel vehicles and travel devices.

Policy C 3.2.4: The City and County will encourage new commercial and retail developments to provide prioritized parking for electric vehicles and vehicles using alternative fuels.

Objective C 3.3: Make more efficient use of parking and maximize economic use of land, while decreasing impervious surfaces in urban areas, through parking management strategies.

Policy C 3.3.2: In pedestrian-oriented, high density mixed use districts, provide for common parking facilities to serve the district, where appropriate.

Policy C 3.3.3: Promote shared use of parking facilities between businesses with complementary uses and hours, where feasible.

Policy C 3.3.4: Within transit-oriented development projects, provide incentives such as higher floor area ratio and/or lower parking requirements for commercial development that provides transit and ride-share programs.

Policy C 3.3.6: In the development review process, prioritize direct pedestrian access between building entrances, sidewalks, and transit stops, by placing parking behind buildings where possible, to the sides of buildings when necessary, and always away from street intersections.

Policy C 3.3.7: Create parking benefit districts which invest meter revenues in pedestrian infrastructure and other public amenities wherever feasible.

Goal C 4: Rail service to meet regional and inter-regional needs for convenient, cost-effective travel alternatives, which are fully integrated into the Valley's circulation systems and land use patterns.

Objective C 4.1: Maximize the effectiveness of Metrolink's commuter rail service through provision of support facilities and land planning.

Policy C 4.1.1: Develop permanent Metrolink facilities with an expanded bus transfer station and additional park-and-ride spaces at the Via Princessa station, or other alternative location as deemed appropriate to meet the travel needs of residents on the Valley's east side.

Policy C 4.1.2: Coordinate with other agencies to facilitate extension of a passenger rail line from the Santa Clarita Station to Ventura County, which may be used for Metrolink service.

Policy C 4.1.3: Continue to expand and improve commuter services, including park-and-ride lots, bicycle parking and storage, and waiting facilities, at all Metrolink stations.

Policy C 4.1.6: Provide incentives to promote transit-oriented development near rail stations.

Policy C 4.1.7: Facilitate coordination of planning for any future high speed regional rail systems in the Valley with Metrolink services.

Objective C 4.2: Access to a high speed rail system connecting the Santa Clarita Valley with other regions, and other regional rail service connections.

Policy C 4.2.1: Continue to work with the Orange Line Development Authority (OLDA) to plan for development of an environmentally sensitive, high speed transportation system with a route through the Santa Clarita Valley, including a regional transit hub with associated infrastructure that would provide connections to the Los Angeles Basin, Palmdale Regional Airport, and other destinations.

Policy C 4.2.2: Coordinate with other agencies as needed to facilitate planning for other high-speed rail alternatives in the Santa Clarita Valley.

Policy C 4.2.3: Promote and encourage the expansion of Amtrak Rail Service to the Santa Clarita Valley.

Goal C 5: Bus transit service as a viable choice for all residents, easily accessible and serving destinations throughout the Valley.

Objective C 5.1: Ensure that street patterns and design standards accommodate transit needs.

Policy C 5.1.2: For private gated communities, require the developer to accommodate bus access through the entry gate, or provide bus waiting facilities at the project entry with pedestrian connections to residential streets, where appropriate.

Policy C 5.1.4: Provide for location of bus stops within ¼-mile of residential neighborhoods, and include paved bus waiting areas in street improvement plans wherever appropriate and feasible.

Objective C 5.2: Maximize the accessibility, safety, convenience, and appeal of transit stops.

Policy C 5.2.1: Require paved waiting areas, accessible by paved walkways and reasonably direct pedestrian routes, for bus stops in new development; and provide for retrofitting of existing bus stops, where feasible and practicable.

Policy C 5.2.4: Enhance way-finding signage along walkways and paseos to direct pedestrians to transit stops.

Policy C 5.2.5: Complementary transportation modes should be interconnected at intermodal transit centers, including provisions for bicycles on buses, bicycle parking at transit centers, and park-and-ride at transit stops.

Objective C 5.3: Explore opportunities to improve and expand bus transit service.

Policy C 5.3.3: Evaluate the feasibility of providing "fly-away" bus transit service to airports located at Burbank, Palmdale, and Los Angeles, and implement this program when warranted by demand.

Policy C 5.3.4: Evaluate the feasibility of providing bus rapid transit (BRT) for key transit corridors when light-rail is not feasible or cost effective.

Objective C 5.4: Provide adequate funding to expand transit services to meet the needs of new development in the Valley.

Policy C 5.4.3: Seek funding for transit system expansion and improvement from all available sources, including local, state, and federal programs and grants.

Goal C 6: A unified and well-maintained bikeway system with safe and convenient routes for commuting, recreational use, and utilitarian travel, connecting communities and the region.

Objective C 6.1: Adopt and implement a coordinated master plan for bikeways for the Valley, including both City and County areas, to make bicycling an attractive and feasible mode of transportation.

Policy C 6.1.5: Plan for continuous bikeways to serve major destinations, including but not limited to regional shopping areas, college campuses, public buildings, parks, and employment centers.

Objective C 6.2: Encourage provision of equipment and facilities to support the use of bicycles as an alternative means of travel.

Policy C 6.2.1: Require bicycle parking, which can include bicycle lockers and sheltered areas at commercial sites and multi-family housing complexes for use by employees and residents, as well as customers and visitors.

Policy C 6.2.2: Provide bicycle racks on transit vehicles to give bike-and-ride commuters the ability to transport their bicycles.

Policy C 6.2.3: Promote the inclusion of services for bicycle commuters, such as showers and changing rooms, as part of the development review process for new development or substantial alterations of existing commercial or industrial uses, where appropriate.

Goal C 7: Walkable communities, in which interconnected walkways provide a safe, comfortable, and viable alternative to driving for local destinations.

Objective C 7.1: A continuous, integrated system of safe and attractive pedestrian walkways, paseos and trails linking residents to parks, open space, schools, services, and transit.

Policy C 7.1.1: In reviewing new development proposals, consider pedestrian connections within and between developments as an integral component of the site design, which may include seating, shading, lighting, directional signage, accessibility, and convenience.

Policy C 7.1.2: For existing walled subdivisions, extend pedestrian access to connect these neighborhoods to transit and services through public education and by facilitating retrofitted improvements where feasible.

Policy C 7.1.3: Where feasible and practical, consider grade separated facilities to provide pedestrian connections across arterial streets, flood control channels, utility easements, and other barriers.

Policy C 7.1.4: Identify and develop an improvement program to connect existing walkways and paseos to transit and services, where needed and appropriate.

Policy C 7.1.5: In new commercial development, provide for direct, clearly delineated, and preferably landscaped pedestrian walkways from transit stops and parking areas to building entries, and avoid placement of uses (such as drive-through facilities) in locations that would obstruct pedestrian pathways.

Policy C 7.1.6: Encourage placement of building entries in locations accessible to public sidewalks and transit.

Policy C 7.1.7: Utilize pedestrian-oriented scale and design features in areas intended for pedestrian use.

Policy C 7.1.8: Upgrade streets that are not pedestrian-friendly due to lack of sidewalk connections, safe street crossing points, vehicle sight distance, or other design deficiencies.

Policy C 7.1.9: Promote pedestrian-oriented street design through traffic-calming measures where appropriate, which may include but are not limited to bulb-outs or chokers at intersections, raised crosswalks, refuge islands, striping, and landscaping.

Policy C 7.1.10: Continue to expand and improve the Valley's multi-use trail system to provide additional routes for pedestrian travel.

Goal CO 1: A balance between the social and economic needs of Santa Clarita Valley residents and protection of the natural environment, so that these needs can be met not both in the present and in the future.

Objective CO 1.1: Protect the capacity of the natural "green" infrastructure to absorb and break down pollutants, cleanse air and water, and prevent flood and storm damage.

Policy CO 1.1.1: In making land use decisions, consider the complex, dynamic, and interrelated ways that natural and human systems interact, such as the interactions between energy demand, water demand, air and water quality, and waste management.

Objective CO 1.2: Promote more sustainable utilization of renewable resource systems.

Policy CO 1.2.1: Improve the community's understanding of renewable resource systems that occur naturally in the Santa Clarita Valley, including systems related to hydrology, energy, ecosystems, and habitats, and the interrelationships between these systems, through the following measures:

c. Provide information to decision-makers about the interrelationship between traffic and air quality, ecosystems and water quality, land use patterns and public health, and other similar interrelationships between renewable resource systems in order to ensure that decisions are based on an understanding of these concepts.

Objective CO 1.3: Conserve and make more efficient use of non-renewable resource systems, such as fossil fuels, minerals, and materials.

Policy CO 1.3.1: Explore, evaluate, and implement methods to shift from using non-renewable resources to use of renewable resources in all aspects of land use planning and development.

Policy CO 1.3.3: Provide informational material to the public about programs to conserve non-renewable resources and recover materials from the waste stream.

Policy CO 1.3.4: Promote and encourage cogeneration projects for commercial and industrial facilities, provided they meet all applicable environmental quality standards, including those related to air and noise, and provide a net reduction in greenhouse gas (GHG) emissions associated with energy production.

Objective CO 1.4: Minimize the long-term impacts posed by harmful chemical and biological materials on environmental systems.

Policy CO 1.4.1: In cooperation with other appropriate agencies, identify pollution sources and adopt strategies to reduce emissions into air and water bodies.

Objective CO 1.5: Manage urban development and human-built systems to minimize harm to ecosystems, watersheds, and other natural systems, such as urban runoff treatment trains that infiltrate, treat, and remove direct connections to impervious areas.

Policy CO 1.5.1: Promote the use of environmentally-responsible building design and efficiency standards in new development, and provide examples of these standards in public facilities, pursuant to the County's Green Building Program.

Policy CO 1.5.7: Consider the principles of environmental sustainability, trip reduction, walkability, stormwater management, and energy conservation at the site, neighborhood, district, city, and regional level, in land use decisions.

Goal CO 3: Conservation of biological resources and ecosystems, including sensitive habitats and species.

Objective CO 3.1: In review of development plans and projects, encourage conservation of existing natural areas and restoration of damaged natural vegetation to provide for habitat and biodiversity.

Policy CO 3.1.11: Promote use of pervious materials or porous concrete on sidewalks to allow for planted area infiltration, allow oxygen to

reach tree roots (preventing sidewalk lift-up from roots seeking oxygen), and mitigate tree-sidewalk conflicts, in order to maintain a healthy mature urban forest.

Objective CO 3.6: Minimize impacts of human activity and the built environment on natural plant and wildlife communities.

Policy CO 3.6.1: Minimize light trespass, sky-glow, glare, and other adverse impacts on the nocturnal ecosystem by limiting exterior lighting to the level needed for safety and comfort; reduce unnecessary lighting for landscaping and architectural purposes, and encourage reduction of lighting levels during non-business nighttime hours.

Goal CO 4: An adequate supply of clean water to meet the needs of present and future residents and businesses, balanced with the needs of natural ecosystems.

Objective CO 4.1: Promote water conservation as a critical component of ensuring adequate water supply for Santa Clarita Valley residents and businesses.

Policy CO 4.1.6: Support amendments to the County Building Code that would promote upgrades to water and energy efficiency when issuing permits for renovations or additions to existing buildings.

Objective CO 4.3: Limit disruption of natural hydrology by reducing impervious cover, increasing on-site infiltration, and managing stormwater runoff at the source.

Policy CO 4.3.4: Encourage and promote the use of new materials and technology for improved stormwater management, such as pervious paving, green roofs, rain gardens, and vegetated swales.

Goal CO 7: Clean air to protect human health and support healthy ecosystems.

Objective CO 7.1: Reduce air pollution from mobile sources.

Policy CO 7.1.1: Through the mixed land use patterns and multi-modal circulation policies set forth in the Land Use and Circulation Elements, limit air pollution from transportation sources.

Policy CO 7.1.2: Support the use of alternative fuel vehicles.

Policy CO 7.1.3: Support alternative travel modes and new technologies, including infrastructure to support alternative fuel vehicles, as they become commercially available.

Objective CO 7.2: Apply guidelines to protect sensitive receptors from sources of air pollution as developed by the California Air Resources Board (CARB), where appropriate.

Policy CO 7.2.1: Ensure adequate spacing of sensitive land uses from the following sources of air pollution: high traffic freeways and roads; distribution centers; truck stops; chrome plating facilities; dry cleaners using perchloroethylene; and large gas stations, as recommended by CARB.

Objective CO 7.3: Coordinate with other agencies to plan for and implement programs for improving air quality in the South Coast Air Basin.

Policy CO 7.3.1: Coordinate with local, regional, state, and federal agencies to develop and implement regional air quality policies and programs.

Goal CO 8: Development designed to improve energy efficiency, reduce energy and natural resource consumption, and reduce emissions of greenhouse gases. (Guiding Principle #11).

Objective CO 8.1: Comply with the requirements of State law, including AB 32, SB 375, and implementing regulations, to reach targeted reductions of greenhouse gas (GHG) emissions.

Policy CO 8.1.1: Create and adopt a Climate Action Plan within 18 months of the adoption date of the County's General Plan Update that meets State requirements and includes the following components:

a. Plans and programs to reduce GHG emissions to State-mandated targets, including enforceable reduction measures;

b. Mechanisms to ensure regular review of progress towards the emission reduction targets established by the Climate Action Plan;

c. Procedures for reporting on progress to officials and the public;

d. Procedures for revising the plan as needed to meet GHG emissions reduction targets; and

e. Allocation of funding and staffing for Plan implementation.

After adoption of the Climate Action Plan, amend this Area Plan if necessary to ensure consistency with the adopted Climate Action Plan.

Policy CO 8.1.3: Implement the ordinances developed through the County's Green Building Program.

Policy CO 8.1.4: Provide information and education to the public about energy conservation and local strategies to address climate change.

Policy CO 8.1.5: Coordinate various activities within the community and appropriate agencies related to GHG emissions reduction activities.

Objective CO 8.2: Reduce energy and materials consumption and greenhouse gas emissions in public uses and facilities.

Policy CO 8.2.1: Ensure that all new County buildings, and all major renovations and additions, meet adopted green building standards, with a goal of achieving the LEED (Leadership in Energy and Environmental Design) Silver rating or above, or equivalent, where appropriate.

Policy CO 8.2.2: Ensure energy efficiency of existing public buildings through energy audits and repairs, and retrofit buildings with energy

efficient heating and air conditioning systems and lighting fixtures.

Policy CO 8.2.3: Support purchase of renewable energy for public buildings, which may include installing solar photovoltaic systems to generate electricity for County buildings and operations and other methods as deemed appropriate and feasible, in concert with other significant energy conservation efforts.

Policy CO 8.2.5: Support installation of photovoltaic and other renewable energy equipment on public facilities, in concert with significant energy conservation efforts.

Policy CO 8.2.6: Promote use of solar lighting in parks and along paseos and trails, where practical.

Policy CO 8.2.7: Support the use of sustainable alternative fuel vehicles for machinery and fleets, where practical, by evaluating fuel sources, manufacturing processes, maintenance costs, and vehicle lifetime use.

Policy CO 8.2.8: Promote the purchase of energy-efficient and recycled products, and vendors and contractors who use energy-efficient vehicles and products, consistent with adopted purchasing policies.

Policy CO 8.2.9: Reduce heat islands through installation of trees to shade parking lots and hardscapes, and use of light-colored reflective paving and roofing surfaces.

Policy CO 8.2.10: Support installation of energy-efficient traffic control devices, street lights, and parking lot lights.

Policy CO 8.2.12: Provide ongoing training to appropriate County employees on sustainable planning, building, and engineering practices.

Policy CO 8.2.13: Support trip reduction strategies for employees as described in the Circulation Element.

Policy CO 8.2.14: Reduce extensive heat gain from paved surfaces through development standards wherever feasible.

Objective CO 8.3: Encourage green building and sustainable development practices on private development projects, to the extent reasonable and feasible.

Policy CO 8.3.1: Evaluate development proposals for consistency with the ordinances developed through the County's Green Building Program.

Policy CO 8.3.2: Promote construction of energy efficient buildings through the certification requirements of the ordinances developed through the County's Green Building Program.

Policy CO 8.3.3: Promote energy efficiency and water conservation upgrades to existing non-residential buildings at the time of major remodel or additions.

Policy CO 8.3.4: Encourage new residential development to include on-site solar photovoltaic systems, or pre-wiring, in at least 50% of the residential units, in concert with other significant energy conservation efforts.

Policy CO 8.3.5: Encourage on-site solar generation of electricity in new retail and office commercial buildings and associated parking lots, carports, and garages, in concert with other significant energy conservation efforts.

Policy CO 8.3.6: Require new development to use passive solar heating and cooling techniques in building design and construction, which may include but are not be limited to building orientation, clerestory windows, skylights, placement and type of windows, overhangs to shade doors and windows, and use of light colored roofs, shade trees, and paving materials.

Policy CO 8.3.7: Encourage the use of trees and landscaping to reduce heating and cooling energy loads, through shading of buildings and parking lots.

Policy CO 8.3.8: Encourage energy-conserving heating and cooling systems and appliances, and energy-efficiency in windows and insulation, in all new construction.

Policy CO 8.3.9: Limit excessive lighting levels, and encourage a reduction of lighting when businesses are closed to a level required for security.

Policy CO 8.3.10: Provide incentives and technical assistance for installation of energy-efficient improvements in existing and new buildings.

Policy CO 8.3.12: Reduce extensive heat gain from paved surfaces through development standards wherever feasible.

Goal CO 10: Preservation of open space to meet the community's multiple objectives for resource preservation.

Objective CO 10.1: Identify areas throughout the Santa Clarita Valley which should be preserved as open space in order to conserve significant resources for long-term community benefit.

Policy CO 10.1.17: Allow alternative energy projects in areas designated for open space, where consistent with other uses and values.

Objective CO 10.2: Ensure the inclusion of adequate open space within development projects.

Policy CO 10.2.1: Encourage provision of vegetated open space on a development project's site, which may include shallow wetlands and ponds, drought tolerant landscaping, and pedestrian hardscape that includes vegetated areas.

Effectiveness of Proposed Area Plan Policies

The proposed policies would reduce mobile and stationary source emissions of pollutants that currently exceed state and/or federal standards, and for which the project region is nonattainment. However, individual project emissions could potentially exceed the thresholds.

Effectiveness of Proposed General Plan Goals, Objectives, and Policies

The proposed goals, objectives, and policies would reduce mobile and stationary source emissions of pollutants that currently exceed state and/or federal standards, and for which the project region is nonattainment. However, individual project emissions could potentially exceed the thresholds.

Plan to Plan Analysis

The existing Area Plan and the proposed OVOV Area Plan incorporate goals, objectives and policies that would reduce air emissions through effective land use planning or in the case of OVOV, implementation of Greenhouse Gas policies that would further reduce associated air quality impacts (i.e., measures that reduce greenhouse gas emissions usually have co-benefits of reducing criteria pollutant emissions). However, both Plans would potentially exceed emission during operation and impacts would be significant.

Impact 3.3-4: **The proposed Area Plan and General Plan would have a potentially significant effect if they would expose sensitive receptors to substantial pollutant concentrations from CO hotspots and/or TACs regulated by SCAQMD.**

The California Air Toxics Program establishes the process for the identification and control of toxic air contaminants and includes provisions to make the public aware of significant toxic exposures and for reducing risk. Four TACs pertinent to the proposed project include mobile source air toxins, CO, asbestos, lead, and polychlorinated biphenyls (PCBs).

Carbon Monoxide

Motor vehicles are a primary source of pollutants within the project vicinity. Traffic congested roadways and intersections have the potential to generate localized high levels of CO, where it concentrates at or near ground level because it does not readily disperse into the atmosphere. Ambient concentrations of CO that exceed state and/or federal standards are termed CO "hotspots." Intersections operating at LOS of E or F have the potential to create a CO hotspot.

There are no known CO hotspots in the OVOV Planning Area under existing conditions. According to Tables 4-2 and 4-3 of the project traffic report (**Appendix 3.2**), future levels of service at principal intersections at buildout under both the existing Area Plan and General Plan and under the proposed Area Plan and General Plan will either remain the same or improve. As a result, there would be no potential for future increases in CO concentrations and CO hotspots in the OVOV Planning Area and CO impacts under this criterion would be less than significant.

Mobile Source Air Toxics

CARB has determined that health effects are generally elevated near heavily traveled roadways. The CARB's *Air Quality and Land Use Handbook* states, "Air pollution studies indicate that living close to high traffic and the associated emissions may lead to adverse health effects beyond those associated with regional air pollution in urban areas."[33] The *Air Quality and Land Use Handbook* cites several studies linking adverse respiratory health effects (e.g., asthma) to proximity to roadways with heavy traffic densities, where the distances between the roadway and the receptors were 300 to 1,000 feet. Other studies suggest that such impacts diminish with distance, and a substantial benefit occurs if the separation distance is greater than 500 feet. CARB recommends that lead agencies, where possible, avoid citing new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day.[34] This recommendation is not mandated by state law, but only serves as a general guidance to lead agencies when considering land use projects. The *Air Quality and Land Use Handbook* states that it is up to lead agencies to balance other considerations, including housing and transportation needs, economic development priorities, and other quality of life issues.[35]

According to the SCAQMD, "exposure to vehicle-related air contaminants and the potential for adverse health effects is greatly reduced at approximately 300 feet from the edge of the roadway."[36] At 300 feet from the edge of a roadway, health effects approach background levels. At 500 feet from the edge of a roadway, health effects are equivalent to background levels. Impacts would be potentially significant if sensitive uses were located in close proximity to Interstate 5 or State Route 14 without mitigation.

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33 California Air Resources Board, *Air Quality and Land Use Handbook: A Community Health Perspective*, (2005).

34 Ibid., *Air Quality and Land Use Handbook*, (2005) 8-9. The 2002 study of impacts along the San Diego (I-405) Freeway and the Long Beach (I-710) Freeway cited by CARB in its *Air Quality and Land Use Handbook* found a substantial reduction in pollutant concentrations, relative exposure, and health risk beyond 300 feet.

35 California Air Resources Board, *Air Quality and Land Use Handbook*, (2005) 4.

36 South Coast Air Quality Management District, "Fact Sheet Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning," http://www.aqmd.gov/prdas/aqguide/fact_sheet.html. 2010.

Other Toxic Air Contaminants

Historic uses that operated within the OVOV Planning Area included activities that have the potential to release contaminants into the air. Potential toxic air contaminants on the site include asbestos, lead, and polychlorinated biphenyl's (PCBs). Each of these is discussed individually below.

Asbestos

Asbestos is a mineral with long, thin fibrous crystals. The inhalation of toxic asbestos fibers can cause serious illnesses, including malignant mesothelioma, lung cancer, and asbestosis (also called pneumoconiosis).

Building materials used between 1930 and 1981 have the potential to contain asbestos. Asbestos-containing materials (ACM) can include, but are not limited to wall insulation, acoustical ceiling texture, resilient floor coverings and mastic, wallboard and joint compounds, acoustic ceiling tiles, roofing materials, piping insulation, electrical insulation, and fireproofing materials. The plan area contains buildings that were built or remodeled prior to 1965; therefore, there is a potential for ACM in the structures.

Materials that contain over 1 percent asbestos fibers must be handled according to US EPA and Occupational Safety and Health Administration (OSHA) regulations. SCAQMD Rule 1403 – Asbestos Emissions from Demolition/Renovation Activities is intended to limit asbestos emissions from demolition or renovation of structures and the associated disturbance of asbestos-containing waste material generated or handled during these activities. The rule addresses the US EPA National Emission Standards for Hazardous Air Pollutants (NESHAP) and provides additional requirements to cover non-NESHAP areas. Compliance with Section 145 (a) of NESHAP, 40 CFR, Part 61, Subpart M requires that the owner or operator of any demolition or renovation activity to have an asbestos survey performed prior to demolition. Abatement of identified materials would occur prior to building removal. With implementation of existing rules and regulations, exposure to asbestos would be reduced to less than significant.

Rule 1403 requires the SCAQMD to be notified before demolition or renovation activity occurs. This notification includes a description of structures and methods utilized to determine the presence of asbestos or lack thereof. All asbestos-containing material found on the site must be removed prior to demolition or renovation activity in accordance with the requirements of Rule 1403. Compliance with Rule 1403 would ensure that asbestos-containing materials would be disposed of appropriately.

Compliance with the requirements of this measure would avoid a significant construction-related air quality impact in relation to demolition activities by preventing the release of asbestos emissions.

Lead

Lead is a poisonous metal that was commonly used in paint prior to 1978. Lead poisoning can cause neurological damage, developmental impairment, and other health problems. Because of its low reactivity and solubility, lead poisoning usually only occurs in cases when the paint is in poor condition or during its removal, particularly during sanding. Lead-based paint chips and particulates can enter the body through ingestion and inhalation.

In May 2010, CARB determined that the CAAQS for lead was exceeded in Central Los Angeles County (SRA 1). The exceedance was primarily the result of lead emissions from a lead-acid battery recycling facility in the City of Commerce. The SCAQMD currently maintains a network of three source-oriented lead monitors around the facility. Based on violations of the lead standard, the SCAQMD issued violation notices to the facility for failing to comply with SCAQMD rules and for exceeding the lead emissions standard during five consecutive months (December 2007 through April 2008). Concentrations during this period also exceeded the federal lead standard. Since this time, the SCAQMD monitors show concentrations that are much lower, although they still exceed the revised federal lead standard of 0.15 $\mu g/m^3$ calculated as a rolling three-month average. No other monitors in the SoCAB indicate lead exceedances. The OVOV Planning Area is not located in the vicinity of the lead exceedance in the City of Commerce. Motor vehicles and paints used to be a source of lead; however, unleaded fuel and unleaded paints have virtually eliminated lead emissions from residential and commercial land use developments.

The Consumer Products Safety Commission (CPSC) banned lead-based paint for residential use in 1978. Although usage was allowed to continue in many commercial settings, use of lead paint has declined. The Plan Area contains buildings that were built or remodeled prior to 1965; therefore, there is a potential for lead-based paint on the project site. In addition, zoning designations within the Planning Area allow for light industrial and industrial uses, which could allow for facilities that manufacture or rebuild batteries (Los Angeles County Code; 22.32.040; County Zone Light Industrial [M-1]; Santa Clarita Municipal Code 17.13.030; City Zone Industrial [I]).

On March 31, 2008, the US EPA issued a rule requiring the use of lead-safe practices to protect workers against the risk of lead poisoning. Beginning in April 2010, contractors performing renovation, repair and painting projects that disturb lead-based paint in homes, child care facilities, and schools built before 1978 must be certified and must follow specific work practices to prevent lead contamination. The State of

California is authorized to conduct its own training and certification program under the Department of Health Services.

The SCAQMD currently requires measures to reduce fugitive dust during construction. Each development phase of the proposed project will be required to comply with Rule 403 to reduce fugitive dust impacts. These measures will reduce the risk of exposure to lead particulates. However, prior to the commencement of demolition for each phase, appropriate testing for lead-based paint within the existing structures will be completed. If these materials are discovered, the contractor will be required to employ workers certified in lead-safe practices to prevent lead contamination. The SCAQMD also requires that stationary sources of lead emissions comply with Rule 1420 (Emission Standard for Lead). Rule 1420 requires facilities to monitor, capture, and control lead emissions and not exceed the standards specified in the rule.

With implementation of the existing required rules and regulations, exposure to lead particulates would be reduced to less than significant.

Polychlorinated Biphenyls

PCBs were used as coolants and insulating fluids for transformers and capacitors, stabilizing additives in flexible PVC coatings of electrical wiring and electronic components, cutting oils, pesticide extenders, flame retardants, hydraulic fluids, sealants (used in caulking, etc.), adhesives, paints, de-dusting agents, wood floor finishes, and in carbonless copy paper. Persistent in nature, PCBs can bioaccumulate in animals. PCBs will primarily exist in the vapor phase if released into the atmosphere. Routes of human exposure to PCBs are dermal contact, inhalation, and ingestion. The production of PCBs was banned in the 1970s due to their high toxicity.

PCBs in the Basin are regulated by SCAQMD Rule 1401, New Source Review for Toxic Air Contaminants. Remediation of PCB contaminated soils is under the purview of the Regional Water Quality Control Board (RWQCB) and/or the California State Department of Toxic Substances Control (DTSC).

Should other TACs be identified during the course of buildout of the Area Plan, an impact analysis would be required that would identify all sources of these pollutants and use a dispersion model to determine exposure levels from the combined emissions. The SCAQMD recommends a radius of 1 mile for sources of TACs, including existing sources.

Goals LU 2, LU 3, LU 4, LU 7, C 2, C 3, CO 1, **CO 2**, and **CO 7** listed previously, and the objectives and policies listed below would reduce the potential for CO hotspots and TAC emissions, as well exposure to

TACs by sensitive receptors by avoiding designating residential uses in areas subject to unhealthful air quality; prohibiting manufacturing, processing of goods and materials, and warehousing in mixed use developments (however, some light manufacturing and warehousing may be appropriate in second story units); ensuring adequate spacing of sensitive land uses from high traffic freeways and roads, distribution centers, truck stops, chrome plating facilities, dry cleaners using perchloroethylene, and large gas stations; ensure that mineral extraction sites be maintained in a safe and secure manner after cessation of extraction activities; promoting cleanup and remediation of oil fields west of State Route 14; maintaining suitable distances and/or buffers between aggregate mining and processing activities and sensitive receptors; developing and implementing effective methods of handling and disposing of hazardous materials and waste; attracting and expanding opportunities for clean industries; and reducing roadway congestion/car idling by upgrading intersections to meet level of service standards, synchronizing traffic signals, requiring trip reduction measures from new development (**Objective LU 2.1, Policy LU 2.1.5; Objective LU 2.3, Policy LU 2.3.3; Objective LU 3.3, Policy LU 3.3.1; Objective LU 4.2, Policy LU 4.2.1; Objective LU 4.3, LU 4.3.6; Objective LU 7.7, Policy LU 7.7.1; Objective C 2.1, Policy C 2.1.4; Objective C 2.3, Policy C 2.3.3; Objective C 3.1, Policy C 3.1.1; Objective C 3.2, Policy C 3.2.2, Policy C 3.2.3; Objective CO 1.4**, **Policy CO 1.4.4; Objective CO 1.5**, **Policy CO 1.5.1**; **Objective CO 2.3**, **Policy CO 2.3.4;** and **Objective CO 7.2** and **Policy CO 7.2.1).**

Proposed Area Plan Policies and Proposed General Plan Goals, Objectives, and Policies

The policies provided below are similar for the County's Area Plan and City's General Plan. The City is evaluating its General Plan goals, objectives, and policies while the County is evaluating Area Plan policies.

Objective LU 2.1: Provide adequate, suitable sites for housing, employment, business, shopping, public facilities, public utility facilities, and community services to meet current needs and the anticipated needs of future growth.

Policy LU 2.1.5: Identify areas with hazardous conditions and ensure that uses in or adjacent to these areas pose minimal risk to public health or safety.

Policy LU 2.3.3: Manufacturing, processing of goods and materials, and warehousing shall not be allowable uses in a mixed- use

development, although some light manufacturing and warehousing may be appropriate in second story units.

Objective LU 3.3: Ensure that the design of residential neighborhoods considers and includes measures to reduce impacts from natural or man-made hazards.

Policy LU 3.3.1: Identify areas subject to hazards from seismic activity, unstable soils, excessive noise, unhealthful air quality, or flooding, and avoid designating residential uses in these areas unless adequately mitigated.

Objective LU 4.3: Enhance older commercial and industrial areas.

Policy LU 4.3.6: Support efforts by the City of Santa Clarita to coordinate with property owners and environmental agencies, and provide assistance as appropriate, to promote clean -up and remediation of oil fields west of State Route 14.

Objective LU 7.7: Protect significant mineral resources**,** natural gas storage facilities, and petroleum extraction facilities from encroachment by incompatible uses.

Policy LU 7.7.1: Maintain a suitable distance and/or provide buffering to separate aggregate mining and processing activities from nearby residential uses and other uses with sensitive receptors to noise and airborne emissions.

Objective C 2.1: Implement the Circulation Plan (as shown on Exhibit C- 2) for streets and highways to meet existing and future travel demands for mobility, access, connectivity, and capacity.

Policy C 2.1.3: Protect and enhance the capacity of the roadway system by upgrading intersections to meet level of service standards, widening and/or restriping for additional lanes, synchronizing traffic signals, and other means as appropriate.

Objective C 2.3: Balance the needs of congestion relief with community values for aesthetics and quality of life.

Policy C 2.3.3: When evaluating road widening projects, consider the impacts of additional traffic, noise, and fumes on adjacent land uses and use context-sensitive design techniques where appropriate.

Objective C 3.1: Promote the use of travel demand management strategies to reduce vehicle trips.

Policy C 3.1.1: In evaluating new development projects, require trip reduction measures as feasible to relieve congestion and reduce air pollution from vehicle emissions.

Objective C 3.2: Encourage reduction in airborne emissions from vehicles through use of clean vehicles and transportation system management.

Policy C 3.2.2: Continue to enhance signal timing and synchronization to allow for free traffic flow, minimizing idling and vehicle emissions.

Policy CO 1.4.4: In cooperation with other appropriate agencies, continue to develop and implement effective methods of handling and disposing of hazardous materials and waste.

Goal CO 2: Conserve the Santa Clarita Valley's hillsides, canyons, ridgelines, soils, and minerals, which provide the physical setting for the natural and built environments.

Objective CO 2.3: Conserve areas with significant mineral resources, and provide for extraction and processing of such resources in accordance with applicable laws and land use policies.

Policy CO 2.3.4: Ensure that mineral extraction sites are maintained in a safe and secure manner after cessation of extraction activities, which may include the regulated decommissioning of wells, clean-up of any contaminated soils or materials, closing of mine openings, or other measures as deemed appropriate by the agencies having jurisdiction.

Effectiveness of Proposed Area Plan Policies

The proposed Area Plan policies are designed to reduce emissions of TACs and the potential for CO hotspots, as well as reducing potential to exposure to TACs by sensitive receptors. Implementation of these policies would reduce potential Area Plan air quality impacts under this criterion. However, individual project emissions could potentially exceed the thresholds.

Effectiveness of Proposed General Plan Goals, Objectives, and Policies

The proposed General Plan goals, objectives and policies are designed to reduce emissions of TACs and the potential for CO hotspots, as well as reducing potential to exposure to TACs by sensitive receptors. Implementation of these goals, objectives, and policies would reduce potential General Plan air quality impacts under this criterion. However, individual project emissions could potentially exceed the thresholds.

Plan to Plan Analysis

The existing Area Plan and the proposed OVOV Area Plan incorporate goals, objectives and policies that would reduce air emissions through effective land use planning or in the case of OVOV, implementation of Greenhouse Gas policies that would further reduce associated air quality impacts (i.e., measures that reduce greenhouse gas emissions usually have co-benefits of reducing criteria pollutant emissions). However, both Plans would potentially exceed CO hotspots emissions and impacts would be significant.

Impact 3.3-5 **The proposed Area Plan and General Plan would have potentially significant air quality impacts if they would create objectionable odors affecting a substantial number of people.**

The types of facilities and operations that are prone to generate odors in the Basin include large scale agriculture (farming and livestock), chemical plants, composting operations, dairies, fiberglass molding, landfills, refineries, rendering plants, rail yards, and wastewater treatment plants.[37] Several of these land uses currently exist within the OVOV Planning Area, such as a landfill with composting operations and a wastewater treatment plant; however, they are in locations where they do not adversely affect sensitive receptors. The odor and other air quality impacts of the wastewater treatment plant proposed within the Newhall Ranch Specific Plan have been addressed and mitigated in the environmental impact report for

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[37] South Coast Air Quality Management District, *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning; A Reference for Local Governments Within the South Coast Air Quality Management District* (May 2005), 2-2.

that project. The remaining uses that are prone to generate odors would not be permitted in the OVOV Planning Area under either the proposed Area Plan or the proposed Area Plan without appropriate safeguards.

Although odor impacts associated with the proposed Area Plan and General Plan would be less than significant, **Goals LU 2, LU 7, and C 2** would further reduce the potential for odor impacts by prohibiting the manufacturing, processing of goods and materials, and warehousing in mixed use developments, maintaining suitable distances and/or buffers between aggregate mining and processing activities and sensitive receptors, and considering the effect of fumes on adjacent land uses during road widening projects **(Objectives LU 2.3, LU 7.7,** and **C 2.3; Policies LU 2.3.3, LU 7.7.1,** and **C 2.3.3)**.

Proposed Area Plan Policies and Proposed General Plan Goals, Objectives and Policies

The proposed Area Plan policies and General Plan goals, objectives, and policies have already been cited.

Effectiveness of Proposed Area Plan Policies

The proposed policies are designed to ensure the potential sources of odors in the OVOV Planning Area would be minimized. Implementation of these policies would reduce potential Area Plan air quality impacts under this criterion. However, individual project odors could potentially result in nuisance violations.

Effectiveness of Proposed General Plan Goals, Objectives, and Policies

The proposed goals, objectives, and policies are designed to ensure the potential sources of odors in the OVOV Planning Area would be minimized. Implementation of these goals, objectives, and policies would reduce potential General Plan air quality impacts under this criterion. However, individual project odors could potentially result in nuisance violations.

Plan to Plan Analysis

The existing Area Plan and the proposed OVOV Area Plan incorporate goals, objectives and policies that would reduce air emissions through effective land use planning or in the case of OVOV, implementation of Greenhouse Gas policies that would further reduce associated air quality impacts (i.e., measures that reduce greenhouse gas emissions usually have co-benefits of reducing criteria pollutant emissions). However, both Plans would potentially result in nuisance violations.

MITIGATION FRAMEWORK

The following mitigation measures shall be implemented for activities that would occur under the proposed plan.

Construction

3.3-1: Prior to implementing project approval, applicants shall develop a Construction Traffic Emission Management Plan to minimize emissions from vehicles including, but not limited to, scheduling truck deliveries to avoid peak hour traffic conditions, consolidating truck deliveries, and prohibiting truck idling in excess of 5 minutes.

3.3-2: Prior to grading permit issuance, applicants shall develop a Construction Emission Management Plan to minimize construction-related emissions. The Construction Emission Management Plan shall require the use of Best Available Control Measures, as specified in Table 1 of SCAQMD's Rule 403. If potentially significant impacts are identified after the implementation of the SCAQMD recommended Best Available Control Measures, the Construction Emission Management Plan shall include the following additional elements:

- Use of water trucks or sprinkler systems in sufficient quantities to prevent airborne dust from leaving the site. When wind speeds exceed 15 miles per hour the operators shall increase watering frequency.
- Active sites shall be watered at least three times daily during dry weather.
- Increase watering frequency during construction or use non-toxic chemical stabilizers if it would provide higher control efficiencies.
- Suspend grading and excavation activities during windy periods (i.e., surface winds in excess of 25 miles per hour).
- Suspend the use of all construction equipment during first-stage smog alerts.
- Application of non-toxic chemical soil stabilizers or apply water to form and maintain a crust on inactive construction areas (disturbed lands within construction projects that are unused for at least four consecutive days).
- Application of non-toxic binders to exposed areas after cut and fill operations and hydroseeded areas.
- Cover or application of water or non-toxic chemical suppressants to form and maintain a crust on inactive storage piles.

- Planting of vegetative ground cover in disturbed areas as soon as possible and where feasible.

- Operate street sweepers that comply with SCAQMD Rules 1186 and 1186.1 on roads adjacent to the construction site so as to minimize dust emissions. Paved parking and staging areas shall be swept daily.

- Scheduling truck deliveries to avoid peak hour traffic conditions, consolidating truck deliveries, and prohibiting truck idling in excess of 5 minutes.

- Reduce traffic speeds on all unpaved roads to 15 miles per hour or less.

- Pave or apply gravel on roads used to access the construction sites when possible.

- Schedule construction activities that affect traffic flow to off-peak hours (e.g., between 7:00 PM and 6:00 AM, and between 10:00 AM and 3:00 PM).

- Use of diesel-powered construction equipment shall use ultra-low sulfur diesel fuel.

- Use electric welders to avoid emissions from gas or diesel welders when such equipment is commercially available.

- Use electricity or alternate fuels for on-site mobile equipment instead of diesel equipment when such equipment is commercially available.

- Use on-site electricity or alternative fuels rather than diesel-powered or gasoline-powered generators when such equipment is commercially available.

- Maintain construction equipment by conducting regular tune-ups according to the manufacturers' recommendations.

- Minimize idling time either by shutting equipment when not in use or reducing the time of idling to 5 minutes as a maximum.

- Limit, to the extent feasible, the hours of operation of heavy duty equipment and/or the amount of equipment in use.

- Retrofit large off-road construction equipment that will be operating for significant periods. Retrofit technologies such as particulate traps, selective catalytic reduction, oxidation catalysts, air enhancement technologies, etc., shall be evaluated. These technologies will be required if they are certified by CARB and/or the US EPA, and are commercially available and can feasibly be retrofitted onto construction equipment.

- The project applicant shall require all on-site construction equipment to meet US EPA Tier 4 or higher emissions standards according to the following:

  - April 2010 through December 31, 2011: All off-road diesel-powered construction equipment greater than 50 horsepower (hp) shall meet Tier 2 off-road emissions standards. In addition, all construction equipment shall be outfitted with the BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 2 or Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations.

  - January 1, 2012 through December 31, 2014: All off-road diesel-powered construction equipment greater than 50 horsepower (hp) shall meet Tier 3 off-road emissions standards. In addition, all construction equipment shall be outfitted with the BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations.

  - Post-January 1, 2015: All off-road diesel-powered construction equipment greater than 50 hp shall meet the Tier 4 emission standards, where available. In addition, all construction equipment shall be outfitted with BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations. A copy of each unit's certified tier specification, BACT documentations, and CARB, SCAQMD, or ICAPCD operating permit shall be provided at the time of mobilization of each applicable unit of equipment.

- Designate personnel to monitor dust control measures to ensure effectiveness in minimizing fugitive dust emissions.

- An information sign shall be posted at the entrance to each construction site that identifies the permitted construction hours and provides a telephone number to call and receive information about the construction project or to report complaints regarding excessive fugitive dust generation. Any reasonable complaints shall be rectified within 24 hours of their receipt.

- The contractor shall utilize low-VOC content coatings and solvents that are consistent with applicable SCAQMD and ICAPCD rules and regulations.

- Consideration shall be given to use of other transportation methods to deliver materials to the construction sites (for example, trains or conveyors) if it would result in a reduction of criteria pollutant emissions.

3.3-3: Prior to implementing project approval, applicants shall be required to conduct an LST analysis.

Operation

3.3-4: Prior to the issuance of building permits, the applicant shall submit building plans to the County Department of Public Works, Building and Safety Division to demonstrate that all residential buildings are designed to achieve energy efficiency in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards.

3.3-5: Prior to the issuance of building permits, the applicant shall submit building plans to the County Department of Public Works, Building and Safety Division to demonstrate that all commercial buildings shall be designed to achieve energy efficiency in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards.

3.3-6: Prior to final building inspection, the applicant shall provide preferential parking spaces for carpools and vanpools at major commercial and office locations. The spaces shall be clearly identified on plot plans and may not be pooled in one location.

3.3-7: New residential developments shall allow only natural gas-fired hearths and shall prohibit the installation of wood-burning hearths and wood-burning stoves.

3.3-8: Prior to implementing project approval, tract maps and other sensitive uses located within 500 feet from the closest right of way of Interstate 5 and State Route 14 shall be required to conduct a health risk assessment.

3.3-9: Prior to implementing project approval, tract maps and other sensitive uses located within the screening level distances of potential sources of odors, or new sources of odors located within the screening level distances of existing or reasonably foreseeable sensitive uses, as defined by the SCAQMD, shall be required to conduct an odors assessment.

SIGNIFICANCE OF IMPACT WITH MITIGATION FRAMEWORK

Potential air quality impacts from implementation of the proposed Area Plan and General Plan would remain potentially significant after the implementation of mitigation measures.

3.4 GLOBAL CLIMATE CHANGE

EXECUTIVE SUMMARY

This section describes the science of the global climate change phenomenon; provides information on the evolving regulatory framework that addresses global climate change; quantifies existing greenhouse gas (GHG) emissions under the existing Area Plan and General Plan, and under the proposed Area Plan and General Plan; compares the proposed projects' GHG emissions to the existing emissions and emissions under the existing Area Plan and General Plan; and determines if the projects are consistent with state goals, strategies, and measures to reduce GHG emissions.

The global warming and climate change analysis is a regional analysis for the One Valley One Vision (OVOV) Planning Area. The County and City Planning Areas together comprise the OVOV Planning Area. The County's Planning Area consists of unincorporated land outside of the City's boundaries and adopted Sphere of Influence (SOI) but within the OVOV Planning Area boundaries. The City's Planning Area consists of its incorporated boundaries and adopted SOI. The impact analysis evaluates the proposed Area Plan policies and General Plan goals, objectives, and policies for their effectiveness at reducing GHG emissions. Area Plan and General Plan policies would reduce potential GHG emissions resulting from the buildout of the proposed Area Plan and General Plan. However, buildout of the proposed Area Plan and General Plan would result in an increase of GHG emissions over existing conditions, even with implementation of Area Plan and General Plan policies. Therefore, potential impacts on climate change from implementation of the proposed Area Plan and General Plan would be potentially significant, given the increase in GHG emissions that would result from buildout, and mitigation measures are required.

EXISTING CONDITIONS

Global Climate Change

Climate change refers to any significant change in measures of climate (i.e., temperature, precipitation, or wind) lasting for an extended period (decades or longer). Climate change may result from

- natural factors, such as changes in the sun's intensity or slow changes in the earth's orbit around the sun;
- natural processes within the climate system (e.g., changes in ocean circulation, reduction in sunlight from the addition of GHG and other gases to the atmosphere from volcanic eruptions); and

- human activities that change the atmosphere's composition (e.g., through burning fossil fuels) and the land surface (e.g., deforestation, reforestation, urbanization, desertification).[1]

The third item listed above is the focus of climate change legislation. The natural process through which heat is retained in the troposphere[2] is called the "greenhouse effect." The greenhouse effect traps heat in the troposphere through a three-fold process as follows: (1) short-wave radiation in the form of visible light emitted by the Sun is absorbed by the Earth as heat; (2) long-wave radiation is re-emitted by the Earth; and (3) greenhouse gases (GHGs) in the atmosphere absorb or trap the long-wave radiation and re-emit it back towards the Earth and into space.

While water vapor and CO_2 are the most abundant GHG, other trace GHGs have a greater ability to absorb and re-radiate long-wave radiation. To gauge the potency of GHGs, scientists have established a Global Warming Potential (GWP) for each GHG based on its ability to absorb and re-emit long-wave radiation over a specific period. The GWP of a gas is determined by using CO_2 as the reference gas with a GWP of 1 over 100 years. For example, a gas with a GWP of 10 is 10 times more potent than CO_2 over 100 years. The use of GWP allows GHG emissions to be reported using CO_2 as a baseline. The sum of each GHG multiplied by its associated GWP is referred to as carbon dioxide equivalents (CO_2e). This essentially means that 1 metric ton of a GHG with a GWP of 10 has the same climate change impacts as 10 metric tons of CO_2.

Greenhouse Gases

The compounds described below are GHGs subject to control under state law.[3] As noted above, water vapor is a GHG; however, it's concentration in the atmosphere is a function of temperature and vapor pressure and cannot be controlled by any known means; therefore, water vapor is not subject to control under state law.

- **Water Vapor (H_2O).** Although water vapor has not received the scrutiny of other GHGs, it is the primary contributor to the greenhouse effect. Water vapor and clouds contribute 66 to 85 percent of the greenhouse effect; water vapor alone contributes 36 to 66 percent.[4] Natural processes, such as evaporation from oceans and rivers and transpiration from plants, contribute 90 percent and

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1 United States Environmental Protection Agency, "State Action Recommendations: California," http://yosemite.epa.gov/gw/statepolicyactions.nsf/exhibit?OpenForm&tier=0&state=California&type=state. (August 2008).

2 The troposphere is the bottom layer of the atmosphere, which varies in height from the Earth's surface to 10 to 12 kilometers).

3 All GWPs are given as 100-year GWP. Unless noted otherwise, all GWPs were obtained from the Intergovernmental Panel on Climate Change. *Climate Change 1995: The Science of Climate Change – Contribution of Working Group I to the Second Assessment Report of the IPCC*. Cambridge (UK): Cambridge University Press, 1996.

4 Real Climate, "Water Vapour: Feedback or Forcing?" http://www.realclimate.org/index.php/archives/ 2005/04 /water-vapour-feedback-or-forcing/#more-142. (April 6, 2005).

10 percent of the water vapor in our atmosphere, respectively.[5] The primary human-related source of water vapor comes from fuel combustion in motor vehicles; however, this is not believed to contribute a significant amount (less than 1 percent) to atmospheric concentrations of water vapor.[6] Therefore, the control and reduction of water vapor emissions is not within reach of human actions. The IPCC has not assigned a GWP for water vapor.

- **Carbon Dioxide (CO_2).** Carbon dioxide primarily is generated by fossil fuel combustion from stationary and mobile sources. Due to the emergence of industrial facilities and mobile sources over the past 250 years, the concentration of carbon dioxide in the atmosphere has increased 35 percent.[7] Carbon dioxide is the most widely emitted GHG and is the reference gas (GWP of 1) for determining the GWP of other GHGs. In 2004, 83.8 percent of California's GHG emissions were carbon dioxide.[8]

- **Methane (CH_4).** Methane is emitted from biogenic sources, incomplete combustion in forest fires, landfills, manure management, and leaks in natural gas pipelines. In the United States, the top three sources of methane are landfills, natural gas systems, and intensive fermentation.[9] Methane is the primary component of natural gas, which is used for space and water heating, steam production, and power generation. The GWP of methane is 21.

- **Nitrous Oxide (N_2O).** Nitrous oxide is produced by both natural and human-related sources. Primary human-related sources include: agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuel, adipic acid production, and nitric acid production. The GWP of nitrous oxide is 310.

- **Hydrofluorocarbons (HFCs).** HFCs typically are used as refrigerants in both stationary refrigeration and mobile air conditioning. The use of HFCs for cooling and foam blowing is growing, particularly as the continued phase-out of chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs) gains momentum. The GWP of HFCs range from 140 for HFC-152a to 6,300 for HFC-236fa.

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5 United States Geological Survey, "The Water Cycle: Evaporation," http://ga.water.usgs.gov/edu/ /watercycleevaporation.html. (August 13, 2008).

6 Energy Information Administration, "Alternatives to Traditional Transportation Fuels 1994, Volume 2, Greenhouse Gas Emissions," http://www.eia.doe.gov/cneaf/alternate/page/environment/chap1.html. (January 10, 2008).

7 United States Environmental Protection Agency, Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990-2006 [USEPA #430-R-08-005], Washington DC: United States Environmental Protection Agency, (April 2008), p. 1-3.

8 California Energy Commission, Inventory of California Greenhouse Gas Emissions and Sinks 1990 to 2004, CEC-600-2006-0123-SF, Sacramento: California Energy Commission, (December 2006). This document may be reviewed at http://www.energy.ca.gov/2006publications/CEC-600-2006-013/CEC-600-2006-013-SF.PDF.

9 United States Environmental Protection Agency, "Methane: Sources and Emissions," http://www.epa.gov /methane/sources.html. (October 19, 2006).

- **Perfluorocarbons (PFCs).** Perfluorocarbons are compounds consisting of carbon and fluorine. They primarily are created as a byproduct of aluminum production and semiconductor manufacturing. Perfluorocarbons are potent GHGs with a GWP several thousand times that of carbon dioxide, depending on the specific PFC. Another area of concern regarding PFCs is their long atmospheric lifetime (up to 50,000 years).[10] The GWPs of PFCs range from 5,700 to 11,900.

- **Sulfur Hexafluoride (SF_6).** Sulfur hexafluoride is a colorless, odorless, nontoxic, nonflammable gas. It is most commonly used as an electrical insulator in high voltage equipment that transmits and distributes electricity. Sulfur hexafluoride is the most potent GHG that has been evaluated by the IPCC with a GWP of 23,900. However, its global warming contribution is not as high as the GWP would indicate due to its low mixing ratio, as compared to carbon dioxide (4 parts per trillion [ppt] in 1990 versus 365 parts per million [ppm]).[11]

Global Contributions to Greenhouse Gas Emissions

Worldwide anthropogenic (man-made) GHG emissions are tracked for industrialized nations (referred to as Annex I) and developing nations (referred to as Non-Annex I). Man-made GHG emissions for Annex I nations are available through 2007. Man-made GHG emissions for Non-Annex I nations are available through 2005. The sum of these emissions totaled approximately 42,133 million metric tons of carbon dioxide equivalents ($MMTCO_2e$).[12] It should be noted that global emissions inventory data are not all from the same year and may vary depending on the source of the emissions inventory data.[13] Emissions from the top five (5) countries and the European Union accounted for approximately 55 percent of the total global GHG emissions, according to the most recently available data (see **Table 3.4-1, Top Five GHG Producer Countries and the European Union**). The GHG emissions in more recent years may differ from the inventories presented in **Table 3.4-1**; however, the data is representative of currently available inventory data.

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10 Energy Information Administration, "Emissions of Greenhouse Gases in the United States 2003, Other Gases: Hydrofluorocarbons, Perfluorocarbons, and Sulfur Hexafluoride," http://www.eia.doe.gov/oiaf/1605/archive/gg04rpt/other_gases.html. (December 2004).

11 United States Environmental Protection Agency, "High Global Warming Potential (GWP) Gases, Science: High GWP Gases and Climate Change," http://www.epa.gov/highgwp/scientific.html. (October 19, 2006).

12 The CO_2 equivalent emissions commonly are expressed as "million metric tons of carbon dioxide equivalent ($MMTCO_2e$)." The carbon dioxide equivalent for a gas is derived by multiplying the tons of the gas by the associated GWP, such that $MMTCO_2e$ = (million metric tons of a GHG) x (GWP of the GHG). For example, the GWP for methane is 21. This means that the emission of one million metric tons of methane is equivalent to the emission of 21 million metric tons of CO_2.

13 The global emissions are the sum of Annex I and non-Annex I countries, without counting Land-Use, Land-Use Change and Forestry (LULUCF). For countries without 2005 data, the UNFCCC data for the most recent year were used. United Nations Framework Convention on Climate Change, "Annex I Parties – GHG total without LULUCF," http://unfccc.int/ghg_emissions_data/ghg_data_from_unfccc/time_series_annex_i/items/3841.php and "Flexible GHG Data Queries" with selections for total GHG emissions excluding LULUCF/LUCF, all years, and non-Annex I countries, http://unfccc.int/di/FlexibleQueries/Event.do?event= showProjection. n.d.

Table 3.4-1
Top Five GHG Producer Countries and the European Union

Emitting Countries	GHG Emissions ($MMTCO_2e$)
China	7,250
United States	7,217
European Union (EU), 27 Member States	5,402
Russian Federation	2,202
India	1,863
Japan	1,412
Total	**25,346**

Source: World Resources Institute, "Climate Analysis Indicators Tool (CAIT)," http://cait.wri.org/. 2010.
Note: Excludes emissions and removals from land use, land-use change and forestry (LULUCF). Emissions for Annex I nations are based on 2007 data. Emissions for Non-Annex I nations (e.g., China, India) are based on 2005 data).

United States Contributions to Greenhouse Gas Emissions

As noted in **Table 3.4-1**, the US was one of the top producers of greenhouse gas emissions. The primary greenhouse gas emitted by human activities in the United States was CO_2, representing approximately 84 percent of total greenhouse gas emissions.[14] Carbon dioxide from fossil fuel combustion, the largest source of US greenhouse gas emissions, accounted for approximately 80 percent of US GHG emissions.[15]

California Contributions to Greenhouse Gas Emissions

CARB compiles GHG inventories for the State of California. Based upon the 2008 GHG inventory data (i.e., the latest year for which data are available) for the 2000-2008 greenhouse gas emissions inventory, California emitted 474 $MMTCO_2e$ ***including*** emissions resulting from imported electrical power in 2008.[16] Based on the CARB inventory data and GHG inventories compiled by the World Resources Institute,

14 United States Environmental Protection Agency, Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990-2006 [USEPA #430-R-08-005], Washington DC: United States Environmental Protection Agency, (April 2008).

15 United States Environmental Protection Agency, Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990-2006 [USEPA #430-R-08-005], Washington DC: United States Environmental Protection Agency, (April 2008).

16 California Air Resources Board, "California Greenhouse Gas 2000-2008 Inventory by Scoping Plan Category - Summary," http://www.arb.ca.gov/cc/inventory/data/data.htm. 2010.

California's total statewide GHG emissions rank second in the United States (Texas is number one) with emissions of 417 $MMTCO_2e$ (***excluding*** emissions related to imported power.[17]

The primary contributors to GHG emissions in California are transportation, electric power production from both in-state and out-of-state sources, industry, agriculture and forestry, and other sources, which include commercial and residential activities. The bulk of the emissions from these sources are due to fossil fuel combustion. **Table 3.4-2, GHG Emissions in California**, provides a summary of GHG emissions reported in California in 1990 and 2008 separated by categories defined by the United Nations Intergovernmental Panel on Climate Change (IPCC).

Between 1990 and 2008, the population of California grew by approximately 7.3 million (from 29.8 to 37.9 million).[18] This represents an increase of approximately 27.2 percent from 1990 population levels. In addition, the California economy, measured as gross state product, grew from $788 billon in 1990 to $1.8 trillion in 2008 representing an increase of approximately 128 percent (over twice the 1990 gross state product).[19] Despite the population and economic growth, California's net GHG emissions only grew by approximately 11 percent. The CEC attributes the slow rate of growth to the success of California's renewable energy programs and its commitment to clean air and clean energy.[20]

Table 3.4-2
GHG Emissions in California

Source Category	1990 ($MMTCO_2e$)	Percent of Total	2008 ($MMTCO_2e$)	Percent of Total
ENERGY	**386.41**	**89.2%**	**413.80**	**86.5%**
Energy Industries	157.33	36.3%	171.23	35.8%
Manufacturing Industries & Construction	24.24	5.6%	16.67	3.5%
Transport	150.02	34.6%	173.94	36.4%
Other (Residential/Commercial/Institutional)	48.19	11.1%	46.59	9.8%
Non-Specified	1.38	0.3%	0.00	0.0%
Fugitive Emissions from Oil & Natural Gas	2.94	0.7%	3.28	0.7%
Fugitive Emissions from Other Energy Production	2.31	0.5%	2.09	0.4%

17 Ibid.

18 U.S. Census Bureau, "Data Finders," http://www.census.gov/. 2009; California Department of Finance, "E-5 Population and Housing Estimates for Cities, Counties and the State, 2001-1008, with 2000 Benchmark," http://www.dof.ca.gov/research/demographic/reports/estimates/e-5/2009/. 2010.

19 California Department of Finance, "Financial & Economic Data: Gross Domestic Product, California," http://www.dof.ca.gov/HTML/FS_DATA/LatestEconData/FS_Misc.htm. 2010. Amounts are based on current dollars as of the data of the report (June 2, 2009).

20 California Energy Commission, *Inventory of California Greenhouse Gas Emissions and Sinks 1990 to 2004*, (2006).

Source Category	1990 ($MMTCO_2e$)	Percent of Total	2008 ($MMTCO_2e$)	Percent of Total
INDUSTRIAL PROCESSES & PRODUCT USE	**18.34**	**4.2%**	**30.11**	**6.3%**
Mineral Industry	4.85	1.1%	5.35	1.1%
Chemical Industry	2.34	0.5%	0.06	0.0%
Non-Energy Products from Fuels & Solvent Use	2.29	0.5%	1.97	0.4%
Electronics Industry	0.59	0.1%	0.80	0.2%
Substitutes for Ozone Depleting Substances	0.04	0.0%	13.89	2.9%
Other Product Manufacture and Use	3.18	0.7%	1.66	0.3%
Other	5.05	1.2%	6.39	1.3%
AGRICULTURE, FORESTRY, & OTHER LAND USE	**19.11**	**4.4%**	**24.42**	**5.1%**
Livestock	11.67	2.7%	16.28	3.4%
Land	0.19	0.0%	0.19	0.0%
Aggregate Sources & Non-CO_2 Sources on Land	7.26	1.7%	7.95	1.7%
WASTE	**9.42**	**2.2%**	**9.41**	**2.0%**
Solid Waste Disposal	6.26	1.4%	6.71	1.4%
Wastewater Treatment & Discharge	3.17	0.7%	2.70	0.6%
EMISSIONS SUMMARY				
Gross California Emissions	433.29		477.74	
Sinks from Forests and Rangelands	-6.69		-3.98	
Net California Emissions	426.60		473.76	

Sources:

[1] *California Air Resources Board, "California Greenhouse Gas 1990-2004 Inventory by IPCC Category - Summary," http://www.arb.ca.gov/cc/inventory/archive/archive.htm. 2010.*

[2] *California Air Resources Board, "California Greenhouse Gas 2000-2008 Inventory by IPCC Category - Summary," http://www.arb.ca.gov/cc/inventory/data/data.htm. 2010.*

Human Influences on Global Climate Change

The impact of anthropogenic activities on global climate change is indicated in the observational record. For example, surface temperature data shows that 11 of the 12 years from 1995 to 2006 rank among the 12 warmest since 1850, the beginning of the instrumental record for global surface temperature.[21] In addition, the atmospheric water vapor content has increased since at least the 1980s over land, sea, and in the upper atmosphere, consistent with the capacity of warmer air to hold more water vapor; ocean temperatures are warmer to depths of 3,000 feet; and a marked decline has occurred in mountain glaciers

21 Intergovernmental Panel on Climate Change, *Climate Change 2007: Synthesis Report, Summary for Policymakers*. (November 12–17, 2007). This report may be viewed at http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr_spm.pdf.

and snowpack in both hemispheres, and in polar ice and ice sheets in both the Arctic and Antarctic regions.[22]

Air trapped by ice has been extracted from core samples taken from polar ice sheets to determine the global atmospheric variation of carbon dioxide, methane, and nitrous oxide from before the start of the industrialization, around 1750, to over 650,000 years ago. For that period, it was found that carbon dioxide concentrations ranged from 180 parts per million (ppm) to 300 ppm. For the period from around 1750 to the present, global carbon dioxide concentrations increased from a pre-industrialization period concentration of 280 ppm to 379 ppm in 2005, with the 2005 value far exceeding the upper end of the pre-industrial period range.[23] Global methane and nitrous oxide concentrations show similar increases for the same period (see **Table 3.4-3, Comparison of Global Pre-Industrial and Current GHG Concentrations**).

Table 3.4-3
Comparison of Global Pre-Industrial and Current GHG Concentrations[1]

Greenhouse Gas	Early Industrial Period Concentrations (ppm)	Natural Range for Last 650,000 Years (ppm)	2005 Concentrations (ppm)
Carbon Dioxide	280	180-300	379
Methane	715	320-790	1774
Nitrous Oxide	270	N/A	319

Sources:
[1] Intergovernmental Panel on Climate Change, Climate Change 2007: The Physical Science Basis, Summary for Policymakers, (2007).

Effects of Global Climate Change

The primary effect of global climate change has been a rise in the average global tropospheric temperature of 0.2° Celsius per decade, determined from meteorological measurements worldwide between 1990 and 2005.[24] Climate change modeling using 2000 emission rates shows that further

22 Intergovernmental Panel on Climate Change, *Climate Change 2007: Synthesis Report, Summary for Policymakers*. (November 12–17, 2007). This report may be viewed at http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr_spm.pdf.

23 Intergovernmental Panel on Climate Change, *Climate Change 2007: Synthesis Report, Summary for Policymakers*. (November 12–17, 2007). This report may be viewed at http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr_spm.pdf.

24 Intergovernmental Panel on Climate Change, *Climate Change 2007: Synthesis Report, Summary for Policymakers*. (November 12–17, 2007). This report may be viewed at http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr_spm.pdf.

warming is likely to occur, which may induce further changes in the global climate system during the current century.[25] Changes to the global climate system and ecosystems and to California would include, but would not be limited to,

- declining sea ice and mountain snowpack levels, thereby increasing sea levels and sea surface evaporation rates with a corresponding increase in tropospheric water vapor due to the atmosphere's ability to hold more water vapor at higher temperatures;[26]
- rising average global sea levels, primarily due to thermal expansion and the melting of glaciers, ice caps, and the Greenland and Antarctic ice sheets;[27]
- changing weather patterns, including changes to precipitation, ocean salinity, and wind patterns, and more energetic aspects of extreme weather, including droughts, heavy precipitation, heat waves, extreme cold, and the intensity of tropical cyclones;[28]
- declining Sierra snowpack levels, which account for approximately half of the surface water storage in California;[29]
- increasing number of days conducive to ozone formation by 25 to 85 percent (depending on the future temperature scenario) in high ozone areas located in the Los Angeles area (including the San Joaquin Valley area) by the end of the 21st century;[30]
- increasing potential for erosion of California's coastlines and seawater intrusion into the Delta and associated levee systems due to the rise in sea level.[31]

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25 Intergovernmental Panel on Climate Change, *Climate Change 2007: Synthesis Report, Summary for Policymakers*. (November 12–17, 2007). This report may be viewed at http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr_spm.pdf.

26 Intergovernmental Panel on Climate Change, *Climate Change 2007: Synthesis Report, Summary for Policymakers*. (November 12–17, 2007). This report may be viewed at http://www.ipcc.ch/pdf/assessment-report /ar4/syr/ar4_syr_spm.pdf.

27 Intergovernmental Panel on Climate Change, *Climate Change 2007: Synthesis Report, Summary for Policymakers*. (November 12–17, 2007). This report may be viewed at http://www.ipcc.ch/pdf/assessment-report /ar4/syr/ar4_syr_spm.pdf.

28 Intergovernmental Panel on Climate Change, Climate Change 2007: Synthesis Report, Summary for Policymakers. (November 12–17, 2007). This report may be viewed at http://www.ipcc.ch/pdf/assessment-report/ar4/syr /ar4_syr_spm.pdf.

29 California Environmental Protection Agency, Climate Action Team. Climate Action Team Report to Governor Schwarzenegger and the Legislature, Executive Summary, Sacramento: California Environmental Protection Agency, (March 2006). This report is available for review at http://www.climatechange.ca.gov /climate_action_team/reports/index.html.

30 California Environmental Protection Agency, Climate Action Team, Climate Action Team Report to Governor Schwarzenegger and the Legislature, Executive Summary, Sacramento: California Environmental Protection Agency, (March 2006). This report is available for review at http://www.climatechange.ca.gov /climate_action_team/reports/index.html.

- increasing pest infestation making California more susceptible to forest fires;[32] and
- increasing the demand for electricity by 1 to 3 percent by 2020 due to rising temperatures resulting in hundreds of millions of dollars in extra expenditures.[33]

California Climate Adaptation Strategy

In 2009, the California Natural Resources Agency (CNRA) published the *California Climate Adaptation Strategy*[34] as a response to the Governor's Executive Order S-13-2008. The CNRA report lists specific recommendations for state and local agencies to best adapt to the anticipated risks posed by a changing climate. The Executive Summary contains a list of 12 key preliminary recommendations for adapting to a changing climate. The 12 recommendations are drawn from multiple strategies described within the sector specific and cross-sector adaptation strategy chapters of the CNRA report. Each Executive Summary recommendation lists the sector and recommendation number using the following acronyms to identify the sector: Public Health (PH), Biodiversity and Habitat (BH), Ocean and Coastal Resources (OCR), Water Management (W), Agriculture (A), Forestry (F), Transportation and Energy Infrastructure (TEI), and Cross-Sector (CS). The key preliminary recommendations from the report are as follows:

1. A Climate Adaptation Advisory Panel (CAAP) will be appointed to assess the greatest risks to California from climate change and recommend strategies to reduce those risks building on California's Climate Adaptation Strategy. This panel will be convened by the California Natural Resources Agency, in coordination with the Governor's Climate Action Team, to complete a report by December 2010. The state will partner with the Pacific Council on International Policy to assemble this panel. A list of panel members can be found on the California adaptation Web site. (CS-1).

2. California must change its water management and uses because climate change will likely create greater competition for limited water supplies needed by the environment, agriculture, and cities. As directed by the recently signed water legislation (Senate Bill X71), state agencies must implement strategies to achieve a statewide 20 percent reduction in per capita water use by 2020, expand surface and groundwater storage, implement efforts to fix Delta water supply, quality, and ecosystem

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31 California Environmental Protection Agency, Climate Action Team, Climate Action Team Report to Governor Schwarzenegger and the Legislature, Executive Summary, Sacramento: California Environmental Protection Agency, (March 2006). This report is available for review at http://www.climatechange.ca.gov/ /climate_action_team/reports/index.html.

32 California Environmental Protection Agency, Climate Action Team, Climate Action Team Report to Governor Schwarzenegger and the Legislature, Executive Summary, Sacramento: California Environmental Protection Agency, (March 2006). This report is available for review at http://www.climatechange.ca.gov/ climate_action_team/reports/index.html.

33 California Environmental Protection Agency, Climate Action Team, Climate Action Team Report to Governor Schwarzenegger and the Legislature, Executive Summary, Sacramento: California Environmental Protection Agency, (March 2006). This report is available for review at http://www.climatechange.ca.gov/ climate_action_team/reports/index.html.

34 California Natural Resources Agency, Climate Action Team, *2009 California Climate Adaptation Strategy: A Report to the Governor of the State of California in Response to Executive Order S-13-2008*, (2009).

conditions, support agricultural water use efficiency, improve state-wide water quality, and improve Delta ecosystem conditions and stabilize water supplies as developed in the Bay Delta Conservation Plan. (BH-2, W-3, 6, and 7; A-1; TEI-3).

3. Consider project alternatives that avoid significant new development in areas that cannot be adequately protected (planning, permitting, development, and building) from flooding, wildfire and erosion due to climate change. The most risk-averse approach for minimizing the adverse effects of sea level rise and storm activities is to carefully consider new development within areas vulnerable to inundation and erosion. State agencies should generally not plan, develop, or build any new significant structure in a place where that structure will require significant protection from sea level rise, storm surges, or coastal erosion during the expected life of the structure. However, vulnerable shoreline areas containing existing development that have regionally significant economic, cultural, or social value may have to be protected, and in-fill development in these areas may be accommodated. State agencies should incorporate this policy into their decisions and other levels of government are also encouraged to do so. (CS-2; OCR-1 and 2; W-4 and 9; TEI -2 and 7).

4. All state agencies responsible for the management and regulation of public health, infrastructure or habitat subject to significant climate change should prepare as appropriate agency-specific adaptation plans, guidance, or criteria by September 2010. (PH-3 and 5; BH-1, 2, and 6; OCR-3; F-1 and 2; TEI-2 and 5).

5. To the extent required by CEQA Guidelines Section 15126.2, all significant state projects, including infrastructure projects, must consider the potential impacts of locating such projects in areas susceptible to hazards resulting from climate change. Section 15126.2 is currently being proposed for revision by CNRA to direct lead agencies to evaluate the impacts of locating development in areas susceptible to hazardous conditions, including hazards potentially exacerbated by climate change. Locating state projects in such areas may require additional guidance that in part depends on planning tools that the CAS recommendations call for (see key recommendations 3, 6, 8, 9, and 10; BH-3; OCR-1; TEI-2).

6. The California Emergency Management Agency (Cal EMA) will collaborate with CNRA, the CAT, the Energy Commission, and the CAAP to assess California's vulnerability to climate change, identify impacts to state assets, and promote climate adaptation/mitigation awareness through the Hazard Mitigation Web Portal and My Hazards Website as well as other appropriate sites. The transportation sector CAWG, led by Caltrans, will specifically assess how transportation nodes are vulnerable and the type of information that will be necessary to assist response to district emergencies. Special attention will be paid to the most vulnerable communities impacted by climate change in all studies. (CS-3 and 4; PH-4 and 5; OCR-5; W-4; F-2 and 3; TEI-2, 5, 6 and 8).

7. Using existing research the state should identify key California land and aquatic habitats that could change significantly during this century due to climate change. Based on this identification, the state should develop a plan for expanding existing protected areas or altering land and water management practices to minimize adverse effects from climate change induced phenomena. (BH-1; W-5; F-5).

8. The best long-term strategy to avoid increased health impacts associated with climate change is to ensure communities are healthy to build resilience to increased spread of disease and temperature increases. The California Department of Public Health will develop guidance by September 2010 for use by local health departments and other agencies to assess mitigation and adaptation strategies,

which include impacts on vulnerable populations and communities and assessment of cumulative health impacts. This includes assessments of land use, housing and transportation proposals that could impact health, GHG emissions, and community resilience for climate change, such as in the 2008 Senate Bill 375 regarding Sustainable Communities. (PH-3).

9. The most effective adaptation strategies relate to short and long-term decisions. Most of these decisions are the responsibility of local community planning entities. As a result, communities with General Plans and Local Coastal Plans should begin, when possible, to amend their plans to assess climate change impacts, identify areas most vulnerable to these impacts, and develop reasonable and rational risk reduction strategies using the CAS as guidance. Every effort will be made to provide tools, such as interactive climate impact maps, to assist in these efforts. (BH-1; OCR– 2 and 4; CS-2).

10. State fire fighting agencies should begin immediately to include climate change impact information into fire program planning to inform future planning efforts. Enhanced wildfire risk from climate change will likely increase public health and safety risks, property damage, fire suppression and emergency response costs to government, watershed and water quality impacts, and vegetation conversions and habitat fragmentation. (PH-4 and 5; F-1; TEI-2).

11. State agencies should meet projected population growth and increased energy demand with greater energy conservation and an increased use of renewable energy. Renewable energy supplies should be enhanced through the Desert Renewable Energy Conservation Plan that will protect sensitive habitat that will while helping to reach the state goal of having 33 percent of California's energy supply from renewable sources by 2020. (TEI-2).

12. Existing and planned climate change research can and should be used for state planning and public outreach purposes; new climate change impact research should be broadened and funded. By September 2010, the California Energy Commission will develop the CalAdapt Web site that will synthesize existing California climate change scenarios and climate impact research and to encourage its use in a way that is beneficial for local decision-makers. Every effort will be made to increase funding for climate change research, focusing on three areas: linkages with federal funding resources, developing Energy Commission -led vulnerability studies, and synthesizing the latest climate information into useable information for local needs through the CalAdapt tool. (CS-4; PH-7; BH-4; OCR-6; W-8, 9, and 10; A – 8; F-4 and 5; TEI-3 and 9).

REGULATORY FRAMEWORK

International Activities to Control Greenhouse Gas Emissions

Kyoto Protocol

The original Kyoto Protocol was negotiated in December 1997 and came into force on February 16, 2005. Notably, however, although Congress approved, the United States has not ratified the protocol. Participating nations are separated into Annex 1 (i.e., industrialized countries) and Non-Annex 1 (i.e., developing countries) countries that have differing requirements for GHG reductions. The goal of the protocol is to achieve overall emissions reduction targets for six GHGs by the period 2008 to 2012. The six

GHGs regulated under the protocol are carbon dioxide, methane, nitrous oxide, sulfur hexafluoride, HFCs, and PFCs. Each nation has an emissions reduction target under which they may elect to reduce GHG emissions a certain percentage below 1990 levels (e.g., 8 percent reduction for the European Union, 6 percent reduction for Japan). The average reduction target for nations participating in the Kyoto Protocol is approximately 5 percent below 1990 levels.[35] Although the United States has not ratified the protocol, in 2002 President Bush committed the nation to a comprehensive strategy to reduce the greenhouse gas emission intensity of the American economy by 18 percent by 2012.[36] Greenhouse gas intensity is the ratio of GHG emissions to economic output (i.e., gross domestic product).

Copenhagen Accord

The 2009 United Nations Climate Change Conference, commonly known as the Copenhagen Summit, was held in Copenhagen, Denmark in December of that year. The purpose of the Summit was to organize a meeting of world leaders from nations that are Parties to the United Nations Framework Convention on Climate Change (UNFCCC) to establish a framework for climate change mitigation beyond 2012, when the Kyoto Protocol expires. The Parties agreed, at the 2007 United Nations Climate Change Conference in Bali, Indonesia, to jointly step up international efforts to combat climate change and get to an agreed outcome in Copenhagen in 2009. According to the UNFCCC, the Copenhagen Summit was to have provided clarity on four key issues:

- Ambitious emission reduction targets for developed countries;
- Nationally appropriate mitigation actions of developing countries;
- Scaling up financial and technological support for both adaptation and mitigation; and
- An effective institutional framework with governance structures that address the needs of developing countries.[37]

The Copenhagen Summit was attended by 120 heads of state and government and tens of thousands of delegates and observers. During the Summit, some nations stated what actions they were proposing to take if a binding agreement was achieved. The United States proposed to cut GHG emissions by 17

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35 Pew Center on Global Climate Change, "Bush Policy vs. Kyoto," http://www.pewclimate.org/what_s_being_done/in_the_world/bush_intensity_targe_2.cfm, (August 2008).

36 Council of Environmental Policy, "Addressing Global Climate Change," http://www.whitehouse.gov/ceq/global-change.html, (August 2008).

37 United Nations Framework Convention on Climate Change, "Fact sheet: Copenhagen – Background information," http://unfccc.int/press/fact_sheets/items/4975.php. 2010.

percent below 2005 levels by 2020, 42 percent by 2030 and 83 percent by 2050.[38] However, a binding agreement was not achieved at the Summit. At the final day of the Summit, an agreement was reached between the United States and a unified China, South Africa, India and Brazil. This agreement became known as the Copenhagen Accord. The Parties to the UNFCCC agreed to "take note of" the Copenhagen Accord, instead of fully adopting it; therefore, it is not legally binding.[39] As a result, climate negotiations continue in order to establish a successor to the Kyoto Protocol.

Intergovernmental Panel on Climate Change

The World Meteorological Organization and United Nations Environmental Program established the IPCC in 1988. The goal of the IPCC is to evaluate the risk of climate change caused by human activities. Rather than performing research or monitoring climate, the IPCC relies on peer-reviewed and published scientific literature to make its assessment. The IPCC assesses information (i.e., scientific literature) regarding human-induced climate change, impacts of human-induced climate change, and options for adaptation and mitigation of climate change. The IPCC reports its evaluation through special reports called "assessment reports." The latest assessment report (i.e., *Fourth Assessment Report*, consisting of three working group reports and a synthesis report based on the first three reports) was published in 2007.[40] In its 2007 report, the IPCC stated that global temperature increases since the mid-20th century was "very likely" attributable to man-made activities (greater than 90 percent certainty).

United States Activities to Control Greenhouse Gas Emissions

There have been numerous federal actions over the past decade that have regulated greenhouse gases (GHG). The following is an overview of the most applicable regulations.

In *Massachusetts v. EPA,*[41] the Supreme Court held that U.S. EPA has the statutory authority through the Clean Air Act (CAA)[42] to regulate GHGs from new motor vehicles. The Court did not hold that the U.S. EPA was required to regulate GHG emissions; however, it indicated that the agency must decide whether GHGs from motor vehicles cause or contribute to air pollution that is reasonably anticipated to endanger public health or welfare. Upon the final decision, the President signed Executive Order 13432 directing

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38 The White House, Office of the Press Secretary, "President to Attend Copenhagen Climate Talks: Administration Announces U.S. Emission Target for Copenhagen," http://www.whitehouse.gov/the-press-office/president-attend-copenhagen-climate-talks. 2009.

39 United Nations Framework Convention on Climate Change, "Copenhagen Accord," http://unfccc.int/home/items/5262.php. 2010.

40 The IPCC's Fourth Assessment Report is available online at http://www.ipcc.ch/.

41 *Massachusetts v. EPA*, 549 U.S. at 526.

42 42 U.S.C. § 7521(a)(1), Section 202(a)(1), Clean Air Act.

the U.S. EPA, along with the Departments of Transportation, Energy, and Agriculture, to initiate a regulatory process that responds to the Supreme Court's decision.[43]

In December 2007, the President signed the Energy Independence and Security Act of 2007,[44] which sets a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel in 2022 and sets a national fuel economy standard of 35 miles per gallon by 2020. The Act also contains provisions for energy efficiency in lighting and appliances and for the implementation of green building technologies in Federal buildings.

On July 11, 2008, the U.S. EPA issued an Advance Notice of Proposed Rulemaking on regulating GHGs under the CAA. The Advance Notice of Proposed Rulemaking reviews the various CAA provisions that may be applicable to the regulation of GHGs and presents potential regulatory approaches and technologies for reducing GHG emissions. In the Advance Notice of Proposed Rulemaking, the U.S. EPA seeks further public comment on the regulation of GHG emissions under the CAA.[45]

The U.S. EPA adopted a mandatory GHG reporting rule in September 2009. The rule would requires suppliers of fossil fuels or industrial greenhouse gases, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons or more per year of GHG emissions submit annual reports to the U.S. EPA beginning in 2011 (covering the 2010 calendar year emission). Vehicle and engine manufacturers would begin reporting GHG emissions for model year 2011.

On September 15, 2009, the U.S. EPA and the Department of Transportation's (DOT) National Highway Traffic Safety Administration (NHTSA) issued a joint proposal to establish a national program consisting of new standards for model year 2012 through 2016 light-duty vehicles that will reduce GHG emissions and improve fuel economy. The proposed standards would be phased in and would require passenger cars and light-duty trucks to comply with a declining emission standard. In 2012, passenger cars and light-duty trucks would have to meet an average emission standard of 295 grams of CO_2 per mile and

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43 Federal Register (72 FR 27717), May 16, 2007, Executive Order 13432, *Cooperation Among Agencies in Protecting the Environment With Respect to Greenhouse Gas Emissions From Motor Vehicles, Nonroad Vehicles, and Nonroad Engines*.

44 The Energy Independence and Security Act of 2007 (Pub.L. 110-140, originally named the Clean Energy Act of 2007).

45 U.S. Environmental Protection Agency, "Advance Notice of Proposed Rulemaking: Regulating Greenhouse Gas Emissions under the Clean Air Act," http://www.epa.gov/climatechange/anpr.html. 2008.

30.1 miles per gallon.[46] By 2016, the vehicles would have to meet a standard of 250 grams of CO_2 per mile and 35.5 miles per gallon.[47]

On December 7, 2009, the U.S. EPA Administrator signed two distinct findings regarding GHGs under section 202(a) of the Clean Air Act:

- **Endangerment Finding:** The Administrator finds that the current and projected concentrations of the six key well-mixed GHGs (carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride) in the atmosphere threaten the public health and welfare of current and future generations.
- **Cause or Contribute Finding:** The Administrator finds that the combined emissions of these well-mixed greenhouse gases from new motor vehicles and new motor vehicle engines contribute to the greenhouse gas pollution which threatens public health and welfare.

While these findings do not impose any requirements on industry or other entities, this action is a prerequisite to finalizing the U.S. EPA's proposed greenhouse gas emission standards for light-duty vehicles, which were jointly proposed by the U.S. EPA and the NHSTA. On April 1, 2010, the U.S. EPA and NHTSA issued final rules requiring that by the 2016 model-year, manufacturers must achieve a combined average vehicle emission level of 250 grams of CO_2 per mile, which is equivalent to 35.5 miles per gallon as measured by U.S. EPA standards.

California Activities to Control Greenhouse Gas Emissions

Title 24 Building Standards Code

The California Energy Commission (CEC) first adopted Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations, Title 24, Part 6) in 1978 in response to a legislative mandate to reduce energy consumption in the state. Although not originally intended to reduce GHG emissions, increased energy efficiency, and reduced consumption of electricity, natural gas, and other fuels would result in fewer GHG emissions from residential and nonresidential buildings subject to the standard. The standards are updated periodically to allow for the consideration and inclusion of new energy efficiency technologies and methods. The latest revisions were adopted in 2008 and became effective on January 1, 2010.

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46 U.S. Environmental Protection Agency, "EPA and NHTSA Propose Historic National Program to Reduce Greenhouse Gases and Improve Fuel Economy for Cars and Trucks," http://epa.gov/otaq/climate/regulations/420f09047a.htm. 2009.

47 Ibid.

The Title 24 (2008) standards contain mandatory measures for lighting, mechanical ventilation, pool systems and equipment, and prescriptive requirements for the home energy rating (HERS) index, cool roofs and roofing products, and additional lighting measures. According to data from the CEC, the Title 24 (2008) standards would result in first-year electricity savings of 22.7 percent from newly constructed single-family buildings and alterations, 19.7 percent from newly constructed multi-family buildings and alterations, and 4.9 percent from newly constructed nonresidential buildings.[48] According to data from the CEC, the Title 24 (2008) standards would result in first-year natural gas savings of 10.0 percent from newly constructed single-family buildings and alterations, 7.0 percent from newly constructed multi-family buildings and alterations, and 9.4 percent from newly constructed nonresidential buildings.[49]

Part 11 of the Title 24 Building Standards Code is referred to as the California Green Building Standards Code (CALGreen Code). The purpose of the CALGreen Code is to "improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in the following categories: (1) Planning and design, (2) Energy efficiency, (3) Water efficiency and conservation, (4) Material conservation and resource efficiency, and (5) Environmental air quality."[50] The CALGreen Code is not intended to substitute or be identified as meeting the certification requirements of any green building program that is not established and adopted by the California Building Standards Commission (CBSC). The CBSC has released a *2010 Draft California Green Building Standards Code* on its website.[51] This update to Part 11 of the Title 24 Building Standards Code will be effective on January 1, 2011. Unless otherwise noted in the regulation, all newly constructed buildings in California are subject of the requirements to the CALGreen Code.

Stakeholder meetings and workshops are currently underway for the next update of the Title 24 standards, which are anticipated to be released in 2011. However, the CEC has yet to release any official documentation regarding this next update.

Assembly Bill 1493

In response to the transportation sector's contribution of more than half of California's CO_2 emissions, Assembly Bill 1493 (AB 1493, Pavley) was enacted on July 22, 2002. AB 1493 requires CARB to set GHG emission standards for passenger vehicles, light-duty trucks, and other vehicles whose primary use is noncommercial personal transportation. The bill requires CARB to set the GHG emission standards for

48 California Energy Commissions, *Impact Analysis for 2008 Energy Efficiency Standards*, (2007) 4.

49 California Energy Commissions, *Impact Analysis for 2008 Energy Efficiency Standards*, (2007) 6.

50 California Building Standards Commission, 2008 California Green Building Standards Code, (2009) 3.

51 California Building Standards Commission, "CALGreen," http://www.bsc.ca.gov/CALGreen/default.htm. 2010.

motor vehicles manufactured in 2009 and all subsequent model years. In setting these standards, CARB is required to consider cost-effectiveness, technological feasibility, economic impacts, and provide maximum flexibility to manufacturers. CARB adopted the statutorily mandated standards in September 2004. If fully phased in, the near-term (2009–2012) standards would result in about a 22 percent reduction in greenhouse gas emissions compared to the emissions from the 2002 fleet, while the mid-term (2013–2016) standards would result in a reduction of about 30 percent.

In December 2004, these regulations were challenged in federal court by the Alliance of Automobile Manufacturers, who claimed that the law regulated vehicle fuel economy, a duty assigned to the federal government. In December 2007, after the U.S. Supreme Court's decision in *Massachusetts v. EPA*, the U.S. District Court for the Eastern District dismissed the case against the AB 1493 regulations by the Alliance of Automobile Manufacturers.

However, before these regulations may go into effect, the U.S. EPA must grant California a waiver under the federal CAA, which ordinarily preempts state regulation of motor vehicle emission standards. On June 30, 2009, the U.S. EPA formally approved California's waiver request. However, in light of the September 15, 2009 announcement by the U.S. EPA and NHTSA regarding the national program to reduce vehicle GHG emissions, California—and states adopting California emissions standards—have agreed to defer to the proposed national standard through model year 2016 if granted a waiver by the U.S. EPA. The 2016 endpoint of the two standards is similar, although the national standard ramps up slightly more slowly than required under the California standard. The Pavley standards require additional reductions in CO_2 emissions beyond 2016 (referred to as Phase II standards). Nonetheless, California and other states adopting the California standards will not increase standards beyond the proposed national standard until at least the 2017 model year.

Renewables Portfolio Standard

In 2002, Senate Bill 1078 (SB 1078, Sher) established California's Renewables Portfolio Standard (RPS) which requires investor-owned utilities, such as Pacific Gas and Electric, Southern California Edison, and San Diego Gas and Electric, to increase energy production from renewable source 1 percent per year up to a minimum of 20 percent of total energy generation by 2017. SB 107 (Simitian), signed by the Governor on September 26, 2008, accelerated the Renewables Portfolio Standard by requiring investor-owned utilities to meet the 20 percent target by 2010.

On September 15, 2009, the Governor issued Executive Order S-21-0911 requiring CARB, under its AB 32 authority, to adopt regulations to meet a 33 percent RPS target by 2020. The CARB regulations would use a phased-in or tiered requirement to increase the amount of electricity from eligible renewable sources

over an eight year period beginning in 2012. CARB adopted the regulation at its September 23, 2010, Board meeting.

Executive Order S-3-05

In June 2005, the Governor established California's GHG emissions reduction targets in Executive Order S-3-05. The Executive Order established the following goals: GHG emissions should be reduced to 2000 levels by 2010, 1990 levels by 2020, and 80 percent below 1990 levels by 2050. The Secretary of California Environmental Protection Agency (CalEPA) is required to coordinate efforts of various agencies to collectively and efficiently reduce GHGs. Some of the agency representatives involved in the GHG reduction plan include the Secretary of the Business, Transportation and Housing Agency, the Secretary of the Department of Food and Agriculture, the Secretary of the Resources Agency, the Chairperson of CARB, the Chairperson of the CEC, and the President of the Public Utilities Commission. Representatives from these agencies comprise the Climate Action Team.

Climate Action Team

The Climate Action Team is responsible for implementing global warming emissions reduction programs. The CalEPA secretary is required to submit a biannual progress report from the Climate Action Team to the governor and state legislature disclosing the progress made toward GHG emission reduction targets and the impacts of global warming on California's water supply, public health, agriculture, the coastline, and forestry, and reporting possible mitigation and adaptation plans to combat these impacts.

Climate Action Team Report

The first report was developed in 2006. The 2006 Climate Action Team Report (2006 CAT Report) identified key measures that will help ensure that California will meet the GHG reduction goals established under the Governor's Executive Order S-3-05 (1990 levels by 2020 and 80 percent below 1990 levels by 2050). These key measures include establishing a market-based carbon trading system, mandatory GHG reporting for large emitters, production of alternative transportation fuels, energy efficiency and renewable portfolio standards for utilities, emission reporting protocols for local governments, establishing a public goods charge for transportation that funds key strategies to reduce climate change emissions, and leveraging California's universities to train the next generation of workers needed to service new technologies. Minor changes to some of the recommendations in the 2006 CAT

Report were issued by the Climate Action Team in the *Updated Macroeconomic Analysis of Climate Strategies Presented in the March 2006 Climate Action Team Report* (2007 Update).[52]

The 2009 CAT Report provides more detailed information regarding sector-based impacts from climate change, such impacts to agriculture, forestry, water resources, coastal areas, energy, air quality, and public health. The 2009 CAT report also provides more information on economic impacts on these sectors from climate change. Lastly, the report discussed adaptation strategies for these sectors to avoid or mitigate the potential adverse impacts. The Climate Action Team reports are available for review on the California Climate Change Portal.[53]

The Climate Action Team recognizes some strategies that are currently being implemented by state agencies such as CARB introducing vehicle climate change standards and diesel anti-idling measures, the Energy Commission implementing building and appliance efficiency standards, and the CalEPA implementing its green building initiative. The Climate Action Team also recommends future emission reduction strategies, such as using only low-GWP refrigerants in new vehicles, developing ethanol as an alternative fuel, reforestation, solar power initiatives for homes and businesses, and investor-owned utility energy efficiency programs. According to the report, implementation of current and future emission reduction strategies have the potential to achieve the goals set forth in Executive Order S-3-05.

Assembly Bill 32, The California Global Warming Solutions Act of 2006

In furtherance of the goals established in Executive Order S-3-05, the Legislature enacted Assembly Bill 32 (AB 32, Nuñez and Pavley), the California Global Warming Solutions Act of 2006, which Governor Schwarzenegger signed on September 27, 2006. AB 32 represents the first enforceable statewide program to limit GHG emissions from all major industries with penalties for noncompliance.

CARB Early Action Measures

CARB is responsible for carrying out and developing the programs and requirements necessary to achieve the goals of AB 32—the reduction of California's GHG emissions to 1990 levels by 2020. The first action under AB 32 resulted in CARB's adoption of a report listing three specific early action greenhouse gas emission reduction measures on June 21, 2007. On October 25, 2007, CARB approved an additional six early action GHG reduction measures under AB 32. These early action GHG reduction measures were

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52 California Climate Action Team, *Updated Macroeconomic Analysis of Climate Strategies Presented in the March 2006 Climate Action Team Report*, (2007).

53 The California Climate Change Portal website is available at the following website address: http://www.climatechange.ca.gov/publications/cat/.

adopted and enforced on January 1, 2010, along with 32 other climate-protecting measures CARB is developing between now and 2011. The early action measures are divided into three categories:

- Group 1 - GHG rules for immediate adoption and implementation
- Group 2 - Several additional GHG measures under development
- Group 3 - Air pollution controls with potential climate co-benefits

The original three adopted early action regulations meeting the narrow legal definition of "discrete early action GHG reduction measures" include:

- a low-carbon fuel standard to reduce the "carbon intensity" of California fuels;
- reduction of refrigerant losses from motor vehicle air conditioning system maintenance and to restrict the sale of "do-it-yourself" automotive refrigerants; and
- increased methane capture from landfills by requiring broader use of state-of-the-art methane capture technologies.

The additional six early action regulations adopted on October 25, 2007, also meeting the narrow legal definition of "discrete early action GHG reduction measures," include:

- reduction of aerodynamic drag, and thereby fuel consumption, from existing trucks and trailers through retrofit technology;
- reduction of auxiliary engine emissions of docked ships by requiring port electrification;
- reduction of perfluorocarbons from the semiconductor industry;
- reduction of propellants in consumer products (e.g., aerosols, tire inflators, and dust removal products);
- require that all tune-up, smog check and oil change mechanics ensure proper tire inflation as part of overall service in order to maintain fuel efficiency; and
- restriction on the use of sulfur hexafluoride (SF_6) from non-electricity sectors if viable alternatives are available.

State of California 1990 Greenhouse Gas Inventory

As required under AB 32, on December 6, 2007, CARB approved the 1990 greenhouse gas emissions inventory, thereby establishing the emissions limit for 2020. The 2020 emissions limit was set at 427 $MMTCO_2e$. CARB also projected the state's 2020 GHG emissions under "business as usual" (BAU) conditions—that is, emissions that would occur without any plans, policies, or regulations to reduce

GHG emissions. CARB used an average of the state's GHG emissions from 2002 through 2004 and projected the 2020 levels based on population and economic forecasts. The projected net emissions totaled approximately 596 $MMTCO_2e$. Therefore, the state must reduce its 2020 BAU emissions by approximately 29 percent in order to meet the 1990 target.

The inventory revealed that in 1990, transportation, with 35 percent of the state's total emissions, was the largest single sector generating carbon dioxide; followed by industrial emissions, 24 percent; imported electricity, 14 percent; in-state electricity generation, 11 percent; residential use, 7 percent; agriculture, 5 percent; and commercial uses, 3 percent. (These figures represent the 1990 values.) AB 32 does not require individual sectors to meet their individual 1990 GHG emissions inventory; the total statewide emissions are required to meet the 1990 threshold by 2020.

CARB Mandatory Reporting Requirements

In addition to the 1990 emissions inventory, CARB also adopted regulations requiring the mandatory reporting of GHG emissions for large facilities on December 6, 2007. The mandatory reporting regulations require annual reporting from the largest facilities in the state, which account for approximately 94 percent of greenhouse gas emissions from industrial and commercial stationary sources in California. About 800 separate sources fall under the new reporting rules and include electricity generating facilities, electricity retail providers and power marketers, oil refineries, hydrogen plants, cement plants, cogeneration facilities, and industrial sources that emit over 25,000 tons of carbon dioxide each year from on-site stationary combustion sources. Transportation sources, which account for 38 percent of California's total greenhouse gas emissions as of the 2002–-2004 GHG inventory conducted by CARB[54], are not covered by these regulations but will continue to be tracked through existing means. Affected facilities began tracking their emissions in 2008, to be reported beginning in 2009 with a phase-in process to allow facilities to develop reporting systems and train personnel in data collection. Emissions for 2008 may be based on best available emission data. Beginning in 2010, however, emissions reporting requirements are more rigorous and subject to third-party verification. Verification will take place annually or every three years, depending on the type of facility.

AB 32 Climate Change Scoping Plan

As indicated above, AB 32 requires CARB to adopt a scoping plan indicating how reductions in significant GHG sources will be achieved through regulations, market mechanisms, and other actions. CARB released the *Climate Change Proposed Scoping Plan* in October 2008, which contains an outline of the

54 California Air Resources Board, "Greenhouse Gas Inventory Data – 2020 Forecast," http://www.arb.ca.gov/cc/inventory/data/forecast.htm. 2009.

proposed State strategies to achieve the 2020 greenhouse gas emission limits. The CARB Governing Board approved the *Climate Change Scoping Plan* on December 11, 2008. Key elements of the Scoping Plan include the following recommendations:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
- Achieving a statewide renewables energy mix of 33 percent;
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system;
- Establishing targets for transportation-related greenhouse gas emissions for regions throughout California and pursuing policies and incentives to achieve those targets;
- Adopting and implementing measures pursuant to existing State laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard; and
- Creating targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the State's long-term commitment to AB 32 implementation.

Under the Scoping Plan, approximately 85 percent of the State's emissions are subject to a cap-and-trade program where covered sectors are placed under a declining emissions cap. The emissions cap incorporates a margin of safety whereby the 2020 emissions limit will still be achieved even in the event that uncapped sectors do not fully meet their anticipated emission reductions. Emissions reductions will be achieved through regulatory requirements and the option to reduce emissions further or purchase allowances to cover compliance obligations. It is expected that emission reduction from this cap-and-trade program will account for a large portion of the reductions required by AB 32.

Table 3.4-4, AB 32 Scoping Plan Measures, lists CARB's preliminary recommendations for achieving greenhouse gas reductions under AB 32 along with a brief description of the reduction strategies.

Table 3.4-4
AB 32 Scoping Plan Measures

Scoping Plan Measure	Description	Estimated Reductions and Percent of Reductions
SPM-1: California Cap-and-Trade Program linked to Western Climate Initiative	Implement a broad-based cap-and-trade program that links with other Western Climate Initiative Partner programs to create a regional market system. Ensure California's program meets all applicable AB 32 requirements for market-based mechanisms. Capped sectors include transportation, electricity, natural gas, and industry. Projected 2020 business-as-usual emissions for capped sectors are estimated at 512 $MTCO_2e$; preliminary 2020 emissions limit under cap-and-trade program are estimated at 365 $MTCO_2e$ (29 percent reduction).	Total "Capped Sector" Reductions: 146.7 $MMTCO_2e$; 84.3% Cap-and-Trade Reductions Only: 34.4 $MMTCO_2e$; 19.8% (The "Total Reductions" represent the reductions from the cap-and-trade program and the reductions from the "capped sectors" from the complementary measures listed under SPM-2 through SPM-12. The "Additional Needed" represents the reductions from the cap-and-trade program only, without the reductions from SPM-2 through SPM-12.)
SPM-2: California Light-Duty Vehicle GHG Standards	Implement adopted Pavley standards and planned second phase of the program. AB 32 states that if the Pavley standards (AB 1493) do not remain in effect, CARB shall implement equivalent or greater alternative regulations to control mobile sources.	31.7 $MMTCO_2e$; 18.2%
SPM-3: Energy Efficiency	Maximize energy efficiency building and appliance standards, and pursue additional efficiency efforts. The Proposed Scoping Plan considers green building standards as a framework to achieve reductions in other sectors, such as electricity.	26.3 $MMTCO_2e$; 15.1%
SPM-4: Renewables Portfolio Standard	Achieve 33 percent Renewable Portfolio Standard by both investor-owned and publicly owned utilities.	21.3 $MMTCO_2e$; 12.2%
SPM-5: Low Carbon Fuel Standard	Develop and adopt the Low Carbon Fuel Standard. CARB identified the Low Carbon Fuel Standard as a Discrete Early Action item and the final regulation will be adopted and implemented by 2010. In January 2007, Governor Schwarzenegger issued Executive Order S-1-07, which called the reduction of the carbon intensity of California's transportation fuels by at least ten percent by 2020.	15 $MMTCO_2e$; 8.6%

Scoping Plan Measure	Description	Estimated Reductions and Percent of Reductions
SPM-6: Regional Transportation-Related Greenhouse Gas Targets	Develop regional greenhouse gas emissions reduction targets for passenger vehicles. SB 375 requires CARB to develop, in consultation with metropolitan planning organizations, passenger vehicle greenhouse gas emissions reduction targets for 2020 and 2035 by September 30, 2010. SB 375 requires metropolitan planning organizations to prepare a sustainable communities strategy to reach the regional target provided by CARB.	5 $MMTCO_2e$; 2.9% (This number represents an estimate of what may be achieved from local land use changes. It is not the SB 375 regional target.)
SPM-7: Vehicle Efficiency Measures	Implement light-duty vehicle efficiency measures. CARB is pursuing fuel-efficient tire standards and measures to ensure properly inflated tires during vehicle servicing.	4.5 $MMTCO_2e$; 2.6%
SPM-8: Goods Movement	Implement adopted regulations for port drayage trucks and the use of shore power for ships at berth. Improve efficiency in goods movement operations.	3.7 $MMTCO_2e$; 2.1%
SPM-9: Million Solar Roofs Program	Install 3,000 megawatts of solar-electric capacity under California's existing solar programs.	2.1 $MMTCO_2e$; 1.2%
SPM-10: Heavy/Medium-Duty Vehicles	Adopt heavy- and medium-duty vehicle and engine measures. Measures targeting aerodynamic efficiency, vehicle hybridization, and engine efficiency are recommended.	1.4 $MMTCO_2e$; 0.8%
SPM-11: Industrial Emissions	Require assessment of large industrial sources to determine whether individual sources within a facility can cost-effectively reduce greenhouse gas emissions and provide other pollution reduction co-benefits. Reduce greenhouse gas emissions from fugitive emissions from oil and gas extraction and gas transmission. Adopt and implement regulations to control fugitive methane emissions and reduce flaring at refineries.	1.4 $MMTCO_2e$; 0.8%
SPM-12: High Speed Rail	Support implementation of a high-speed rail system. This measure supports implementation of plans to construct and operate a high-speed rail system between Northern and Southern California serving major metropolitan centers.	1.0 $MMTCO_2e$; 0.6%
SPM-13: Green Building Strategy	Expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings.	Although some of these emissions reductions may be additional, most of them are accounted for in the Energy, Waste, Water, and Transportation sectors. In addition, some of these reductions may occur out of state, making quantification more difficult. Because of this, these emissions reductions are not currently counted toward the AB 32 2020 goal.

Scoping Plan Measure	Description	Estimated Reductions and Percent of Reductions
SPM-14: High Global Warming Potential Gases	Adopt measures to reduce high global warming potential gases. The Proposed Scoping Plan contains 6 measures to reduce high global warming potential gases from mobile sources, consumer products, stationary sources, and semiconductor manufacturing.	20.2 $MMTCO_2e$; 11.6%
SPM-15: Recycling and Waste	Reduce methane emissions at landfills. Increase waste diversion, composting, and commercial recycling. Move toward zero-waste.	1.0 $MMTCO_2e$; 0.6%
SPM-16: Sustainable Forests	Preserve forest sequestration and encourage the use of forest biomass for sustainable energy generation. The federal government and California's Board of Forestry and Fire Protection have the regulatory authority to implement the Forest Practice Act to provide for sustainable management practices. This measure is expected to play a greater role in the 2050 goals.	5 $MMTCO_2e$; 2.9%
SPM-17: Water	Continue efficiency programs and use cleaner energy sources to move water. California will also establish a public goods charge for funding investments in water efficiency that will lead to as yet undetermined reductions in greenhouse gases.	Greenhouse gas emission reductions from the water sector are not currently counted toward the 2020 goal. CARB anticipates that a portion of these reductions will be additional to identified reductions in the Electricity sector and is working with the appropriate agencies to refine the electricity/water emissions inventory.
SPM-18: Agriculture	In the near-term, encourage investment in manure digesters and at the five-year Scoping Plan update determine if the program should be made mandatory by 2020. Increase efficiency and encourage use of agricultural biomass for sustainable energy production. CARB has begun research on nitrogen fertilizers and will explore opportunities for emission reductions.	Because the emission reductions from this measure are not required, they are not counted in the total.
Total Estimated Reductions from Scoping Plan Measures:		174 $MMTCO_2e$; 100% (The Scoping Plan calls for reductions that exceed the actual 2020 target as a precautionary measure in the event that the "uncapped sectors" do not reduce emissions by the expected amount.)

Source: California Air Resources Board, Climate Change Scoping Plan, *(2008).*

Senate Bill 1368

Just two days after signing AB 32, Governor Schwarzenegger reiterated California's commitment to reducing GHGs by signing SB 1368 (Perata) on September 29, 2006. SB 1368 requires the CEC and the CPUC to develop and adopt regulations for GHG emissions performance standards for the long-term procurement of electricity by local publicly owned utilities, whether or not the electricity is generated in California. The CPUC adopted its standards on January 25, 2007, and the CEC adopted its standards, which are consistent with the CPUC standards, on May 23, 2007.

The CPUC and the CEC share responsibility for implementing and enforcing SB 1368. The CEC has jurisdiction over municipal utilities, while the CPUC regulates all other entities that supply electricity to customers in the state.

Executive Order S-1-07

On January 18, 2007, California further solidified its commitment to reducing GHGs by setting a new Low Carbon Fuel Standard (LCFS) for transportation fuels sold within the state. Executive Order S-1-07 sets a declining standard for GHG emissions measured in CO_2-equivalent gram per unit of fuel energy sold in California. The target of the LCFS is to reduce the carbon intensity of California passenger vehicle fuels by at least 10 percent by 2020. The LCFS will apply to refiners, blenders, producers, and importers of transportation fuels, and will use market-based mechanisms to allow these providers to choose how they reduce emissions during the "fuel cycle" using the most economically feasible methods. The Executive Order requires the Secretary of Cal/EPA to coordinate with actions of the CEC, CARB, the University of California, and other agencies to develop a protocol to measure the "life-cycle carbon intensity" of transportation fuels. Furthermore, the executive order directs CARB to consider initiating a regulatory proceeding to establish and implement the LCFS. In response, CARB identified the LCFS as an early action item and adopted the LCFS regulation in April 2009.

Senate Bill 97

In August 2007, the legislature enacted SB 97 (Dutton), which directed the Governor's Office of Planning and Research (OPR) to develop guidelines under CEQA for the mitigation of greenhouse gas emissions. A number of actions have taken place under SB 97, which are discussed below.

OPR Climate Change Technical Advisory

On June 19, 2008, OPR issued a technical advisory as interim guidance regarding the analysis of GHG emissions in CEQA documents.[55] The advisory indicated that a project's GHG emissions, including those associated with vehicular traffic, and construction activities, should be identified and estimated. The advisory further recommended that the lead agency determine significance of the impacts and impose all mitigation measures that are necessary to reduce GHG emissions. The advisory did not recommend a specific threshold of significance.

CEQA Guideline Amendments

In its work to formulate CEQA Guideline Amendments for GHG emissions, OPR submitted the *Proposed Draft CEQA Guideline Amendments for Greenhouse Gas Emissions* to the Secretary for Natural Resources on April 13, 2009. The Natural Resources Agency conducted formal rulemaking procedures in 2009 and adopted the CEQA Guideline Amendments on December 30, 2009.

Senate Bill 375

SB 375 (Steinberg) requires the regional governing bodies in each of the state's major metropolitan areas to adopt, as part of their regional transportation plan, a "sustainable community strategy" that will meet the region's target for reducing GHG emissions. The strategies would promote development near public transit, projects that include a mix of residential and commercial uses, and projects that include affordable housing closer to existing transportation sources. It was signed into law on September 30, 2008. Under the law, the California Air Resources Board has two years—until September 30, 2010—to set regional greenhouse gas reduction targets after consultation with local governments. The target must then be incorporated within that region's Regional Transportation Plan (RTP), which is used for long-term transportation planning, in a Sustainable Communities Strategy. SB 375 also requires each region's Regional Housing Needs Assessment (RHNA) to be adjusted based on the Sustainable Communities Strategy in its RTP. Additionally, SB 375 will reform the environmental review process to create incentives to implement the strategy, especially transit priority projects.

In accordance with SB 375, on January 23, 2009, CARB appointed a Regional Targets Advisory Committee (RTAC) to provide recommendations and methodologies to be used in the target setting process. The RTAC provided its recommendations in a report to CARB on September 29, 2009. On August 9, 2010, CARB staff issued the *Proposed Regional Greenhouse Gas Emission Reduction Targets For Automobiles And*

55 State of California, Governor's Office of Planning and Research, *CEQA and Climate Change: Addressing Climate Change Through California Environmental Quality Act (CEQA) Review*, (2008).

Light Trucks Pursuant To Senate Bill 375.[56] CARB staff proposed draft reduction targets for the four largest MPOs (Bay Area, Sacramento, Southern California, and San Diego) of 7 to 8 percent for 2020 and reduction targets between 13 to 16 percent for 2035. For the Southern California Association of Governments (SCAG), which is the MPO for the region, CARB established a draft target of 8 percent for 2020 and 13 percent for 2035, subject to SCAG Board approval.

CARB Preliminary Draft Staff Proposal

On October 24, 2008, CARB issued a *Preliminary Draft Staff Proposal: Recommended Approaches for Setting Interim Significance Thresholds for Greenhouse Gases under the California Environmental Quality Act* (*Preliminary Draft Staff Proposal*). In the *Preliminary Draft Staff Proposal*, CARB proposed a tiered approach to determine the significance of two types of projects: (1) industrial; and (2) commercial/residential. With respect to commercial/residential projects, CARB proposed a four-tiered threshold:

- Tier 1: Is the project exempt from further analysis under existing statutory or categorical exemptions? If yes, there is a presumption of less-than-significant impacts with respect to climate change.
- Tier 2: Does the project comply with a previously approved plan that addresses GHG emissions? (The plan must satisfy certain requirements (e.g., be consistent with AB 32 and/or SB 375).) If yes, there is a presumption of less-than-significant impacts with respect to climate change.
- Tier 3: Does the project satisfy certain minimum performance standards relating to construction and operational activities, or include equivalent mitigation measures, *and* emit no more than a yet to be determined quantity of emissions? If yes, there is a presumption of less-than-significant impacts with respect to climate change.
- Tier 4: The project will have significant climate change impacts.

With respect to industrial projects, CARB proposed a three-tiered threshold:

- Tier 1: Is the project exempt from further analysis under existing statutory or categorical exemptions? If yes, there is a presumption of less-than-significant impacts with respect to climate change.
- Tier 2: Does the project satisfy certain minimum performance standards relating to construction and transportation activities, or include equivalent mitigation measures, *and* emit no more than 7,000 $MTCO_2e$ from non-transportation-related GHG sources? If yes, there is a presumption of less-than-significant impacts with respect to climate change.
- Tier 3: The project will have significant climate change impacts.

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56 California Air Resources Board, *Staff Report: Proposed Regional Greenhouse Gas Emission Reduction Targets For Automobiles And Light Trucks Pursuant To Senate Bill 375*, (2010).

CARB staff received public comments on the draft thresholds; however, as of this writing, the thresholds remain draft recommendations and CARB has ceased any further development of the threshold. CARB has not indicated when or if it will resume development of the threshold.

Regional Activities to Control Greenhouse Gas Emissions

In April 2008, the South Coast Air Quality Management District (SCAQMD), in order to provide guidance to local lead agencies on determining the significance of GHG emissions identified in CEQA documents, convened a "GHG CEQA Significance Threshold Working Group."[57] The goal of the working group is to develop and reach consensus on an acceptable CEQA significance threshold for GHG emissions that would be utilized on an interim basis until CARB (or some other state agency) develops statewide guidance on assessing the significance of GHG emissions under CEQA.

Initially, SCAQMD staff presented the working group with a significance threshold that could be applied to various types of projects – residential; non-residential; industrial; etc. However, the threshold is still under development. In December 2008, staff presented the SCAQMD Governing Board with a significance threshold for stationary source projects where it is the lead agency. This threshold uses a tiered approach to determine a project's significance, with 10,000 metric tons of carbon dioxide equivalent ($MTCO_2e$) as a screening numerical threshold.

At the present time, the SCAQMD has not adopted thresholds for projects such as the one analyzed in this technical report. The SCAQMD is considering a tiered approach to determine the significance of residential and commercial projects. The draft approach that was published in October 2008 is as follows:[58]

- Tier 1: Is the project exempt from further analysis under existing statutory or categorical exemptions? If yes, there is a presumption of less-than-significant impacts with respect to climate change.
- Tier 2: Is the project's GHG emissions within the GHG budgets in an approved regional plan? (The plan must be consistent with *State CEQA Guidelines* §§15064(h)(3), 15125(d), or 15152(s).) If yes, there is a presumption of less-than-significant impacts with respect to climate change.
- Tier 3: Is the project's incremental increase in GHG emissions below or mitigated to less than the significance screening level (10,000 $MTCO_2e$ per year for industrial projects and 3,000 $MTCO_2e$ for commercial/residential projects) and is the project X percent beyond the Title 24 standard and achieve Y percent reduction in water use (the X and Y values were not determined at the time the draft

57 For more information see: http://www.aqmd.gov/ceqa/handbook/GHG/GHG.html.

58 South Coast Air Quality Management District, "Greenhouse Gases (GHG) CEQA Significance Thresholds Working Group Meeting #6," http://www.aqmd.gov/ceqa/handbook/GHG/2008/oct22mtg/oct22.html. 2008.

approach was published)? If yes, there is a presumption of less-than-significant impacts with respect to climate change.

- Tier 4: Does the project meet one of the following performance standards (the performance standards were not well-defined at the time the draft approach was published)? If yes, there is a presumption of less-than-significant impacts with respect to climate change.

  Option #1: Uniform Percent Emission Reduction Target Objective (e.g., 30 percent) from BAU by incorporating project design features and/or implementing emission reduction measures.

  Option #2: Early Implementation of Applicable AB32 Scoping Plan Measures.

  Option #3: Achieve sector-based standard (e.g., pounds per person, pounds per square foot, etc.).

- Tier 5: Does the project obtain offsets alone or in combination with the above to achieve the target significance screening level (offsets provided for 30-year project life, unless project life limited by permit, lease, or other legally binding conditions)? If yes, there is a presumption of less-than-significant impacts with respect to climate change. Otherwise, the project is significant.

In November 2009, the following revisions were proposed for Tiers 3 and 4:[59]

- Tier 3: Is the project's incremental increase in GHG emissions below or mitigated to less than the significance screening level (10,000 $MTCO_2e$ per year for industrial projects; 3,500 $MTCO_2e$ for residential projects; 1,400 $MTCO_2e$ for commercial projects; 3,000 $MTCO_2e$ for mixed-use or all land use projects)? If yes, there is a presumption of less-than-significant impacts with respect to climate change.

- Tier 4: Does the project meet one of the following performance standards? If yes, there is a presumption of less-than-significant impacts with respect to climate change.

  Option #1: Achieve a 28 percent reduction from a base case scenario, including land use sector reductions from AB 32 (total emissions not to exceed 25,000 $MTCO_2e$).

  Option #2: Achieve a project-level efficiency target of 4.6 $MTCO_2e$ per service population (total emissions not to exceed 25,000 $MTCO_2e$) or plan-level efficiency target of 6.6 $MTCO_2e$ per service population.

The SCAQMD has not announced when staff is expecting to present a finalized version of these thresholds to the Governing Board. The SCAQMD has also adopted Rules 2700, 2701, and 2702 that address GHG reductions; however, these rules are currently applicable to boilers and process heaters, forestry, and manure management projects.

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59 South Coast Air Quality Management District, "Greenhouse Gases (GHG) CEQA Significance Thresholds Working Group Meeting #14," http://www.aqmd.gov/ceqa/handbook/GHG/2009/nov19mtg/nov19.html. 2009.

Local Activities to Control Greenhouse Gas Emissions

In January 2007, the Los Angeles County Board of Supervisors adopted the Countywide Energy and Environmental Policy (Policy), which provides guidelines for sustainability and green building design within County departments. The Policy states that the County will join the California Climate Action Registry (CCAR) to establish goals for reducing GHG emissions. The Policy also incorporates a sustainable building program into County capital improvement projects and seeks to integrate energy efficient and sustainable designs into future County building plans.[60]

In addition, the court settlement in August 2007 regarding the lack of GHG mitigation strategies in the San Bernardino County General Plan prompted Los Angeles County to pursue more immediate and formal mitigation strategies. Accordingly, the County prepared its "Report on the Impact of the State Action Against San Bernardino County Regarding its General Plan Update," which contains numerous recommendations for future requirements to combat global warming.[61] The report has three main sections: (i) energy efficiency and climate change, (ii) green buildings, and (iii) low-impact development.

In order to secure implementation of green building practices, the Board of Supervisors adopted three ordinances pursuant to the County's Green Building Program on October 7, 2008, relating to green building, low-impact development, and native, drought-tolerant landscaping. These ordinances became applicable in unincorporated portions of Los Angeles County as of January 1, 2009.

The green building standards ordinance applies to four categories of development, with corresponding requirements for each: (i) small residential and nonresidential projects; (ii) medium-sized residential projects; (iii) medium-sized (i.e., 10,000 to 25,000 square feet) nonresidential, commercial, mixed-use, or first-time tenant improvement projects; and (iv) large nonresidential, commercial, mixed-use, or first-time tenant improvement projects greater than 25,000 square feet, and all new high-rise buildings greater than 75 feet in height. In addition, the adopted ordinance contains minimum standards for all applicable projects:

- *Energy*: 15 percent better than Title 24;
- *Water*: Smart controller in landscaped areas, 75 percent of the landscaped area to use drought-tolerant plants, turf restrictions, hydrozones;
- *Resources*: Minimum 50 percent waste diversion during construction;

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60 Documents relating to this County Policy are available online at http://lacounty.info/bos/sop/supdocs/29480.pdf and http://lacounty.info/bos/sop/supdocs/29932.pdf.

61 This report is available online at http://planning.co.la.ca.us/docOfficial.htm.

- *Trees*: 2 trees planted per single family home, 1 tree planted per 5,000 square feet of lot area for multi-family projects, 3 trees planted per 10,000 square feet of lot area for nonresidential projects; and

- *Low Impact Development*: Single-family residences to use three (3) of seven (7) approved low-impact development best management practices.

THRESHOLDS OF SIGNIFICANCE

In accordance with Senate Bill (SB) 97, the Natural Resources Agency adopted amendments to the *State CEQA Guidelines* on December 30, 2009, which includes criteria for evaluating GHG emissions.[62] Specifically, Appendix G of the *State CEQA Guidelines* (Environmental Checklist Form) lists the following thresholds, under which a project may be deemed to have a significant impact on air quality if it would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or

- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Under CEQA, "the determination of whether a project may have a significant effect on the environment calls for careful judgment on the part of the public agency involved, based to the extent possible on scientific and factual data."[63] CEQA grants agencies with the general authority to adopt criteria for determining whether a given impact is "significant."[64] When no guidance exists under CEQA, the agency may look to and assess general compliance with comparable regulatory schemes.[65]

Several air quality management and air pollution control districts have adopted guidance documents for evaluating the significance of GHG emissions. Other districts have published draft guidance documents that have not yet been formally adopted. A brief description of the available guidance documents from several air quality management and air pollution control districts is provided below. As listed below, the guidance documents do not provide a set of consistent thresholds for evaluating the significance of GHGs on the global climate.

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62 The adopted amendments may be viewed at the following website: http://ceres.ca.gov/ceqa/guidelines/. 2010.

63 *State CEQA Guidelines* Section 15064(b).

64 See *Cal. Pub. Resources Code* Section 21082.

65 See *Protect Historic Amador Waterways v. Amador Water Agency (2004) 116 Cal. App. 4th 1099, 1107* ["'[A] lead agency's use of existing environmental standards in determining the significance of a project's environmental impacts is an effective means of promoting consistency in significance determinations and integrating CEQA environmental review activities with other environmental program planning and resolution.""]. Lead agencies can, and often do, use regulatory agencies' performance standards. A project's compliance with these standards usually is presumed to provide an adequate level of protection for environmental resources. See, e.g., *Cadiz Land Co. v. Rail Cycle (2000) 83 Cal.App.4th 74, 106-09* (upholding use of regulatory agency performance standard).

- CARB published preliminary draft thresholds in 2008, but ceased further development of their threshold as of the date of this writing. The preliminary draft thresholds recommended that the significance of a project's GHG emissions should be based on compliance with a previously approved plan that addresses GHG emissions or compliance with performance standards relating to construction and operational activities (or equivalent GHG-reduction measures) and emitting no more than a yet to be determined quantity of GHG emissions for residential and commercial projects and 7,000 $MTCO_2e$ for industrial projects from non-transportation-related GHG sources. Projects that do not meet these thresholds would be considered to have a significance impact.

- The San Joaquin Valley Air Pollution Control District (SJVAPCD) adopted the *Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA* in late 2009. According to the guidance, the SJVAPCD guidance recommends the use of best performance standards to assess the significance of GHG emissions. The SJVAPCD expects that compliance with the recommended best performance standards would reduce a project's GHG emissions by a target of 29 percent or more, compared to 'business as usual' (BAU) conditions. The 29 percent reduction target is based on the goal of AB 32, which is to reduce the state's GHG emissions to 1990 levels by 2020.

- The Sacramento Metropolitan Air Quality Management District (SMAQMD) has also adopted guidance recommending that project achieve a 29 percent reduction from BAU conditions.

- The Bay Area Air Quality Management District (BAAQMD) adopted revisions to its CEQA Guidelines in June 2010 that recommends a project-level significance threshold of 1,100 $MTCO_2e$ for residential and commercial projects or a project-level efficiency target of 4.6 $MTCO_2e$ per service population (residents plus employees) per year. The recommended plan-level significance thresholds are compliance with a qualified greenhouse gas reduction strategy (or similar criteria included in a General Plan) or a plan-level efficiency target of 6.6 $MTCO_2e$ per service population (residents plus employees) per year.

- The SCAQMD is currently developing thresholds for GHG emissions. As noted previously, the SCAQMD recommends a tiered approach. The Tier 3 threshold requires that a project's incremental increase in GHG emissions should be below or mitigated to less than the significance screening level (10,000 $MTCO_2e$ per year for industrial projects; 3,500 $MTCO_2e$ for residential projects; 1,400 $MTCO_2e$ for commercial projects; 3,000 $MTCO_2e$ for mixed-use or all land use projects). The Tier 4 threshold requires that projects achieve a 28 percent reduction from a base case scenario, including land use sector reductions from AB 32 (total emissions not to exceed 25,000 $MTCO_2e$) or achieve a project-level efficiency target of 4.6 $MTCO_2e$ per service population per year (total emissions not to exceed 25,000 $MTCO_2e$ per year). The recommended plan-level significance thresholds is an efficiency target of 6.6 $MTCO_2e$ per service population per year.

- The California Air Pollution Control Officers Association (CAPCOA) prepared a white paper on CEQA and Climate Change in January 2008. The white paper contains a disclaimer that states the paper is intended to be used as a resource by lead agencies when considering policy options and not as a guidance document. The disclaimer also states that it "is not intended, and should not be interpreted, to dictate the manner in which an air district or lead agency chooses to address GHG

emissions in the context of its review of projects under CEQA."[66] Specifically, the white paper discusses three possible approaches to evaluating the significance of GHG emissions and possible mitigation measures; however, CAPCOA does not endorse any particular approach. The three alternative significance approaches are (1) not establishing a significance threshold for GHG emissions; (2) setting the GHG emission threshold at zero; and (3) setting the GHG emission threshold at some non-zero level. The white paper evaluates potential considerations and pitfalls associated with the three approaches. At the end of the white paper, CAPCOA provides a list of potential mitigation measures and discusses each in terms of emissions reduction effectiveness, cost effectiveness, and technical and logistical feasibility.

While a wide array of thresholds, standards, and considerations have been presented, the amendments to the *State CEQA Guidelines* reaffirm that the lead agency has the discretion to determine how to evaluate a project's significance under CEQA. The *State CEQA Guidelines* includes a new Section 15064.4, which states that, when making a determination of the significance of GHG emissions, a lead agency shall have discretion to determine whether to use a model or methodology to quantify GHG emissions and/or rely on a qualitative analysis or performance based standards.

Based on the above discussion, the Appendix G thresholds of the *State CEQA Guidelines* (Environmental Checklist Form) shall be assessed by performing an analysis of the project's GHG emissions from construction and operational activities. Policies in the proposed Area Plan, and goals, objectives, and policies in the proposed General Plan, address GHG emissions. The significance of the consistency between the proposed General Plan and proposed Area Plan and an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases shall be determined by assessing the consistency of the policies in the proposed Area Plan, and the goals, objectives, and policies of the proposed General Plan, with the emission reduction strategies prescribed in, or developed to implement, Executive Order S-3-05 and AB 32.

IMPACT ANALYSIS

This impact analysis section evaluates the potential effects of the proposed Area Plan policies, and the proposed General Plan goals, objectives, and policies, on GHG emissions and global climate change within the OVOV Planning Area, using the emissions reduction targets and strategies prescribed in, or developed to implement, Executive Order S-3-05 and AB 32.

66 California Air Pollution Control Officers Association, *CEQA & Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act*, (2008).

Impact 3.4-1: Generates greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

Construction Sources of GHG Emissions

The construction activities required to facilitate buildout of the proposed project would include the use of heavy-duty construction equipment. The vast majority of construction equipment (e.g., backhoes; cranes; rubber-tired loaders; scrapers; haul trucks) rely on fossil fuels, primarily diesel, as an energy source. The combustion of fossil fuels in construction equipment results in GHG emissions of CO_2 and much smaller amounts of CH_4 and N_2O. Other sources of construction-related GHG emissions include the use of motor vehicles to transport workers and vendor supplies to and from the project site. Typically, light-duty and medium-duty automobiles and trucks would be used for worker trips and heavy-duty trucks would be used for vendor trips. The vast majority of motor vehicles used for worker trips rely on gasoline as an energy source while motor vehicles used for vendor trips rely on diesel as an energy source. The combustion of gasoline in motor vehicles results in GHG emissions of CO_2 and smaller amounts of CH_4 and N_2O. The combustion of diesel in heavy-duty trucks results in GHG emissions of CO_2 and much smaller amounts of CH_4 and N_2O.

The methodology used to estimate the GHG emissions associated with construction of the proposed project is based on the SCAQMD's *CEQA Air Quality Handbook*, the URBEMIS2007 (Version 9.2.4) Environmental Management Software, and information provided in the URBEMIS2007 v9.2 User's Manual.[67] URBEMIS2007 is an update to the previous model, URBEMIS2002 (Version 8.7), and uses CARB's EMFAC2007 model for on-road vehicle emissions and CARB's OFFROAD2007 model for off-road vehicle emissions. URBEMIS2007 calculates emissions of CO_2 using emission factors from EMFAC2007 and OFFROAD2007.

The California Climate Action Registry's *General Reporting Protocol: Reporting Entity-Wide Greenhouse Gas Emissions, Version 3.1* contains emission factors for CH_4 and N_2O from off-road construction equipment.[68] These factors, along with the CO_2 emissions calculated with the URBEMIS2007 program, were used to calculate the GHG emissions from construction equipment in terms of carbon dioxide equivalents (CO_2e), using GWPs of 21 for CH_4 and 310 for N_2O. Based on the factors, CO_2 emissions account for the vast majority of the total GHG emissions from off-road construction equipment.

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67 Rimpo and Associates, URBEMIS2007 Version 9.2.4, http://www.urbemis.com. 2007.

68 California Climate Action Registry, *General Reporting Protocol: Reporting Entity-Wide Greenhouse Gas Emissions, Version 3.0*, (2007) 94–96.

While the CCAR *General Reporting Protocol* also contains CH_4 and N_2O emission factors for on-road heavy-duty trucks and passenger vehicles, they are based on specific vehicle model years. It is not known what vehicle model years would be in use during project construction; therefore, CO_2e emissions were estimated based on additional data from the California Energy Commission and the U.S. EPA Office of Transportation and Air Quality. Vice Chair James D. Boyd of the CEC stated in a document published in 2002 that fuel economy in Class 8 heavy-duty trucks have improved from 5.2 miles per gallon to 6.5 miles per gallon between 1982 and 2000.[69] As a conservative measure, this assessment assumed a fuel economy of six (6) miles per gallon for on-road heavy-duty trucks. Using this information, in conjunction with emission factors from the CCAR, CO_2e emissions were determined for on-road heavy-duty trucks. The U.S. EPA Office of Transportation and Air Quality published a document in 2005 that stated CO_2 emissions represent approximately 95 percent of the total GHG emissions from passenger vehicles on a CO_2e basis.[70] Using this information in conjunction with the emissions obtained from the URBEMIS2007 program, CO_2e emissions were determined for passenger (worker) vehicles.

The manufacture of construction materials would indirectly contribute to climate change (upstream emission source). Upstream emissions refer to emissions that are generated during the manufacture of products used for construction (e.g., cement, steel, and transport of materials to the region). The upstream GHG emissions, which may also include perfluorocarbons and sulfur hexafluoride, are not estimated in this impact analysis because they are not within the control of the developers and the lack of data precludes their quantification without speculation.

The SCAQMD recommends amortizing construction-related GHG emissions over a project's lifetime in order to include these emissions as part of the annual total operational emissions. The SCAQMD has defined a project lifetime to be a 30-year period. Therefore, the construction GHG emissions have been amortized over this period and included in the annual total operational emissions discussed in the next sections.

Operational Sources of GHG Emissions

Operational sources of GHG emissions include motor vehicles, natural gas combustion, electrical generation, municipal services (water supply and wastewater treatment). Each of these sources is discussed individually below, and their emissions are estimated.

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69 California Energy Commission, *Diesel Use in California, Remarks by Commissioner James D. Boyd,* (2002).

70 US Environmental Protection Agency, Office of Transportation and Air Quality, *Emission Facts–Greenhouse Gas Emissions from a Typical Passenger Vehicle (EPA420-F-05-004)*, (2005) 4.

Motor Vehicles

The proposed project would include residential, commercial, office, industrial, institutional, and recreational land uses, which would result in the day-to-day operation of motor vehicles. Examples of motor vehicles include passenger automobiles, light-duty trucks, and sport utility vehicles. The vast majority of motor vehicles rely on fossil fuels, primarily gasoline, as an energy source. The combustion of fossil fuels in motor vehicles results in GHG emissions of CO_2 and smaller amounts of CH_4 and N_2O. Since specific information regarding the types of vehicles that would be used by the proposed project's future residents and users is not known, fleet-average characteristics based on currently available data for the region typically are used to assess the GHG emissions from motor vehicles.

As noted above, the URBEMIS2007 program calculates CO_2 emissions from motor vehicles. Because GHG emissions from motor vehicles are dependant on model years and the specific types of vehicles that would be used by the proposed project's residents and users are not known, the emissions were calculated assuming a representative motor vehicle fleet mix in 2030. While URBEMIS2007 projects vehicle fleet out to 2040, the OVOV Area Plan and General Plan does not identify a buildout year; therefore, 2030 was used as a reasonable estimate.

Motor vehicle emission reductions from the Low Carbon Fuel Standard and the Assembly Bill 1493 (Pavley standards) were taken into account using the Bay Area Air Quality Management District's (BAAQMD) Greenhouse Gas Calculator (Version 1.1.9), which is an add-on module to the URBEMIS2007 model. The BAAQMD's Greenhouse Gas Calculator uses the UREMIS2007 model files and applies phased-in reductions associated with Low Carbon Fuel Standard and the Assembly Bill 1493 using emission factor data from the US EPA and CARB. The BAAQMD's calculator also converts the URBEMIS2007 emissions data to carbon dioxide equivalents.

Area Source Emissions (Landscaping Equipment and Hearths)

Area source emissions from gasoline-powered landscaping equipment and natural gas-fired and wood-fired stoves and hearths were estimated using the URBEMIS2007 model. As noted above, the URBEMIS2007 program calculates CO_2 emissions. Therefore, the BAAQMD's Greenhouse Gas Calculator was used to convert these emissions to carbon dioxide equivalents.

Natural Gas

Residents within the proposed project would utilize natural gas, primarily for heating and cooking needs. The combustion of natural gas results in GHG emissions of CO_2 and smaller amounts of CH_4 and N_2O.

Natural gas emissions were estimated using the URBEMIS2007 model. Emission factors for CH_4 and N_2O were obtained from the California Climate Action Registry's *General Reporting Protocol*.[71]

Electrical Generation

Most of the generation of electricity in California is achieved through the combustion of fossil fuels, primarily natural gas, using steam boilers, internal combustion engines, and combustion turbines. As discussed previously, SB 107 requires investor-owned utilities to increase energy production from renewable source to 20 percent by 2010. A portion of the electricity generated in California and imported from outside the state is derived from the combustion of coal and other non-gaseous fossil fuels.

The combustion of fossil fuels to produce electricity results in GHG emissions of CO_2 and smaller amounts of CH_4 and N_2O. These emissions occur due to the electrical demand of the proposed project's residential and recreational land uses. The electricity generation occurs off-site; therefore, electricity use causes GHG emissions that are considered to be indirect.

Emission factors for GHGs due to electrical generation from the proposed project's residential and recreational land uses were obtained from the *SCE 2006 Power/Utility Protocol (PUP) Report* to the CCAR.[72] CCAR members, such as SCE, voluntarily measure, verify, and publicly report their GHG emissions. The electrical generation GHG emissions factor from the *SCE 2006 PUP Report* is provided as metric tons of CO_2e per megawatt-hour (MW-hr), which was converted to metric tons per million kilowatt-hours (10^6 kW-hr). This emission factor takes into account the current mix of energy sources used to generate electricity for SCE and the relative carbon intensities of these sources, and includes natural gas, coal, nuclear, large hydroelectric, and other renewable sources of energy both inside and outside of California's borders.

Municipal Services

The proposed project's municipal sources of GHG emissions would include both the supply and treatment of water and wastewater. Municipal vehicles, such as fire engines or garbage trucks, will be present in the development; however, emissions from these vehicles are accounted for under Motor Vehicles.

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71 California Climate Action Registry, *General Reporting Protocol*, Version 3.1 (2009) 103.

72 California Climate Action Registry, "Reporting Online Tool, Public Annual Entity Emissions," http://www.climateregistry.org/CARROT/public/Reports.aspx, Online Review (March 2009).

Water Supply

The GHG emission estimates for potable water supply are based on the fossil fuel based energy needed to treat and distribute the water to and throughout the OVOV Planning Area. The energy is used to power treatment equipment and to create water pressure, which can be achieved by gravity or a pump. The combustion of fossil fuels to produce the energy needed to operate the treatment equipment and water pumps results in GHG emissions of CO_2 and smaller amounts of CH_4 and N_2O. As the electricity needed to operate the equipment and water pumps is generated off- site, the associated GHG emissions are considered to be indirect.

Supplying potable water results in emissions of GHGs due to the generation of electricity needed to supply, convey, treat, and distribute the water. The analysis of GHG emissions resulting from the OVOV Planning Area's water demand at buildout was estimated using projected water demand from **Section 3.13, Water Service**.

Based on data from a report prepared for the CEC, it has been estimated that it takes 9,727 kW-hr per million gallons to supply and convey potable water in Southern California.[73] This estimate takes into account system losses of five (5) percent for conveyance.[74] This factor also assumes that the primary sources of water in Southern California are the east and west branches of the State Water Project.[75] Because the proposed project may have a portion of its water supplied by local sources, such as local groundwater and recycled water, this factor likely over predicts the actual energy required to supply and convey water to the proposed project.

The CEC also has estimated that 111 kW-hr of electricity is necessary to treat one million gallons of water and 1,272 kW-hr is necessary to distribute that water to the end users in Southern California.[76] These factors take into account system losses of 5 percent for water treatment and 6 percent for water

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73 Navigant Consulting, Inc. *Refining Estimates of Water-Related Energy Use in California*, *PIER Final Project Report (CEC-500-2006-118)*, (Sacramento: California Energy Commission, [December 2006]),). This document is available for review at http://www.energy.ca.gov/ pier/project_reports/CEC-500-2006-118.html.

74 Navigant Consulting, Inc. *Refining Estimates of Water-Related Energy Use in California*, *PIER Final Project Report (CEC-500-2006-118)*, (Sacramento: California Energy Commission, [December 2006]),), p. 21. This document is available for review at http://www.energy.ca.gov/pier/project_reports/CEC-500-2006-118.html.

75 Navigant Consulting, Inc. *Refining Estimates of Water-Related Energy Use in California*, *PIER Final Project Report (CEC-500-2006-118)*, (Sacramento: California Energy Commission, [December 2006]),), p. 19. This document is available for review at http://www.energy.ca.gov/pier/project_reports/CEC-500-2006-118.html.

76 Navigant Consulting, Inc. *Refining Estimates of Water-Related Energy Use in California*, *PIER Final Project Report (CEC-500-2006-118)*, (Sacramento: California Energy Commission, December 2006), p. 22. This document is available for review at http://www.energy.ca.gov/pier/project_reports/CEC-500-2006-118.html.

distribution.[77] The CEC did not identify any geographic differences in electricity consumption for wastewater treatment or distribution.[78] Emission factors for GHGs due to electrical demands from the potable water supply needs of the OVOV Planning Area were obtained from the *SCE 2006 PUP Report* to the CCAR.[79]

Wastewater Treatment

Treatment of wastewater produced in the OVOV Planning Area would remove soluble organic matter, suspended solids, pathogenic organisms, and chemical contaminants. Wastewater treatment produces emissions of CH_4, if the organic components in the wastewater are treated anaerobically (*i.e.*, without oxygen).[80] Wastewater treatment also produces emissions of N_2O during both nitrification and denitrification of the nitrogen present in the wastewater, usually in the form of urea, ammonia, and proteins. During nitrification, the compounds are converted to nitrate (NO_3) in an aerobic (*i.e.*, in the presence of oxygen) process by certain types of bacteria. Denitrification occurs under anaerobic conditions and involves the biological conversion of nitrate into dinitrogen gas (N_2). N_2O can be an intermediate product of both these processes.[81] Additional GHG emissions of CO_2, CH_4, and N_2O associated with wastewater treatment are due to the electrical demand that powers the treatment process.

The treatment of wastewater results in emissions of GHGs due to the generation of electricity needed to treat the wastewater. Future wastewater generation is assumed to be 60 percent of water demand. The electrical demand factor for treating wastewater is 1,911 kilowatt-hours per million gallons of

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77 Navigant Consulting, Inc. *Refining Estimates of Water-Related Energy Use in California*, *PIER Final Project Report (CEC-500-2006-118)*, (Sacramento: California Energy Commission, [December 2006]), p. 21. This document is available for review at http://www.energy.ca.gov/pier/project_reports/CEC-500-2006-118.html.

78 Navigant Consulting, Inc. *Refining Estimates of Water-Related Energy Use in California*, *PIER Final Project Report (CEC-500-2006-118)*, (Sacramento: California Energy Commission, [December 2006]), p. 18. This document is available for review at http://www.energy.ca.gov/pier/project_reports/CEC-500-2006-118.html.

79 California Climate Action Registry, "Reporting Online Tool, Public Annual Entity Emissions," http://www.climateregistry.org/CARROT/public/Reports.aspx, (March 2009).

80 United States Environmental Protection Agency, "Methane: Sources and Emissions," http://www.epa.gov/ /methane/sources.html. (October 19, 2006).

81 United States Environmental Protection Agency, "Nitrous Oxide: Sources and Emissions," http://www.epa.gov /nitrousoxide/sources.html, (October 19, 2006).

wastewater, and is based on data from a report prepared for the CEC.[82] Electrical demand GHG emissions factors for wastewater treatment were obtained from the *SCE 2006 PUP Report* to the CCAR.[83]

Operational GHG Emissions

Build out of the proposed Area Plan and General Plan would result in direct operational emissions of GHGs. These emissions, primarily CO_2, CH_4, and N_2O, are the result of fuel combustion from building heating systems and motor vehicles. Building and motor vehicle air conditioning systems may use HFCs (and HCFCs and CFCs to the extent that they have not been completely phased out at later dates); however, they are not quantified as emissions of these GHGs and would only occur through accidental leaks. Water vapor and O_3 are also not quantified as project GHG emissions because water vapor concentrations in the upper atmosphere are primarily due to climate feedbacks[84] rather than emissions from project related activities. Furthermore, O_3 in the troposphere is relatively short-lived and project emissions of ozone precursors would not significantly contribute to climate change.

The direct operational emissions of CO_2 were estimated using URBEMIS2007 with the following adjustments to convert CO_2 emissions to GHG emissions on a CO_2e basis:

- Area sources (natural gas combustion): The CO_2 emissions from natural gas consumption for the project were adjusted based on emission factors for CO_2, CH_4, and N_2O for natural gas combustion from URBEMIS2007 and the California Climate Action Registry.[85]

- Motor vehicles: The CO_2 emissions associated with project-generated trips were multiplied by a factor based on the assumption that CO_2 represents 95 percent of the CO_2e emissions associated with passenger vehicles, which account for most of the project-related trips.[86]

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82 Navigant Consulting, Inc. *Refining Estimates of Water-Related Energy Use in California*, *PIER Final Project Report (CEC-500-2006-118)*, (Sacramento: California Energy Commission, [December 2006]), p. 22. This document is available for review at http://www.energy.ca.gov/pier/project_reports/CEC-500-2006-118.html.

83 California Climate Action Registry, "Reporting Online Tool, Public Annual Entity Emissions," http://www.climateregistry.org/CARROT/public/Reports.aspx. (March 2009).

84 A climate feedback is an indirect, or secondary climatic change that occurs in response to a forcing mechanism. For example, a disturbance that causes global temperatures to increase could cause more water to evaporate from the oceans, leading to larger amounts of water vapor in the atmosphere absorbing more radiation from the earth's surface and emitting more radiation back, thereby enhancing the greenhouse effect and further increasing the air temperature.

85 California Climate Action Registry. General Reporting Protocol: Reporting Entity-Wide Greenhouse Gas Emissions, Version 3.0. Los Angeles: California Climate Action Registry, April 2008. This document is available for review at http://www.climateregistry.org/resources/docs/protocols/grp/GRP_V3_April2008_FINAL.pdf.

86 United States Environmental Protection Agency, Office of Transportation and Air Quality. Emission Facts: Greenhouse Gas Emissions from a Typical Passenger Vehicle (EPA420-F-05-004). Washington, DC: US Environmental Protection Agency, (February 2005). This document may be viewed at http://www.epa.gov/oms/climate /420f05004.pdf.

The Plan would also result in indirect GHG emissions from electricity generation, water treatment and delivery, wastewater collection and treatment, solid waste haul trucks, and anaerobic decomposition of organics during the wastewater treatment process (CH_4).

Electricity would not only be used within the OVOV Planning Area, but it would also be used in activities outside the OVOV Planning Area, such as in the water and wastewater treatment and in the conveyance process where in-line pumps would be required. GHG emission factors from electrical demand were obtained from the *SCE 2006 Power/Utility Protocol (PUP) Report* to the California Climate Action Registry.[87] The estimated annual electrical demand for the OVOV Planning Area at buildout of the proposed Area Plan and proposed General Plan was obtained from factors in the South Coast Air Quality Management District's *CEQA Air Quality Handbook*. The annual electrical demand factor for water treatment and distribution[88] was obtained from the CEC. GHG emission factors for wastewater treatment[89] and solid waste disposal[90] were obtained from the US EPA.

In order to assess the increase in GHG emissions from the OVOV Planning Area as it builds out, the operational GHG emissions are calculated for the following scenarios:

- Existing Conditions
- Buildout Under Proposed Area Plan and General Plan Land Use Designations (without GHG reductions that would result from the implementation of the proposed policies to reduce GHG emissions)

Operational GHG emissions under buildout of the proposed Area Plan and General Plan land use designations are compared with existing emissions in order to determine the net increase in project GHG

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87 California Climate Action Registry. "Reporting Online Tool, Public Annual Entity Emissions" [Southern California Edison, PUP Report, 2006.] http://www.climateregistry.org/CARROT/public/Reports.aspx. Online Review August 2008. The SCE 200*6 PUP Report* provides a GHG emission factor from electrical generation in units of metric tons of CO_2e per megawatt-hour (MW-hr), which was converted to metric tons per million kilowatt-hours (10^6 kW-hr). This emission factor takes into account the current mix of energy sources used to generate electricity for SCE and the relative carbon intensities of these sources, and includes natural gas, coal, nuclear, large hydroelectric, and other renewable sources of energy.

88 Navigant Consulting, Inc. *Refining Estimates of Water-Related Energy Use in California*, *PIER Final Project Report (CEC-500-2006-118)*, (Sacramento: California Energy Commission, [December 2006]), p. 22. This document is available for review at http://www.energy.ca.gov/pier/project_reports/CEC-500-2006-118.html.

89 United States Environmental Protection Agency. Compilation of Air Pollutant Emission Factors AP 42, Fifth Edition. Research Triangle Park, NC: US Environmental Protection Agency, Office of Air Quality Planning and Standards, January 1995, Volume I, Chapter 4.3.5. This document is available for review at http://www.epa.gov/ttn/chief/ap42/index.html.

90 United States Environmental Protection Agency. Office of Solid Waste and Emergency Response, *Greenhouse Gas* Emission Factors for Management of Selected Materials in Municipal Solid Waste [EPA-530-R-98-013]. Washington DC: United States Environmental Protection Agency, (April 1998).

emissions expected as the OVOV Planning Area builds out. Detailed calculations of the operational emissions are found in **Appendix 3.4**.

GHG Emissions from Existing Conditions

The estimated maximum annual GHG emissions under existing conditions are shown in **Table 3.4-5, Estimated Existing Annual GHG Emissions**. Total GHG emissions are approximately 3,221,900 $MTCO_2e$/year.

Table 3.4-5
Estimated Existing Annual GHG Emissions

Existing GHG Emissions Sources	Emissions (Metric Tons CO_2e/year)
Motor Vehicles	2,457,800
Area Sources (Landscaping; Hearths)	9,900
Natural Gas Consumption	306,300
Electricity Consumption	313,200
Solid Waste Generation	10,300
Water Supply	105,600
Wastewater Treatment	18,800
Annual Total Existing GHG Emissions	**3,221,900**

*Source: Impact Sciences, Inc. Emissions calculations are provided in **Appendix 3.4**.*
Motor vehicle and area source emissions are averages for summertime and wintertime emissions. Numbers are rounded to their nearest 100.

GHG Emissions from the Proposed Area Plan and General Plan

As shown in **Table 3.4-6, GHG Emissions from the Proposed Area Plan and General Plan**, the total GHG emissions within the OVOV Planning Area at buildout under the proposed Area Plan and General Plan land use designations would be conservatively estimated at 5,070,300 $MTCO_2e$/year. This represents an approximate net increase of 1,848,400 $MTCO_2e$/year over existing conditions.

Table 3.4-6
GHG Emissions from the Proposed Area Plan and General Plan

General Plan & Area Plan GHG Emissions Sources	Emissions (Metric Tons CO_2e/year)
Amortized Construction	19,200
Motor Vehicles	3,602,300
Area Sources (Landscaping; Hearths)	20,000
Natural Gas Consumption	512,300
Electricity Consumption	722,800
Solid Waste Generation	21,800
Water Supply	144,800
Wastewater Treatment	27,100
Annual Total GHG Emissions	**5,070,300**
Existing Annual Total GHG Emissions	**3,221,900**
Net Total Increase of GHG Emissions[1]	**1,848,400**

Source: Impact Sciences, Inc. Emissions calculations are provided in ***Appendix 3.4****.*

[1] *Annual Total GHG Emissions minus Existing Annual Total GHG Emissions. Numbers are rounded to their nearest 100.*

The emissions associated with the proposed Area Plan and General Plan, as described above, represent a conservative assessment of the actual GHG emissions that would result from the plans' implementation. The construction emissions were based on the assumption that equipment would operate continuously throughout an 8-hour work-day. In reality, construction equipment tends to operate cyclically for only a portion of the work day. In addition, as noted in CARB's AB 32 *Climate Change Scoping Plan*, reductions in GHG emissions from construction equipment are expected to occur upon implementation of the low carbon fuel standard (Scoping Plan Measure 5) and vehicle hybridization and energy efficiency standards adopted for medium- and heavy-duty vehicles (Scoping Plan Measure 10). These additional reductions were not quantified in this analysis resulting in conservatively estimated construction GHG emissions. Nonetheless, construction equipment would comply with the low carbon fuel standard and vehicle hybridization and energy efficiency standards adopted for medium- and heavy-duty vehicles as required by state and local agencies.

As shown in **Table 3.4-6**, GHG emissions from motor vehicles represent the majority of the total operational GHG emissions associated with the proposed General Plan and Area Plan. Several regulatory actions have taken place at the federal and state level that would reduce GHG emissions from motor vehicles. As discussed previously, reductions associated with the Low Carbon Fuel Standard and the

GHG emission standards for light-duty automobiles and light-duty trucks under Assembly Bill 1493 have been taken into account. However, additional motor vehicle reductions are planned under AB 32. Under CARB's *Climate Change Scoping Plan*, fuel-efficient tire standards are being pursued (Scoping Plan Measure 7). Also, CARB is anticipated to adopt land use planning GHG reduction targets for Metropolitan Planning Organization under Senate Bill 375. Additionally, it is likely that technology would continue to improve and Corporate Average Fuel Economy (CAFE) standards would become more stringent in future years.

Similarly, the GHG emissions associated with electricity, natural gas, and water consumption represent conservative estimates since the effect of many of the reductions associated with energy efficiency policies are not included in the emission calculations. The GHG emissions associated with electricity, natural gas, and water consumption were calculated based on current building standards. Future GHG emissions associated with electricity and natural gas consumption rates from new construction would be reduced in accordance with efficiencies gained from compliance with newer California Title 24 building code standards. The California Energy Commission is required to periodically update Title 24 standards. In 2008, the California Energy Commission revised the standards and issued an *Impact Analysis* report that assessed the energy savings from the 2008 revisions to Title 24, relative to the previous standards.[91] Data from these reports indicate that energy consumption would be reduced by approximately 5 to 20 percent, depending on the type of new construction (i.e., non-residential, residential, etc.). In addition to the 2008 revisions to Title 24, it is likely that the California Energy Commission would further revise building code standards and require even more energy efficiency measures in the future. For these reasons, the GHG emissions associated with electricity, natural gas, and water consumption also represent conservative estimates.

Impact 3.4-2: Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

The policies listed below are the same for the City's General Plan and the County's Area Plan. The City is evaluating General Plan goals, objectives, and policies and the County is evaluating Area Plan policies.

Goal CO 8 promotes development designed to improve energy efficiency, reduce energy and natural resource consumption, and reduce GHG emissions. This goal would be achieved through the following objectives and policies: **Objectives CO 8.1** and **CO 8.2; Policies CO 8.1.3, CO 8.2.1,** and **CO 8.2.7**. GHG emissions would be reduced during construction by strengthening building codes for new construction and renovation to achieve a higher level of energy efficiency; by the City adopting a Green Building

91 California Energy Commission, *Impact Analysis: 2008 Update to the California Energy Efficiency Standards*, (2007).

Program or Green Building Code and the County implementing the ordinances developed through its Green Building Program; promoting orientation of buildings to maximize passive solar heating, minimizing solar heat gain, enhancing natural ventilation, promoting effective use of daylight, and optimizing opportunities for on-site solar generation; encouraging mitigation of the "heat island" effect through use of cool roofs, light-colored paving, and shading to reduce energy consumption for air conditioning; ensuring that all new City and County buildings, and all major renovations and additions, meet adopted green building standards, with a goal of achieving the LEED (Leadership in Energy and Environmental Design) Silver rating or equivalent of; and supporting the use of sustainable alternative fuel vehicles for machinery and fleets by evaluating fuel sources, manufacturing processes, maintenance costs and vehicle lifetime use.

Achievement of proposed **Goals LU 1, LU 2, LU 3, LU 4, LU 5**, **LU 6, LU 7, LU 9, C 1**, **C 2, C 3, C 4, C 5, C 6, C 7, CO 1, CO 3, CO 4, CO 7**, **CO 8**, and **CO 10** would directly and indirectly reduce greenhouse gas emissions through a mix of land uses, a diverse and healthy economy, a beautiful urban environment, environmentally responsible development, a unified and well managed network of streets and highways, by direct energy savings, and indirect energy savings through water conservation, and preservation of open space. These goals would be achieved through the proposed objectives and policies, which are listed in their entirety below: **Objective LU 1.2, Policy LU 1.2.13; Objective LU 2.1, Policy LU 2.1.2; Objective LU 2.3, Policies LU 2.3.2, LU 2.3.5; Objective LU 3.1, Policies LU 3.1.3, LU 3.1.7; Objective LU 3.2, Policies LU 3.2.1, LU 3.2.2; Objective LU 4.1, Policy LU 4.1.3; Objective LU 4.2, Policies LU 4.2.1, LU 4.2.2; Objective LU 4.4, Policy LU 4.4.3; Objective LU 4.5, Policies LU 4.5.2**, **LU 4.5.3, LU 4.5.4; Objective LU 5.1, Policies LU 5.1.3, LU 5.1.4, LU 5.1.5; Objective LU 5.2, Policies LU 5.2.1, LU 5.2.2, LU 5.2.3, LU 5.2.4, LU 5.2.5; Objective LU 6.1, Policy LU 6.1.3; Objective LU 7.1, Policies LU 7.1.2, LU 7.1.3, LU 7.1.4; Objective LU 9.1, Policy LU 9.1.7; Objective C 1.1, Policies C 1.1.1, C 1.1.2, C 1.1.3, C 1.1.4, C 1.1.6, C 1.1.10, C 1.1.11, C 1.1.12, C 1.1.13; Objective C 1.2, Policies C 1.2.1, C1.2.2, C 1.2.3, C 1.2.4, C 1.2.5, C 1.2.6, C 1.2.7, C 1.2.8, C 1.2.9, C 1.2.10, C 1.2.11, C 1.2.12; Objective C 1.3, Policies C 1.3.2, C 1.3.6, C 1.3.7; Objective C 2.2, Policies C 2.2.6, C 2.2.7; Objective C 3.1, Policies C 3.1.1, C 3.1.2, C 3.1.3, C 3.1.4, C 3.1.5, C 3.1.6, C 3.1.7; Objective C 3.2, Policies C 3.2.1, C 3.2.2, C 3.2.3, C 3.2.4; Objective C 3.3, Policies C 3.3.2, C 3.3.3, C 3.3.4, C 3.3.6, C 3.3.7; Objective C 4.1, Policies C 4.1.1, C 4.1.2, C 4.1.3, C 4.1.6, C4.1.7; Objective C 4.2, Policies C 4.2.1, C 4.2.2, C 4.2.3; Objective C 5.1, Policies C 5.1.2, C 5.1.4; Objective C 5.2, Policies C 5.2.1, C 5.2.4, C 5.2.5; Objective C 5.3, Policies C 5.3.3, C 5.3.4; Objective C 5.4, Policy C 5.4.3; Objective C 6.1, Policy C 6.1.5; Objective C 6.2, Policies C 6.2.1, C 6.2.2, C 6.2.3; Objective C 7.1, Policies C 7.1.1, C 7.1.2, C 7.1.3, C 7.1.4, C 7.1.5, C 7.1.6, C 7.1.7, C 7.1.8, C 7.1.9, C 7.1.10; Objective CO 1.1, Policy CO 1.1.1; Objective CO 1.2, Policy CO 1.2.1; Objective CO 1.3, Policies CO 1.3.1**, **CO 1.3.2**, **CO 1.3.3, CO 1.3.4; Objective CO 1.5, Policies CO 1.5.1**, **CO 1.5.7; Objective CO 3.1, Policies CO 3.1.5**, **CO 3.1.7**, **CO 3.1.11; Objective C 3.4, Policy C 3.4.2; Objective CO 3.6, Policy CO 3.6.1; Objective CO 4.1**, **Policies CO**

4.1.1, **CO 4.1.2**, **CO 4.1.3, CO 4.1.4**, **CO 4.1.5**, **CO 4.1.6**, **CO 4.1.7**, **CO 4.1.8; Objective CO 4.2, Policies CO 4.2.1**, **CO 4.2.2**, **CO 4.2.3; Objective CO 4.3, Policy CO 4.3.4**; **Objective C 7.1**, **Policies C 7.1.1, C 7.1.2, C 7.1.3,; Objective CO 8.1, Policies CO 8.1.1**, **CO 8.1.2**, **CO 8.1.3, CO 8.1.4; Objective CO 8.2, Policies CO 8.2.1**, **CO 8.2.2**, **CO 8.2.3**, **CO 8.2.4, CO 8.2.5, CO 8.2.6**, **CO 8.2.7**, **CO 8.2.8**, **CO 8.2.9**, **CO 8.2.10**, **CO 8.2.11**, **CO 8.2.12, CO 8.2.13, CO 8.2.14; Objective CO 8.3, Policies CO 8.3.1**, **CO 8.3.2**, **CO 8.3.3, CO 8.3.4, CO 8.3.5, CO 8.3.6**, **CO 8.3.7**, **CO 8.3.8**, **CO 8.3.9**, **CO 8.3.10**, **CO 8.3.11, CO 8.3.12**; **Objective CO 8.4, Policies CO 8.4.1**, **CO 8.4.2, CO 8.4.3, CO 8.4.4, CO 8.4.5, CO 8.4.6, CO 8.4.7, CO 8.4.8; Objective CO 10.1, Policies CO 10.1.9 and 10.1.17;** and **Objective CO 10.2** and **Policy CO 10.2.1.**

Goals C 2, CO 3, CO 4, and **CO 8** and the following proposed objectives and policies (**Objective C 2.2, Policy C 2.2.6; Objective CO 3.1, Policy CO 3.1.11; Objective CO 3.4, Policy CO 3.4.2; Objective CO 8.3; Policy CO 8.3.7**) would promote carbon sequestration through the planning of urban trees, maintaining a healthy mature urban forest, and protecting existing trees through forest management. Terrestrial carbon sequestration reduces global warming by slowing down the buildup of carbon dioxide in the atmosphere. Trees remove (sequester) CO_2 from the atmosphere during photosynthesis to form carbohydrates that are used in plant structure/function and return oxygen back to the atmosphere as a byproduct. Trees, therefore, act as a carbon sink by removing the carbon and storing it as cellulose in their trunk, branches, leaves and roots while releasing oxygen back into the air.

Proposed Area Plan Policies and General Plan Goals, Objectives and Policies

The goals, objectives, and policies listed below are generally the same for the County's Area Plan and City's General Plan. Since this EIR evaluates the County's Area Plan, the goals, objectives, and policies listed below are those in the County's Area Plan. These goals, objectives, and policies address consistency with the state's legislative efforts to reduce GHG emissions. State legislation, especially with respect to global climate change, is subject to a high degree of change given the difficulty in estimating the effects of legislation on future potential impacts, which are also not yet fully understood. Therefore, these goals, objectives, and policies are designed to incorporate flexibility in to accommodate legislative uncertainties. The County is evaluating its Area Plan policies and the City is evaluating its General Plan goals, objectives, and policies.

Goal LU 1: An interconnected Valley of Villages providing diverse lifestyles, surrounded by a greenbelt of natural open space.

Objective LU 1.2: Maintain the distinctive community character of villages and neighborhoods throughout the planning area by establishing uses,

densities, and design guidelines appropriate to the particular needs and goals of each area, including but not limited to the following:

Policy LU 1.2.13: Encourage use of the specific plan process to plan for cohesive, vibrant, pedestrian-oriented communities with mixed uses, access to public transit, and opportunities for living and working within the same community.

Goal LU 2: A mix of land uses to accommodate growth, supported by adequate resources and maintaining community assets.

Objective LU 2.1: Provide adequate, suitable sites for housing, employment, business, shopping, public facilities, public utility facilities, and community services to meet current needs and the anticipated needs of future growth.

Policy LU 2.1.2: On the Land Use Map, integrate land use designations in a manner that promotes healthy, walkable communities, by providing an appropriate mix of residential and service uses in proximity to one another.

Objective LU 2.3: Increase mixed-use development to create more livable neighborhoods, walkable business districts, and to reduce vehicle trips, while ensuring land use compatibility, through the following policies:

Policy LU 2.3.2: Either vertical or horizontal integration of uses shall be allowed in a mixed-use development, with an emphasis on tying together the uses with appropriate pedestrian linkages.

Policy LU 2.3.5: Mixed-use developments shall be designed to create a pedestrian-scale environment through appropriate street and sidewalk widths, block lengths, relationship of buildings to streets, and use of public spaces.

Goal LU 3: Healthy and safe neighborhoods for all residents.

Objective LU 3.1: Provide for a diversity of housing types available to provide safe and suitable homes for all economic levels, household sizes, age groups and special needs groups within the community.

Policy LU 3.1.3: Promote opportunities for live-work units to accommodate residents with home-based businesses.

Policy LU 3.1.7: Promote development of housing for students attending local colleges, in consideration of access to campuses to the extent practicable.

Objective LU 3.2: Promote walkable neighborhoods that provide safe access to community services and essential services.

Policy LU 3.2.1: Require provision of adequate walkways in urban residential neighborhoods that provide safe and accessible connections to destinations such as schools, parks, and neighborhood commercial centers.

Policy LU 3.2.2: In planning residential neighborhoods, include pedestrian linkages, landscaped parkways with sidewalks, and separated trails for pedestrians and bicycles, where appropriate and feasible.

Goal LU 4: A diverse and healthy economy.

Objective LU 4.1: Promote creation of strong regional and local economies.

Policy LU 4.1.3: Direct business creation and expansion for larger companies within and adjacent to existing and planned business centers and major transportation corridors.

Objective LU 4.2: Promote job creation, focusing on employment generators in the technical and professional sectors.

Policy LU 4.2.1: Pursue business attraction and expansion programs for clean industries that provide job opportunities for local residents, particularly in the areas of film/entertainment, biotechnology, aerospace, and technology.

Policy LU 4.2.2: Achieve a balanced ratio of jobs to housing through business expansion and economic development programs, with a goal of at least 1.5 jobs per household.

Objective LU 4.4: Expand infrastructure to attract and sustain new business.

Policy LU 4.4.3: Evaluate the feasibility of connecting business activity centers throughout the Santa Clarita Valley with light rail, to provide increased mobility and access for customers and employees between the Valencia Town Center, Whittaker Bermite property, Newhall, Valencia Industrial Center, Magic Mountain and Entrada, Newhall Ranch, and other areas as deemed appropriate.

Objective LU 4.5: Ensure creation of attractive and technology-friendly business environments to attract tenants and employees.

Policy LU 4.5.2: Encourage the provision of usable open space that is accessible to employees and visitors, and discourage the provision of large areas of water-consuming landscaping that are not usable or accessible.

Policy LU 4.5.3: Promote the inclusion of state-of-the-art technology within business complexes for telecommunications, heating and cooling, water and energy conservation, and other similar design features.

Policy LU 4.5.4: Encourage the provision of support services for employees within business park areas, such as dining and personal services where appropriate, to reduce vehicle trips and promote pedestrian-friendly work environments.

Goal LU 5: Enhanced mobility through alternative transportation choices and land use patterns.

Objective LU 5.1: Provide for alternative travel modes linking neighborhoods, commercial districts, and job centers.

Policy LU 5.1.1: Require safe, secure, clearly delineated, adequately illuminated walkways and bicycle facilities in all commercial and business centers.

Policy LU 5.1.2: Require connectivity between walkways and bikeways serving neighborhoods and nearby commercial areas, schools, parks, and other supporting services and facilities.

Policy LU 5.1.3: Ensure that adequate bus turnouts, served by walkways and comfortable, safe, and convenient waiting facilities, are provided for transit users within residential, shopping, and business developments.

Objective LU 5.2: Coordinate land use designations with support services and public transit in order to encourage vehicle trip reduction.

Policy LU 5.2.1: Designate higher-density residential uses in areas served by public transit and a full range of support services.

Policy LU 5.2.2: Provide for location of neighborhood commercial uses in proximity to the neighborhoods they serve, to encourage cycling and walking to local stores.

Policy LU 5.2.3: Promote location of non-polluting businesses providing employment opportunities in proximity to neighborhoods, to encourage walking to work.

Policy LU 5.2.4: Encourage transit-oriented development (TOD) through designation of land uses that allow compact, mixed-use development in proximity to rail stations and multi-modal transit facilities, in conformance with applicable policies.

Policy LU 5.2.5: Encourage the mix of compatible uses in areas where, though not served by rail or transit, mixed uses will achieve more walkable neighborhoods and trip reduction, in conformance with applicable policies.

Goal LU 6: A scenic and beautiful urban environment that builds on the community's history and natural setting.

Objective LU 6.1: Maintain the natural beauty of the Santa Clarita Valley's hillsides, significant ridgelines, canyons, oak woodlands, rivers and streams.

Policy LU 6.1.3: Ensure that new development in hillside areas is designed to protect the scenic backdrop of foothills and canyons enjoyed by Santa Clarita Valley communities, through requiring compatible hillside management techniques that may include but are not limited to density-controlled development (clustering) subject to the limitations in Policy LU 1.3.5; contouring and landform grading; revegetation with native plants; limited site disturbance; avoidance of tall retaining and build-up walls; use of stepped pads; and other techniques as deemed appropriate.

Goal LU 7: Environmentally responsible development through site planning, building design, waste reduction, and responsible stewardship of resources.

Objective LU 7.1: Achieve greater energy efficiency in building and site design.

Policy LU 7.1.2: Promote the use of solar panels and renewable energy sources in all projects.

Policy LU 7.1.3: Encourage development of energy-efficient buildings, and discourage construction of new buildings for which energy efficiency cannot be demonstrated.

Policy LU 7.1.4: Support the establishment of energy-efficient industries in the Santa Clarita Valley.

Goal LU 9: Adequate public facilities and services, provided in a timely manner and in appropriate locations to serve existing and future residents and businesses.

Objective LU 9.1: Coordinate land use planning with provision of adequate public services and facilities to support development.

Policy LU 9.1.7: Provide for location of additional waste transfer stations and other facilities to promote recycling and reuse of materials within Industrial designations on the Land Use Map, subject to the provisions of the County Zoning Ordinance.

Goal C 1: An inter-connected network of circulation facilities that integrates all travel modes, provides viable alternatives to automobile use, and conforms with regional plans.

Objective C 1.1: Provide multi-modal circulation systems that move people and goods efficiently while protecting environmental resources and quality of life.

Policy C 1.1.1: Reduce dependence on the automobile, particularly single-occupancy vehicle use, by providing safe and convenient access to transit, bikeways, and walkways.

Policy C 1.1.2: Promote expansion of alternative transportation options to increase accessibility to all demographic and economic groups throughout the community, including mobility-impaired persons, senior citizens, low-income persons, and youth.

Policy C 1.1.3: Work with local and regional agencies and employers to promote an integrated, seamless transportation system that meets access needs, including local and regional bus service, dial-a-ride, taxis, rail, van pools, car pools, bus pools, bicycling, walking, and automobiles.

Policy C 1.1.4: Promote public health through provision of safe, pleasant, and accessible walkways, bikeways, and multi-purpose trail systems for residents.

Policy C 1.1.6: Provide adequate facilities for multi-modal travel, including but not limited to bicycle parking and storage, expanded park-and-ride lots, and adequate station and transfer facilities in appropriate locations.

Policy C 1.1.10: Provide for flexibility in the transportation system to accommodate new technology as it becomes available, in order to reduce trips by vehicles using fossil fuels where feasible and appropriate.

Policy C 1.1.11: Promote use of multi-modal facilities by providing adequate and attractive way-finding programs directing users to transit stations, park-and-ride lots, bicycle storage, and other facilities.

Policy C 1.1.12: Encourage the City of Santa Clarita to implement recommendations of its Non-Motorized Transportation Plan to expand opportunities for alternative travel modes.

Policy C 1.1.13: Design new activity centers and improve existing activity centers to prioritize walking, bicycling and circulator transit for internal circulation of person-travel.

Objective C 1.2: Coordinate land use and circulation planning to achieve greater accessibility and mobility for users of all travel modes.

Policy C 1.2.1: Develop coordinated plans for land use, circulation, and transit to promote transit-oriented development that concentrates higher density housing, employment, and commercial areas in proximity to transit corridors.

Policy C 1.2.2: Create walkable communities, with paseos and walkways connecting residential neighborhoods to multi-modal transportation services such as bus stops and rail stations.

Policy C 1.2.3: Require that new commercial and industrial development provide walkway connections to public sidewalks and transit stops, where available.

Policy C 1.2.4: Consider location, availability, and accessibility of transit in evaluating new development plans.

Policy C 1.2.5: In mixed-use projects, require compact development and a mix of land uses to locate housing, workplaces, and services within walking distance or bicycling distance of each other.

Policy C 1.2.6: Provide flexible standards for parking and roadway design in transit-oriented development areas to promote transit use, where appropriate.

Policy C 1.2.7: In pedestrian-oriented areas, provide a highly connected circulation grid with relatively small blocks to encourage walking.

Policy C 1.2.8: Provide safe pedestrian connections across barriers, which may include but are not limited to major traffic corridors, drainage and flood control facilities, utility easements, grade separations, and walls.

Policy C 1.2.9: Emphasize providing right-of-way for non-vehicular transportation modes so that walking and bicycling are the easiest, most convenient modes of transportation available for short trips.

Policy C 1.2.10: Protect communities by discouraging the construction of facilities that sever residential neighborhoods.

Policy C 1.2.11: Reduce vehicle miles traveled (VMT) through the use of smart growth concepts.

Policy C 1.2.12: Balance the anticipated volume of people and goods movement with the need to maintain a walkable and bicycle friendly environment.

Objective C 1.3: Ensure conformance of the Circulation Plan with regional transportation plans.

Policy C 1.3.2: Through trip reduction strategies and emphasis on multi-modal transportation options, contribute to achieving the air quality goals of the South Coast Air Quality Management District Air Quality Management Plan.

Policy C 1.3.6: Support the expansion of Palmdale Regional Airport and the extension of multi-modal travel choices between the airport and the Santa Clarita Valley, in conformance with regional planning efforts.

Policy C 1.3.7: Apply for regional, State, and Federal grants for bicycle and pedestrian infrastructure projects.

Goal C 2: A unified and well-maintained network of streets and highways which provides safe and efficient movement of people and goods between neighborhoods, districts, and regional centers, while maintaining community character.

Objective C 2.2: Adopt and apply consistent standards throughout the Santa Clarita Valley for street design and service levels, which promote safety, convenience, and efficiency of travel.

Policy C 2.2.6: Within residential neighborhoods, promote the design of "healthy streets" which may include reduced pavement width, shorter block length, provision of on-street parking, traffic-calming devices, bike routes and pedestrian connectivity, landscaped parkways, and canopy street trees.

Policy C 2.2.7: Where practical, encourage the use of grid or modified grid street systems to increase connectivity and walkability; where cul-de-sacs are provided, promote the use of walkways connecting cul-de-sac bulbs to adjacent streets and/or facilities to facilitate pedestrian access; where street connectivity is limited and pedestrian routes are spaced over 500 feet apart, promote the use of intermediate pedestrian connections through or between blocks.

Goal C 3: Reduction of vehicle trips and emissions through effective management of travel demand, transportation systems, and parking.

Objective C 3.1: Promote the use of travel demand management strategies to reduce vehicle trips.

Policy C 3.1.1: In evaluating new development projects, require trip reduction measures as feasible to relieve congestion and reduce air pollution from vehicle emissions.

Policy C 3.1.2: Promote home-based businesses and live-work units as a means of reducing home-to-work trips.

Policy C 3.1.3: Promote the use of flexible work schedules and telecommuting to reduce home to work trips.

Policy C 3.1.4: Promote the use of employee incentives to encourage alternative travel modes to work.

Policy C 3.1.5: Promote the use of van pools, car pools, and shuttles to encourage trip reduction.

Policy C 3.1.6: Promote the provision of showers and lockers within businesses and employment centers, in order to encourage opportunities for employees to bicycle to work.

Policy C 3.1.7: Encourage special event center operators to advertise and offer discounted transit passes with event tickets.

Objective C 3.2: Encourage reduction in airborne emissions from vehicles through use of clean vehicles and transportation system management.

Policy C 3.2.1: Adopt clean vehicle purchase policies for City and County fleets.

Policy C 3.2.2: Continue to enhance signal timing and synchronization to allow for free traffic flow, minimizing idling and vehicle emissions.

Policy C 3.2.3: When available and feasible, provide opportunities and infrastructure to support use of alternative fuel vehicles and travel devices.

Policy C 3.2.4: The City and County will encourage new commercial and retail developments to provide prioritized parking for electric vehicles and vehicles using alternative fuels.

Objective C 3.3: Make more efficient use of parking and maximize economic use of land, while decreasing impervious surfaces in urban areas, through parking management strategies.

Policy C 3.3.2: In pedestrian-oriented, high-density mixed use districts, provide for common parking facilities to serve the district, where appropriate.

Policy C 3.3.3: Promote shared use of parking facilities between businesses with complementary uses and hours, where feasible.

Policy C 3.3.4: Within transit-oriented development projects, provide incentives such as higher floor area ratio and/or lower parking

requirements for commercial development that provides transit and ride-share programs.

Policy C 3.3.6: In the development review process, prioritize direct pedestrian access between building entrances, sidewalks and transit stops, by placing parking behind buildings where possible, to the sides of buildings when necessary, and always away from street intersections.

Policy C 3.3.7: Create parking benefit districts which invest meter revenues in pedestrian infrastructure and other public amenities wherever feasible.

Goal C 4: Rail service to meet regional and inter-regional needs for convenient, cost-effective travel alternatives, which are fully integrated into the Valley's circulation systems and land use patterns.

Objective C 4.1: Maximize the effectiveness of Metrolink's commuter rail service through provision of support facilities and land planning.

Policy C 4.1.1: Develop permanent Metrolink facilities with an expanded bus transfer station and additional park-and-ride spaces at the Via Princessa station, or other alternative location as deemed appropriate to meet the travel needs of residents on the Valley's east side.

Policy C 4.1.2: Coordinate with other agencies to facilitate extension of a passenger rail line from the Santa Clarita Station to Ventura County, which may be used for Metrolink service.

Policy C 4.1.3: Continue to expand and improve commuter services, including park-and-ride lots, bicycle parking and storage, and waiting facilities, at all Metrolink stations.

Policy C 4.1.6: Provide incentives to promote transit-oriented development near rail stations.

Policy C 4.1.7: Facilitate coordination of planning for any future high speed regional rail systems in the Valley with Metrolink services.

Objective C 4.2: Access to a high speed rail system connecting the Santa Clarita Valley with other regions, and other regional rail service connections.

Policy C 4.2.1: Continue to work with the Orange Line Development Authority (OLDA) to plan for development of an environmentally sensitive, high speed transportation system with a route through the Santa Clarita Valley, including a regional transit hub with associated infrastructure that would provide connections to the Los Angeles Basin, Palmdale Regional Airport, and other destinations.

Policy C 4.2.2: Coordinate with other agencies as needed to facilitate planning for other high-speed rail alternatives in the Santa Clarita Valley.

Policy C 4.2.3: Promote and encourage the expansion of Amtrak Rail Service to the Santa Clarita Valley.

Goal C 5: Bus transit service as a viable choice for all residents, easily accessible and serving destinations throughout the Valley.

Objective C 5.1: Ensure that street patterns and design standards accommodate transit needs.

Policy C 5.1.2: For private gated communities, require the developer to accommodate bus access through the entry gate, or provide bus waiting facilities at the project entry with pedestrian connections to residential streets, where appropriate.

Policy C 5.1.4: Provide for location of bus stops within ¼-mile of residential neighborhoods, and include paved bus waiting areas in street improvement plans wherever appropriate and feasible.

Objective C 5.2: Maximize the accessibility, safety, convenience and appeal of transit stops.

Policy C 5.2.1: Require paved waiting areas, accessible by paved walkways and reasonably direct pedestrian routes, for bus stops in new development; and provide for retrofitting of existing bus stops, where feasible and practicable.

Policy C 5.2.4: Enhance way-finding signage along walkways and paseos to direct pedestrians to transit stops.

Policy C 5.2.5: Complementary transportation modes should be interconnected at intermodal transit centers, including provisions for bicycles on buses, bicycle parking at transit centers, and park-and-ride at transit stops.

Objective C 5.3: Explore opportunities to improve and expand bus transit service.

Policy C 5.3.3: Evaluate the feasibility of providing "fly-away" bus transit service to airports located at Burbank, Palmdale, and Los Angeles, and implement this program when warranted by demand.

Policy C 5.3.4: Evaluate the feasibility of providing bus rapid transit (BRT) for key transit corridors when light-rail is not feasible or cost effective.

Objective C 5.4: Provide adequate funding to expand transit services to meet the needs of new development in the Valley.

Policy C 5.4.3: Seek funding for transit system expansion and improvement from all available sources, including local, state, and federal programs and grants.

Goal C 6: A unified and well-maintained bikeway system with safe and convenient routes for commuting, recreational use and utilitarian travel, connecting communities and the region.

Objective C 6.1: Adopt and implement a coordinated master plan for bikeways for the Valley, including both City and County areas, to make bicycling an attractive and feasible mode of transportation.

Policy C 6.1.5: Plan for continuous bikeways to serve major destinations, including but not limited to regional shopping areas, college campuses, public buildings, parks, and employment centers.

Objective C 6.2: Encourage provision of equipment and facilities to support the use of bicycles as an alternative means of travel.

Policy C 6.2.1: Require bicycle parking, which can include bicycle lockers and sheltered areas at commercial sites and multi-family housing complexes for use by employees and residents, as well as customers and visitors.

Policy C 6.2.2: Provide bicycle racks on transit vehicles to give bike-and-ride commuters the ability to transport their bicycles.

Policy C 6.2.3: Promote the inclusion of services for bicycle commuters, such as showers and changing rooms, as part of the development review process for new development or substantial alterations of existing commercial or industrial uses, where appropriate.

Goal C 7: Walkable communities, in which interconnected walkways provide a safe, comfortable and viable alternative to driving for local destinations.

Objective C 7.1: A continuous, integrated system of safe and attractive pedestrian walkways, paseos and trails linking residents to parks, open space, schools, services, and transit.

Policy C 7.1.1: In reviewing new development proposals, consider pedestrian connections within and between developments as an integral component of the site design, which may include seating, shading, lighting, directional signage, accessibility, and convenience.

Policy C 7.1.2: For existing walled subdivisions, extend pedestrian access to connect these neighborhoods to transit and services through public education and by facilitating retrofitted improvements where feasible.

Policy C 7.1.3: Where feasible and practical, consider grade separated facilities to provide pedestrian connections across arterial streets, flood control channels, utility easements, and other barriers.

Policy C 7.1.4: Identify and develop an improvement program to connect existing walkways and paseos to transit and services, where needed and appropriate.

Policy C 7.1.5: In new commercial development, provide for direct, clearly delineated, and preferably landscaped pedestrian walkways from transit stops and parking areas to building entries, and avoid placement of uses (such as drive-through facilities) in locations that would obstruct pedestrian pathways.

Policy C 7.1.6: Encourage placement of building entries in locations accessible to public sidewalks and transit.

Policy C 7.1.7: Utilize pedestrian-oriented scale and design features in areas intended for pedestrian use.

Policy C 7.1.8: Upgrade streets that are not pedestrian-friendly due to lack of sidewalk connections, safe street crossing points, vehicle sight distance, or other design deficiencies.

Policy C 7.1.9: Promote pedestrian-oriented street design through traffic-calming measures where appropriate, which may include but are not limited to bulb-outs or chokers at intersections, raised crosswalks, refuge islands, striping, and landscaping.

Policy C 7.1.10: Continue to expand and improve the Valley's multi-use trail system to provide additional routes for pedestrian travel.

Goal CO .1: **A** balance between the social and economic needs of Santa Clarita Valley residents and protection of the natural environment, so that these needs can be met in the present and in the future.

Objective CO 1.1: Protect the capacity of the natural "green" infrastructure to absorb and break down pollutants, cleanse air and water, and prevent flood and storm damage.

Policy CO 1.1.1: In making land use decisions, consider the complex, dynamic, and interrelated ways that natural and human systems interact,

such as the interactions between energy demand, water demand, air and water quality, and waste management.

Objective CO 1.2: Promote more sustainable utilization of renewable resource systems.

Policy CO 1.2.1: Improve the community's understanding of renewable resource systems that occur naturally in the Santa Clarita Valley, including systems related to hydrology, energy, ecosystems, and habitats, and the interrelationships between these systems, through the following measures:

c. Provide information to decision-makers about the interrelationship between traffic and air quality, ecosystems and water quality, land use patterns and public health, and other similar interrelationships between renewable resource systems in order to ensure that decisions are based on an understanding of these concepts.

Objective CO 1.3: Conserve and make more efficient use of non-renewable resource systems, such as fossil fuels, minerals, and materials.

Policy CO 1.3.1: Explore, evaluate, and implement methods to shift from using non-renewable resources to use of renewable resources in all aspects of land use planning and development.

Policy CO 1.3.2: Promote reducing, reusing, and recycling in all Land Use designations and cycles of development.

Policy CO 1.3.3: Provide informational material to the public about programs to conserve non-renewable resources and recover materials from the waste stream.

Policy CO 1.3.4: Promote and encourage cogeneration projects for commercial and industrial facilities, provided they meet all applicable environmental quality standards, including those related to air and noise, and provide a net reduction in greenhouse gas (GHG) emissions associated with energy production.

Objective CO 1.5: Manage urban development and human-built systems to minimize harm to ecosystems, watersheds, and other natural systems, such as urban

runoff treatment trains that infiltrate, treat and remove direct connections to impervious areas.

Policy CO 1.5.1: Promote the use of environmentally-responsible building design and efficiency standards in new development, and provide examples of these standards in public facilities, pursuant to the County's Green Building Program.

Policy CO 1.5.7: Consider the principles of environmental sustainability, trip reduction, walkability, stormwater management, and energy conservation at the site, neighborhood, district, city, and regional level, in land use decisions.

Goal CO 3: Conservation of biological resources and ecosystems, including sensitive habitats and species.

Objective CO 3.1: In review of development plans and projects, encourage conservation of existing natural areas and restoration of damaged natural vegetation to provide for habitat and biodiversity.

Policy CO 3.1.5: Promote the use of site-appropriate native or adapted plant materials, and prohibit use of invasive or noxious plant species in landscape designs.

Policy CO 3.1.7: Limit the use of turf-grass on development sites and promote the use of native or adapted plantings to promote biodiversity and natural habitat.

Policy CO 3.1.11: Promote use of pervious materials or porous concrete on sidewalks to allow for planted area infiltration, allow oxygen to reach tree roots (preventing sidewalk lift-up from roots seeking oxygen), and mitigate tree-sidewalk conflicts, in order to maintain a healthy mature urban forest.

Objective CO 3.4: Ensure that development in the Santa Clarita Valley does not adversely impact habitat within the adjacent National Forest lands.

Policy CO 3.4.2: Consider principles of forest management in land use decisions for projects adjacent to the National Forest, including limiting

the use of invasive species, discouraging off-road vehicle use, maintaining fuel modification zones and fire access roads, and other measures as appropriate, in accordance with the goals set forth in the Angeles National Forest Land Management Plan.

Objective CO 3.6: Minimize impacts of human activity and the built environment on natural plant and wildlife communities.

Policy CO 3.6.1: Minimize light trespass, sky-glow, glare, and other adverse impacts on the nocturnal ecosystem by limiting exterior lighting to the level needed for safety and comfort; reduce unnecessary lighting for landscaping and architectural purposes, and encourage reduction of lighting levels during non-business nighttime hours.

Goal CO 4: An adequate supply of clean water to meet the needs of present and future residents and businesses, balanced with the needs of natural ecosystems.

Objective CO 4.1: Promote water conservation as a critical component of ensuring adequate water supply for Santa Clarita Valley residents and businesses.

Policy CO 4.1.1: In coordination with applicable water suppliers, adopt and implement a water conservation strategy for public and private development.

Policy CO 4.1.2: Provide examples of water conservation in landscaping through use of low water use landscaping in public spaces such as parks, landscaped medians and parkways, plazas, and around public buildings.

Policy CO 4.1.3: Require low water use landscaping in new residential subdivisions and other private development projects, including a reduction in the amount of turf-grass.

Policy CO 4.1.4: Provide informational materials to applicants and contractors on Castaic Lake Water Agency's Landscape Education Program, and/or other information on xeriscape, native California plants, and water-conserving irrigation techniques as materials become available.

Policy CO 4.1.5: Promote the use of low-flow and/or waterless plumbing fixtures and appliances in all new on-residential development and residential development of five or more dwelling units.

Policy CO 4.1.6: Support amendments to the County Building Code that would promote upgrades to water and energy efficiency when issuing permits for renovations or additions to existing buildings.

Policy CO 4.1.7: Apply water conservation policies to all pending development projects, including approved tentative subdivision maps, to the extent permitted by law; where precluded from adding requirements by vested entitlements, encourage water conservation in construction and landscape design.

Policy CO 4.1.8: Upon the availability of non-potable water services, discourage and consider restrictions on the use of potable water for washing outdoor surfaces.

Objective CO 4.2: Work with water providers and other agencies to identify and implement programs to increase water supplies to meet the needs of future growth.

Policy CO 4.2.1: In cooperation with the Sanitation District and other affected agencies, expand opportunities for use of recycled water for the purposes of landscape maintenance, construction, water recharge, and other uses as appropriate.

Policy CO 4.2.2: Require new development to provide the infrastructure needed for delivery of recycled water to the property for use in irrigation, even if the recycled water main delivery lines have not yet reached the site, where deemed appropriate by the reviewing authority.

Policy CO 4.2.3: Promote the installation of rainwater capture and gray water systems in new development for irrigation, where feasible and practicable.

Objective CO 4.3: Limit disruption of natural hydrology by reducing impervious cover, increasing on-site infiltration, and managing stormwater runoff at the source.

Policy CO 4.3.4: Encourage and promote the use of new materials and technology for improved stormwater management, such as pervious paving, green roofs, rain gardens, and vegetated swales.

Goal CO 7: Clean air to protect human health and support healthy ecosystems.

Objective CO 7.1: Reduce air pollution from mobile sources.

Policy CO 7.1.1: Through the mixed land use patterns and multi-modal circulation policies set forth in the Land Use and Circulation Elements, limit air pollution from transportation sources.

Policy CO 7.1.2: : Support the use of alternative fuel vehicles.

Policy CO 7.1.3: Support alternative travel modes and new technologies, including infrastructure to support alternative fuel vehicles, as they become commercially available.

Goal CO 8: Development designed to improve energy efficiency, reduce energy and natural resource consumption, and reduce emissions of greenhouse gases. (Guiding Principle #11).

Objective CO 8.1: Comply with the requirements of State law, including AB 32, SB 375 and implementing regulations, to reach targeted reductions of greenhouse gas (GHG) emissions.

Policy CO 8.1.1: Create and adopt a Climate Action Plan within 18 months of the adoption date of the County's General Plan Update that meets State requirements and includes the following components:

a. Plans and programs to reduce GHG emissions to State-mandated targets, including enforceable reduction measures;

b. Mechanisms to ensure regular review of progress towards the emission reduction targets established by the Climate Action Plan;

c. Procedures for reporting on progress to officials and the public;

d. Procedures for revising the plan as needed to meet GHG emissions reduction targets; and

e. Allocation of funding and staffing for Plan implementation.

After adoption of the Climate Action Plan, amend this Area Plan if necessary to ensure consistency with the adopted Climate Action Plan.

Policy CO 8.1.2: Participate in the preparation of a regional Sustainable Communities Strategy (SCS) Plan to meet regional targets for greenhouse gas emission reductions, as required by SB 375.

Policy CO 8.1.3: Implement the ordinances developed through the County's Green Building Program.

Policy CO 8.1.4: Provide information and education to the public about energy conservation and local strategies to address climate change.

Policy CO 8.1.5: Coordinate various activities within the community and appropriate agencies related to GHG emissions reduction activities.

Objective CO 8.2: Reduce energy and materials consumption and greenhouse gas emissions in public uses and facilities.

Policy CO 8.2.1: Ensure that all new County buildings, and all major renovations and additions, meet adopted green building standards, with a goal of achieving the LEED (Leadership in Energy and Environmental Design) Silver rating or above, or equivalent where appropriate.

Policy CO 8.2.2: Ensure energy efficiency of existing public buildings through energy audits and repairs, and retrofit buildings with energy efficient heating and air conditioning systems and lighting fixtures.

Policy CO 8.2.3: Support purchase of renewable energy for public buildings, which may include installing solar photovoltaic systems to generate electricity for County buildings and operations and other methods as deemed appropriate and feasible, in concert with significant energy conservation efforts.

Policy CO 8.2.4: Establish maximum lighting levels for public facilities, and encourage reduction of lighting levels to the level needed for security purposes after business hours, in addition to use of downward-directed lighting and use of low-reflective paving surfaces.

Policy CO 8.2.5: Support installation of photovoltaic and other renewable energy equipment on public facilities, in concert with significant energy conservation efforts.

Policy CO 8.2.6: Promote use of solar lighting in parks and along paseos and trails, where practical.

Policy CO 8.2.7: Support the use of sustainable alternative fuel vehicles for machinery and fleets, where practical, by evaluating fuel sources, manufacturing processes, maintenance costs and vehicle lifetime use.

Policy CO 8.2.8: Promote the purchase of energy-efficient and recycled products, and vendors and contractors who use energy-efficient vehicles and products, consistent with adopted purchasing policies.

Policy CO 8.2.9: Reduce heat islands through installation of trees to shade parking lots and hardscapes, and use of light-colored reflective paving and roofing surfaces.

Policy CO 8.2.10: Support installation of energy-efficient traffic control devices, street lights, and parking lot lights.

Policy CO 8.2.11: Implement recycling in all public buildings, parks, and public facilities, including for special events.

Policy CO 8.2.12: Provide ongoing training to appropriate County employees on sustainable planning, building, and engineering practices.

Policy CO 8.2.13: Support trip reduction strategies for employees as described in the Circulation Element.

Policy CO 8.2.14: Reduce extensive heat gain from paved surfaces through development standards wherever feasible.

Objective CO 8.3: Encourage green building and sustainable development practices on private development projects, to the extent reasonable and feasible.

Policy CO 8.3.1: Evaluate development proposals for consistency with the ordinances developed through the County's Green Building Program.

Policy CO 8.3.2: Promote construction of energy efficient buildings through the certification requirements of the ordinances developed through the County's Green Building Program.

Policy CO 8.3.3: Promote energy efficiency and water conservation upgrades to existing non-residential buildings at the time of major remodel or additions.

Policy CO 8.3.4: Encourage new residential development to include on-site solar photovoltaic systems, or pre-wiring, in at least 50% of the residential units, in concert with other significant energy conservation efforts.

Policy CO 8.3.5: Encourage on-site solar generation of electricity in new retail and office commercial buildings and associated parking lots, carports, and garages, in concert with other significant energy conservation efforts.

Policy CO 8.3.6: Require new development to use passive solar heating and cooling techniques in building design and construction, which may include but are not be limited to building orientation, clerestory windows, skylights, placement and type of windows,

overhangs to shade doors and windows, and use of light colored roofs, shade trees, and paving materials.

Policy CO 8.3.7: Encourage the use of trees and landscaping to reduce heating and cooling energy loads, through shading of buildings and parking lots.

Policy CO 8.3.8: Encourage energy-conserving heating and cooling systems and appliances, and energy-efficiency in windows and insulation, in all new construction.

Policy CO 8.3.9: Limit excessive lighting levels, and encourage a reduction of lighting when businesses are closed to a level required for security.

Policy CO 8.3.10: Provide incentives and technical assistance for installation of energy-efficient improvements in existing and new buildings.

Policy CO 8.3.11: Consider allowing carbon off-sets for large development projects, if appropriate, which may include funding off-site projects or purchase of credits for other forms of mitigation, provided that any such mitigation shall be measurable and enforceable.

Policy CO 8.3.12: Reduce extensive heat gain from paved surfaces through development standards wherever feasible.

Objective CO 8.4: Reduce energy consumption for processing raw materials by promoting recycling and materials recovery by all residents and businesses throughout the community.

Policy CO 8.4.1: Encourage and promote the location of enclosed materials recovery facilities (MRF) within the Santa Clarita Valley.

Policy CO 8.4.2: Adopt mandatory residential recycling programs for all residential units, including single-family and multi-family dwellings.

Policy CO 8.4.3: Allow and encourage composting of greenwaste, where appropriate.

Policy CO 8.4.4: Promote commercial and industrial recycling, including recycling of construction and demolition debris.

Policy CO 8.4.5: Develop and implement standards for refuse and recycling receptacles and enclosures to accommodate recycling in all development.

Policy CO 8.4.6: Introduce and assist with the placement of receptacles for recyclable products in public places, including at special events.

Policy CO 8.4.7: Provide information to the public on recycling opportunities and facilities, and support various locations and events to promote public participation in recycling.

Policy CO 8.4.8: : Take an active role in promoting, incubating, and encouraging businesses that would qualify under the Recycling Market Development Zone program or equivalent, including those that manufacture products made from recycled products, salvage, and resource recovery business parks.

Goal CO 10: Preservation of open space to meet the community's multiple objectives for resource preservation.

Objective CO 10.1: Identify areas throughout the Santa Clarita Valley which should be preserved as open space in order to conserve significant resources for long-term community benefit.

Policy CO 10.1.9: Preserve forested areas, agricultural lands, wildlife habitat and corridors, wetlands, watersheds, groundwater recharge areas, and other open space that provides natural carbon sequestration benefits.

Policy CO 10.1.17: Allow alternative energy projects in areas designated for open space, where consistent with other uses and values.

Objective CO 10.2: Ensure the inclusion of adequate open space within development projects.

Policy CO 10.2.1: Encourage provision of vegetated open space on a development project's site, which may include shallow wetlands and ponds, drought tolerant landscaping, and pedestrian hardscape that includes vegetated areas.

Consistency with AB 32 Climate Change Scoping Plan

The OVOV proposed Area Plan and General Plan's consistency with the implementing programs and regulations to achieve the statewide GHG emission reduction goals established under AB 32 is evaluated below in **Table 3.4-7, Consistency of Sustainable Strategies with AB 32 Scoping Plan Measures.** The sustainable policies, project design features, and mitigation measures included in the OVOV proposed Area Plan and General Plan are evaluated relative to the key measures included in CARB's *Climate Change Scoping Plan*. As shown in the table below, the OVOV proposed Area Plan and General Plan would comply with the applicable Scoping Plan measures.

Table 3.4-7
Consistency of Sustainable Strategies with AB 32 Scoping Plan Measures

Scoping Plan Measure	OVOV Policy/Project Feature
SPM-1: California Cap-and-Trade Program linked to Western Climate Initiative	Not applicable: This measure is beyond the scope of the proposed project and beyond the control of the Project Applicant.
SPM-2: California Light-Duty Vehicle GHG Standards	Not applicable: This measure is beyond the scope of the proposed project and beyond the control of the Project Applicant.
SPM-3: Energy Efficiency	**Project is Consistent:** **Policy CO 8.1.3:** Implement the ordinances developed through the County's Green Building Program. **Policy CO 8.2.1:** Ensure that all new County buildings, and all major renovations and additions, meet adopted green building standards, with a goal of achieving the LEED (Leadership in Energy and Environmental Design) Silver rating or above, or equivalent, where appropriate. **Policy CO 8.2.2:** Ensure energy efficiency of existing public buildings through energy audits and repairs, and retrofit buildings with energy efficient heating and air conditioning systems and lighting fixtures. **Policy CO 8.2.3:** Support purchase of renewable energy for public buildings, which may include installing solar photovoltaic systems to generate electricity for County buildings and operations and other methods as deemed appropriate and feasible, in concert with significant energy conservation efforts.

Scoping Plan Measure	OVOV Policy/Project Feature
	Policy CO 8.2.4: Establish maximum lighting levels for public facilities, and encourage reduction of lighting levels to the level needed for security purposes after business hours, in addition to use of downward-directed lighting and use of low-reflective paving surfaces. **Policy CO 8.2.5:** Support installation of photovoltaic and other renewable energy equipment on public facilities, in concert with significant energy conservation efforts. **Policy CO 8.2.6:** Promote use of solar lighting in parks and along paseos and trails, where practical. **Policy CO 8.2.8:** Promote the purchase of energy-efficient and recycled products, and vendors and contractors who use energy-efficient vehicles and products, consistent with adopted purchasing policies. **Policy CO 8.2.9:** Reduce heat islands through installation of trees to shade parking lots and hardscapes, and use of light-colored reflective paving and roofing surfaces. **Policy CO 8.2.10:** Support installation of energy-efficient traffic control devices, street lights, and parking lot lights. **Policy CO 8.2.11:** Implement recycling in all public buildings, parks, and public facilities, including for special events. **Policy CO 8.2.12:** Provide ongoing training to appropriate County employees on sustainable planning, building, and engineering practices. **Policy CO 8.3.1:** Evaluate development proposals for consistency with the ordinances developed through the County's Green Building Program. **Policy CO 8.3.2:** Promote construction of energy efficient buildings through the certification requirements of the ordinances developed through the County's Green Building Program. **Policy CO 8.3.3:** Promote energy efficiency and water conservation upgrades to existing non-residential buildings at the time major remodel or additions. **Policy CO 8.3.4:** Encourage new residential development to include on-site solar photovoltaic systems, or pre-wiring, in at least 50% of the residential units, in concert with other significant energy conservation efforts. **Policy CO 8.3.5:** Encourage on-site solar generation of electricity in new retail and office commercial buildings and associated parking lots, carports, and garages, in concert with significant energy conservation efforts. **Policy CO 8.3.6:** Require new development to use passive solar heating and cooling techniques in building design and construction, which may include but are not be limited to building orientation, clerestory windows, skylights, placement and type of windows, overhangs to shade doors and windows, and use of light colored roofs, shade trees, and paving materials. **Policy CO 8.3.7:** Encourage the use of trees and landscaping to reduce heating and cooling energy loads, through shading of buildings and parking lots. **Policy CO 8.3.8:** Encourage energy-conserving heating and cooling systems and appliances, and energy-efficiency in windows and insulation, in all new construction. **Policy CO 8.3.9:** Limit excessive lighting levels, and encourage a reduction of lighting when businesses are closed to a level required for security. **Policy CO 8.3.10:** Provide incentives and technical assistance for installation of energy-efficient improvements in existing and new buildings.

Scoping Plan Measure	OVOV Policy/Project Feature
	Policy CO 8.3.11: Consider allowing carbon off-sets for large development projects, if appropriate, which may include funding off-site projects or purchase of credits for other forms of mitigation, provided that any such mitigation shall be measurable and enforceable. **Policy LU 7.1.2:** Promote the use of solar panels and renewable energy sources in all projects. **Policy LU 7.1.3:** Encourage development of energy-efficient buildings, and discourage construction of new buildings for which energy efficiency cannot be demonstrated.
SPM-4: Renewables Portfolio Standard	Not applicable: This measure is beyond the scope of the proposed project and beyond the control of the Project Applicant.
SPM-5: Low Carbon Fuel Standard	Not applicable: This measure is beyond the scope of the proposed project and beyond the control of the Project Applicant.
SPM-6: Regional Transportation-Related Greenhouse Gas Targets	**Project is Consistent:** **Policy LU 2.1.2:** On the Land Use Map, integrate land use designations in a manner that promotes healthy, walkable communities, by providing an appropriate mix of residential and service uses in proximity to one another. **Policy LU 2.3.1:** In a mixed- use development, residential densities at the higher end of the allowed range should be allowed only if the development incorporates a robust mix of non-residential uses. **Policy LU 2.3.2:** Either vertical or horizontal integration of uses shall be allowed in a mixed use development, with an emphasis on tying together the uses with appropriate pedestrian linkages. **Policy LU 2.3.4:** Adequate public spaces and amenities shall be provided in a mixed- use development to support both commercial and residential uses, including but not limited to plazas, landscaped walkways, village greens, and greenbelts. **Policy LU 2.3.5:** Mixed- use developments shall be designed to create a pedestrian-scale environment through appropriate street and sidewalk widths, block lengths, relationship of buildings to streets, and use of public spaces. **Policy LU 2.3.6:** Provide parking alternatives in mixed-use developments, including subterranean parking and structured parking to limit the amount of surface area devoted to vehicle storage. **Policy LU 3.1.1:** On the Land Use Map, designate adequate land for residential use at various densities to provide a mix of housing opportunities for all segments of the population, including attached, detached, senior, and mixed use housing types, which are consistent with community character and meet the region's housing goals. **Policy LU 3.1.3:** Promote opportunities for live-work units to accommodate residents with home-based businesses. **Policy LU 3.1.4:** Promote development of workforce housing to meet the needs of those employed in the Santa Clarita Valley. **Policy LU 3.1.7:** Promote development of housing for students attending local colleges, in consideration of access to campuses to the extent practicable. **Policy LU 3.2.1:** Require provision of adequate walkways in urban residential neighborhoods that provide safe and accessible connections to destinations such as schools, parks, and neighborhood commercial centers.

Scoping Plan Measure	OVOV Policy/Project Feature
	Policy LU 3.2.2: In planning residential neighborhoods, include pedestrian linkages, landscaped parkways with sidewalks, and separated trails for pedestrians and bicycles, where appropriate and feasible. **Policy LU 4.2.3:** Encourage businesses to locate in all appropriate areas of the community to encourage job creation in closer proximity to workforce housing. **Policy LU 5.1.1:** Require safe, secure, clearly-delineated, adequately-illuminated walkways and bicycle facilities in all commercial and business centers. **Policy LU 5.1.2:** Require connectivity between walkways and bikeways serving neighborhoods and nearby commercial areas, schools, parks, and other supporting services and facilities. **Policy LU 5.1.3:** Ensure that adequate bus turnouts, served by walkways and comfortable, safe, and convenient waiting facilities, are provided for transit users within residential, shopping, and business developments. **Policy LU 5.2.1:** Designate higher-density residential uses in areas served by public transit and a full range of support services. **Policy LU 5.2.2:** Provide for location of neighborhood commercial uses in proximity to the neighborhoods they serve, to encourage cycling and walking to local stores. **Policy LU 5.2.3:** Promote location of non-polluting businesses providing employment opportunities in proximity to neighborhoods, to encourage walking to work. **Policy LU 5.2.4:** Encourage transit-oriented development (TOD) through designation of land uses that allow compact, mixed-use development in proximity to rail stations and multi-modal transit facilities, in conformance with applicable policies. **Policy LU 5.2.5:** Encourage the mix of compatible uses in areas where, though not served by rail or transit, mixed uses will achieve more walkable neighborhoods and trip reduction, in conformance with applicable policies. **Policy C 1.1.1:** Reduce dependence on the automobile, particularly single-occupancy vehicle use, by providing safe and convenient access to transit, bikeways, and walkways. **Policy C 1.1.2:** Promote expansion of alternative transportation options to increase accessibility to all demographic and economic groups throughout the community, including mobility-impaired persons, senior citizens, low-income persons, and youth. **Policy C 1.1.3:** Work with local and regional agencies and employers to promote an integrated, seamless transportation system that meets access needs, including local and regional bus service, dial-a-ride, taxis, rail, van pools, car pools, bus pools, bicycling, walking, and automobiles. **Policy C 1.1.6:** Provide adequate facilities for multi-modal travel, including but not limited to bicycle parking and storage, expanded park-and-ride lots, and adequate station and transfer facilities in appropriate locations. **Policy C 1.1.12:** Encourage the City of Santa Clarita to implement recommendations of its Non-Motorized Transportation Plan to expand opportunities for alternative travel modes. **Policy C 1.1.13:** Design new activity centers and improve existing activity centers to prioritize walking, bicycling and circulator transit for internal circulation of person-travel.

Scoping Plan Measure	OVOV Policy/Project Feature
	Policy C 1.2.1: Develop coordinated plans for land use, circulation, and transit to promote transit-oriented development that concentrates higher density housing, employment, and commercial areas in proximity to transit corridors. **Policy C 1.2.2:** Create walkable communities, with paseos and walkways connecting residential neighborhoods to multi-modal transportation services such as bus stops and rail stations. **Policy C 1.2.3:** Require that new commercial and industrial development provide walkway connections to public sidewalks and transit stops, where available. **Policy C 1.2.4:** Consider location, availability, and accessibility of transit in evaluating new development plans. **Policy C 1.2.5:** In mixed- use projects, require compact development and a mix of land uses to locate housing, workplaces, and services within walking or bicycling distance of each other. **Policy C 1.2.6:** Provide flexible standards for parking and roadway design in transit-oriented development areas to promote transit use, where appropriate. **Policy C 1.2.7:** In pedestrian-oriented areas, provide a highly connected circulation grid with relatively small blocks to encourage walking. **Policy C 1.2.8:** Provide safe pedestrian connections across barriers, which may include but are not limited to major traffic corridors, drainage and flood control facilities, utility easements, grade separations, and walls. **Policy C 1.2.9:** Emphasize providing right-of-way for non-vehicular transportation modes so that walking and bicycling are the easiest, most convenient modes of transportation available for short trips. **Policy C 1.2.11:** Reduce vehicle miles traveled (VMT) through the use of smart growth concepts. **Policy C 2.1.1:** Protect mobility on arterial highways by limiting excessive cross traffic, access points, and turning movements; traffic signals on arterial highways should be spaced at least ½-mile apart, and the minimum allowable separation should be at least ¼-mile. **Policy C 2.1.2:** Enhance connectivity of the roadway network to the extent feasible given the constraints of topography, existing development patterns, and environmental resources, by constructing grade separations and bridges; connecting discontinuous streets; extending secondary access into areas where needed; prohibiting gates on public streets; and other improvements as deemed appropriate based on traffic analysis. **Policy C 2.2.6:** Within residential neighborhoods, promote the design of "healthy streets" which may include reduced pavement width, shorter block length, provision of on-street parking, traffic-calming devices, bike routes and pedestrian connectivity, landscaped parkways, and canopy street trees. **Policy C 2.2.7:** Where practical, encourage the use of grid or modified grid street systems to increase connectivity and walkability; where cul-de-sacs are provided, promote the use of walkways connecting cul-de-sac bulbs to adjacent streets and/or facilities to facilitate pedestrian access; where street connectivity is limited and pedestrian routes are spaced over 500 feet apart, promote the use of intermediate pedestrian connections through or between blocks. **Policy C 2.2.14:** Streets should be designed in context with the terrain and the natural and built features of the area, but excessively circuitous streets should be avoided to minimize unnecessary vehicle, bicycle and pedestrian mileage.

Scoping Plan Measure	OVOV Policy/Project Feature
SPM-7: Vehicle Efficiency Measures	Not applicable: This measure is beyond the scope of the proposed project and beyond the control of the Project Applicant.
SPM-8: Goods Movement	Not applicable: This measure is beyond the scope of the proposed project and beyond the control of the Project Applicant.
SPM-9: Million Solar Roofs Program	**Project is Consistent:** **Policy LU 7.1.2:** Promote the use of solar panels and renewable energy sources in all projects. **Policy CO 8.2.3:** Support purchase of renewable energy for public buildings, which may include installing solar photovoltaic systems to generate electricity for County buildings and operations and other methods as deemed appropriate and feasible, in concert with significant energy conservation efforts. **Policy CO 8.2.6:** Promote use of solar lighting in parks and along paseos and trails, where practical. **Policy CO 8.3.4:** Encourage new residential development to include on-site solar photovoltaic systems, or pre-wiring, in at least 50% of the residential units, in concert with other significant energy conservation efforts.
SPM-10: Heavy/Medium-Duty Vehicles	Not applicable: This measure is beyond the scope of the proposed project and beyond the control of the Project Applicant.
SPM-11: Industrial Emissions	Not applicable: This measure is beyond the scope of the proposed project and beyond the control of the Project Applicant.
SPM-12: High Speed Rail	Not applicable: This measure is beyond the scope of the proposed project and beyond the control of the Project Applicant.
SPM-13: Green Building Strategy	**Project is Consistent:** **Policy CO 8.3.1:** Evaluate development proposals for consistency with the ordinances developed through the County's Green Building Program. **Policy CO 8.3.2:** Promote construction of energy efficient buildings through the certification requirements of the ordinances developed through the County's Green Building Program. **Policy CO 8.3.3:** Promote energy efficiency and water conservation upgrades to existing non-residential buildings at the time of major remodel, or additions. **Policy CO 8.3.4:** Encourage new residential development to include on-site solar photovoltaic systems, or pre-wiring, in at least 50% of the residential units, in concert with other significant energy conservation efforts. **Policy CO 8.3.5:** Encourage on-site solar generation of electricity in new retails and office commercial buildings and associated parking lots, carports, and garages, in concert with other significant energy conservation efforts. **Policy CO 8.3.6:** Require new development to use passive solar heating and cooling techniques in building design and construction, which may include but are not be limited to building orientation, clerestory windows, skylights, placement and type of windows, overhangs to shade doors and windows, and use of light colored roofs, shade trees, and paving materials. **Policy CO 8.3.7:** Encourage the use of trees and landscaping to reduce heating and cooling energy loads, through shading of buildings and parking lots.
SPM-14: High Global Warming Potential Gases	Not applicable: This measure is beyond the scope of the proposed project and beyond the control of the Project Applicant.

Scoping Plan Measure	OVOV Policy/Project Feature
SPM-15: Recycling and Waste	**Project is Consistent:** **Policy CO 1.3.1:** Explore, evaluate, and implement methods to shift from using non-renewable resources to use of renewable resources in all aspects of land use planning and development. **Policy CO 1.3.2:** Promote reducing, reusing, and recycling in all Land Use designations and cycles of development. **Policy CO 1.3.3:** Provide informational material to the public about programs to conserve non-renewable resources and recover materials from the waste stream. **Policy CO 8.2.11:** Implement recycling in all public buildings, parks, and public facilities, including for special events. **Policy CO 8.4.1:** Encourage and promote the location of enclosed materials recovery facilities (MRF) within the Santa Clarita Valley. **Policy CO 8.4.2:** Adopt mandatory residential recycling programs for all residential units, including single-family and multi-family dwellings. **Policy CO 8.4.3:** Allow and encourage composting **of** greenwaste, where appropriate. **Policy CO 8.4.5:** Develop and implement standards for refuse and recycling receptacles and enclosures to accommodate recycling in all development. **Policy CO 8.4.6:** Introduce and assist with the placement of receptacles for recyclable products in public places, including at special events. **Policy CO 8.4.7:** Provide information to the public on recycling opportunities and facilities, and support various locations and events to promote public participation in recycling. **Policy CO 8.4.8:** Take an active role in promoting, incubating, and encouraging businesses that would qualify under the Recycling Market Development Zone program or equivalent, including those that manufacture products made from recycled products, salvage, and resource recovery business parks. **Policy LU 7.5.1:** Ensure that all new development provides adequate space for recycling receptacles and bins on site.
SPM-16: Sustainable Forests	**Project is Consistent:** **Policy CO 3.4.2:** Consider principles of forest management in land use decisions for projects adjacent to the National Forest, including limiting the use of invasive species, discouraging off-road vehicle use, maintaining fuel modification zones and fire access roads, and other measures as appropriate, in accordance with the goals set forth in the Angeles National Forest Land Management Plan. **Policy CO 10.1.9:** Preserve forested areas, agricultural lands, wildlife habitat and corridors, wetlands, watersheds, groundwater recharge areas, and other open space that provides natural carbon sequestration benefits.
SPM-17: Water	**Project is Consistent:** **Policy CO 4.1.1:** In coordination with applicable water suppliers, adopt and implement a water conservation strategy for public and private development. **Policy CO 4.1.2:** Provide examples of water conservation in landscaping through use of low water use landscaping in public spaces such as parks, landscaped medians and parkways, plazas, and around public buildings. **Policy CO 4.1.3:** Require low water use landscaping design into in new residential subdivisions and other private development projects, including a reduction in the allowable amount of turf-grass.

Scoping Plan Measure	OVOV Policy/Project Feature
	Policy CO 4.1.4: Provide informational materials to applicants and contractors on the Castaic Lake Water Agency's Landscape Education Programs, and/or other information on xeriscape, native California plants, and water-conserving irrigation techniques as materials become available. **Policy CO 4.1.5:** Promote the use of low-flow and/or waterless plumbing fixtures and appliances in all new non-residential development and residential development of five or more dwelling units. **Policy CO 4.1.6:** Support amendments to the County Building Code that would promote upgrades to water and energy efficiency when issuing permits for renovations or additions to existing buildings. **Policy CO 4.1.7:** Apply water conservation policies to all pending development projects, including approved tentative subdivision maps, to the extent permitted by law; where precluded from adding requirements by vested entitlements, encourage water conservation in construction and landscape design. **Policy CO 4.1.8:** Upon the availability of non-potable water services, discourage and consider restrictions on the use of potable water for washing outdoor surfaces. **Policy CO 4.2.1:** In cooperation with the Sanitation District and other affected agencies, expand opportunities for use of recycled water for the purposes of landscape maintenance, construction, water recharge, and other uses as appropriate. **Policy CO 4.2.2:** Require new development to provide the infrastructure needed for delivery of recycled water to the property for use in irrigation, even if the recycled water main delivery lines have not yet reached the site, where deemed appropriate by the reviewing authority. **Policy CO 4.2.3:** Promote the installation of rainwater capture and gray water systems in new development for irrigation, where feasible and practicable. **Policy CO 4.2.4:** Identify and protect areas with substantial potential for groundwater recharge, and promote recharge of groundwater basins throughout the watershed (excluding the river bed). **Policy CO 4.2.5:** Participate and cooperate with other agencies to complete, adopt, and implement an Integrated Regional Water Management Plan to build a diversified portfolio of water supply, water quality, and resource stewardship priorities for the Santa Clarita Valley. **Policy LU 4.5.2:** Encourage the provision of usable open space that is accessible to employees and visitors, and discourage the provision of large areas of water-consuming landscaping that are not usable or accessible.
SPM-18: Agriculture	Not applicable: This measure is beyond the scope of the proposed project and beyond the control of the Project Applicant.

Source: Impact Sciences, Inc., (2009).

In addition, as CARB and the SCAQMD develop additional control measures and regulations for direct and indirect GHG emissions (e.g., indirect source rule), OVOV Planning Area occupants may be required to comply with any newly adopted measures and regulations.

As previously discussed, CARB's AB 32 *Climate Change Scoping Plan* outlines the State's strategies for achieving 1990-level GHG emissions by 2020. CARB has estimated the State's 1990 emissions at approximately 427 $MMTCO_2e$. Using 2002-2004 data, CARB projected the State's 2020 "business as usual" emissions at approximately 596 $MMTCO_2e$. The 2020 business as usual projected emissions were based on current technology with assumptions for growth factors based on each economic sector. For example, it was assumed that all growth in electricity demand by 2020 would be met by in-state natural gas-fired power plants. Similarly, transportation-related GHG emissions in 2020 were based on current fuel sales data and growth in vehicle miles traveled derived from EMFAC2007 with no change in vehicle fleet mix over time. Based on CARB's GHG emissions inventory, the *Climate Change Scoping Plan* identifies measures that will achieve the necessary reductions from business as usual conditions. **Table 3.4-8, Climate Change Scoping Plan GHG Emission Reductions**, lists the Scoping Plan measures and the estimated reductions from business as usual conditions. Because different sectors will achieve different levels of emission reductions, **Table 3.4-8** lists the emission reductions by sector as well as the percent reduction from business as usual conditions in 2020 for each sector. For example, Scoping Plan Measure 2, California Light-Duty Vehicle Standards, would account for a reduction of 31.7 $MMTCO_2e$, which is equal to a 14.1 percent reduction of the total transportation sector emissions projected under 2020 business as usual conditions.

The reductions outlined in the table above would primarily be implemented through a variety of regulatory actions at the State level and partnerships with local governments. In addition, local air quality management districts and air pollution control districts may impose permitting requirements for industrial and other stationary sources of GHG emissions. As shown previously in **Table 3.4-7**, the goals, objectives, and policies of the OVOV project would be consistent with the measures and strategies recommended by CARB. In addition to demonstrating consistency with these measures and strategies, the OVOV project would achieve real and quantifiable reductions in GHG emissions from business as usual conditions so that it would not impede or conflict with the State's goal outlined in AB 32—that is, achieving 1990 levels of GHG emissions by 2020. Sources of GHG emissions within the OVOV project would comply with regulatory-driven requirements at the State level as well as with permitting requirements from local agencies. It is generally assumed that the OVOV project would be consistent with the reduction levels listed in **Table 3.4-8** from regulatory- or permit-driven requirements. Reductions from measures and strategies applicable to the OVOV project and achieved via local government partnerships include Scoping Plan Measures 3 (Energy Efficiency – Commercial/Residential), 6 (Regional Transportation), and 9 (Million Solar Roofs Initiative).

Table 3.4-8
Climate Change Scoping Plan GHG Emission Reductions

Sector	ID No.	Scoping Plan Measure	Reductions ($MMTCO_2e$)	Percent Reductions from BAU (by Sector)
Capped Sectors (Subject to SPM-1, California Cap and Trade Program)				
Transportation	SPM-2	California Light-Duty Vehicle Standards*	31.7	14.1%
Transportation	SPM-5	Low Carbon Fuel Standard*	15.0	6.7%
Transportation	SPM-6	Regional Transportation	5.0	2.2%
Transportation	SPM-7	Vehicle Efficiency*	4.5	2.0%
Transportation	SPM-8	Goods Movement*	3.7	1.6%
Transportation	SPM-10	Medium/Heavy Duty Vehicles*	1.4	0.6%
Transportation	SPM-12	High Speed Rail*	1.0	0.4%
Electricity	SPM-3	Energy Efficiency – Utilities*	21.9	15.7%
Electricity	SPM-4	Renewable Portfolio Standard*	21.3	15.3%
Electricity	SPM-9	Million Solar Roofs Initiative	2.1	1.5%
Commercial/ Residential	SPM-3	Energy Efficiency – Commercial/Residential	4.4	9.4%
Industry (capped)	SPM-11	Industrial Emissions*	0.3	0.3%
Additional Reductions Necessary (all sectors)**			34.4	5.8%
Uncapped Sectors (Not subject to SPM-1, California Cap and Trade Program)				
Industry (uncapped)	SPM-11	Industrial Emissions*	1.1	1.1%
High GWP	SPM-14	High GWP Gases*	20.2	43.1%
Recycling and Waste	SPM-15	Recycling/Waste (Landfill Methane Control)*	1.0	13.0%

Source: California Air Resources Board, Climate Change Scoping Plan*, (2008).*

* *Reductions from these measures would primarily result from regulatory efforts at the State level or permitting requirements from local agencies.*

** *The* Climate Change Scoping Plan *requires additional reductions from capped sectors to meet AB 32. The methods and strategies to achieve these additional reductions are not yet specified. CARB estimates that the additional reductions could be achieved via the cap and trade program as well as through additional regulations, such as more stringent light-duty vehicle emission standards.*

Note: Scoping Plan Measures 13, 15, and 17 are not included in the emission reduction projections due to the potential for double counting. Scoping Plan Measure 16 is expected to continue to achieve a 5 $MMTCO_2e$ reduction in GHG emissions due to carbon sequestration; however, it is not included in the emission reduction projections as a conservative assumption. Scoping Plan Measure 18 is not included in the emission reduction projections because compliance is voluntary.

Reductions associated with the commercial/residential component of Scoping Plan Measure 3 are anticipated to result in approximately 9.4 percent of the 2020 business as usual emissions for the electricity sector. As previously discussed, buildings associated with future development in the OVOV Planning Area would be constructed using Title 24 building code standards in effect at the time of

construction. The 2008 revisions to Title 24 would reduce emissions associated with residential electricity consumption by 19.7 percent and non-residential electricity consumption by 4.9 percent.[92] Emission reductions due to the 2008 revisions to Title 24 were not included in the emission estimates provided in **Table 3.4-6**. Future revisions to the Title 24 building code standards would result in even greater reductions. Based on the mix of residential and commercial land uses associated with the OVOV proposed Area Plan and General Plan, the average reduction in emissions would be 11.8 percent, under Title 24 (2008).[93] This value exceeds the sector-specific projected reduction of 9.4 percent listed in **Table 3.4-8**.

Reductions associated with Scoping Plan Measure 6 (Regional Transportation) are anticipated to equal approximately 5 $MMTCO_2e$. The Southern California Association of Governments is in the process of developing a methodology for the implementation of SB 375 in the region. As discussed earlier in this section, SB 375 requires regional governing bodies in each of the state's major metropolitan areas to adopt, as part of their regional transportation plan, a "sustainable communities strategy" that will meet the region's target for reducing GHG emissions. CARB has established draft regional reduction targets for SCAG of 8 percent for 2020 and 13 percent for 2035, subject to SCAG Board approval.

As previously discussed, the proposed Area Plan includes goals, objectives, and policies to address the deficiencies in the existing alternative transportation system, to provide direction for the expansion and improvement of alternative transportation throughout the Santa Clarita Valley, and to promote denser, transit-oriented development in areas where transit use is already high. Emphasis is also placed on introducing mixed-use development on older, underutilized commercial corridors in order to allow residents to reach services in ways that are not exclusively automobile-dependent, such as walking, biking and transit. Grouping mixed uses together reduces the need for residents to make multiple vehicle trips to obtain services and reach employment centers, resulting in a net reduction in the number of vehicles on the roadway. This would yield an improved jobs-to-housing balance for the Santa Clarita Valley, which reduces the need for residents to commute outside the Valley to employment centers to the south.

The OVOV planning effort has designated specific areas to receive increased residential density. This was accomplished by a) creating a Mixed Use land use designation along transit hubs, transit corridors and at outdated strip commercial centers in the City of Santa Clarita; and b) the designation for suitable sites that could accommodate a range of income levels. This increase in residential density is abated by the reduction of units and sprawl in rural areas. Many of these units are accommodated in the Mixed Use

92 California Energy Commission, *Impact Analysis: 2008 Update to the California Energy Efficiency Standards*, (2007).

93 Residential land uses account for approximately 46.6 percent of the total electricity demand. Non-residential land uses account for approximately 53.4 percent of the total electricity demand.

category and are located along urbanized transit corridors, in transit hub areas and in the higher density commercial core areas. The increase in residential units in the more dense environs would help to meet the objectives of SB 375 by creating a community that is more walkable, more transit oriented, and with creative opportunities for people to live, work and play in a variety of village environments throughout the planning area.

Consistency with 2006 Climate Action Team Report (State of California)

The 2006 Climate Action Team report contains recommendations and strategies to reduce emissions of GHGs and associated impacts. As previously discussed, some strategies are currently being developed and/or implemented by state agencies such as the Cal/EPA and the Resources Agency. As listed below in **Table 3.4-9, Consistency with the 2006 Climate Action Team Report**, the OVOV proposed Area Plan and General Plan would be consistent with the recommended measures.

Table 3.4-9
Consistency with the 2006 Climate Action Team Report

ID	Strategy	OVOV Policy/Project Feature
Implementing Agency: CalEPA/California Air Resources Board		
CAT-1	Vehicle Climate Change Standards: With the passage of AB 1493, Pavley, Chapter 200, Statutes of 2002, California moved to the forefront of reducing vehicle climate change emissions. This bill required the state to develop and adopt regulations that achieve the maximum feasible and cost-effective reduction of climate change emissions emitted by passenger vehicles and light duty trucks.	Not applicable: This measure is beyond the scope of the proposed project and beyond the control of the Project Applicant.
CAT-2	Diesel Anti-Idling: In July 2004 the ARB adopted a measure to limit diesel-fueled commercial motor vehicle idling.	**Project is Consistent:** The project would be in compliance with current State law, which restricts diesel truck idling to 5 minutes or less.
CAT-3	Other New Light Duty Vehicle Technology Improvements: New standards would be adopted to phase in beginning in the 2017 model year (following up on the existing mid-term standards that reach maximum stringency in 2016).	Not applicable: This measure is beyond the scope of the proposed project and beyond the control of the Project Applicant.

ID	Strategy	OVOV Policy/Project Feature
CAT-4	HFC Reduction Strategies: CARB staff has identified five possible measures to reduce HFC emissions from vehicular and commercial refrigeration systems. 1. Ban the retail sale of hydrofluorocarbon (HFC) in small (mostly 12-oz.) cans. 2. Require that only low-GWP refrigerants be used in new vehicular systems. 3. Adopt specifications for new commercial refrigeration. 4. Add refrigerant leak-tightness to the "pass" criteria for vehicular Inspection and Maintenance programs (all vehicles) and adopt an "inspect and repair" measure for commercial systems. 5. Enforce the federal ban on releasing HFCs.	Not applicable: This measure is beyond the scope of the proposed project and beyond the control of the Project Applicant.
CAT-5	Transport Refrigeration Units Electrification, Off-road Electrification, Port Electrification (ship to shore).	Not applicable: This measure is beyond the scope of the proposed project and beyond the control of the Project Applicant.
CAT-6	Manure Management.	Not applicable: This measure is beyond the scope of the proposed project and beyond the control of the Project Applicant.
CAT-7	Semi Conductor Industry Targets (PFC Emissions).	Not applicable: This measure is beyond the scope of the proposed project and beyond the control of the Project Applicant.
CAT-8	Alternative Fuels: Biodiesel Blends. CARB would develop regulations to require the use of 1 to 4 percent biodiesel displacement of California diesel fuel.	Not applicable: This measure is beyond the scope of the proposed project and beyond the control of the Project Applicant.
CAT-9	Alternative Fuels: Ethanol. Increase use of E-85 fuel.	Not applicable: This measure is beyond the scope of the proposed project and beyond the control of the Project Applicant.

ID	Strategy	OVOV Policy/Project Feature
CAT-10	Heavy-Duty Vehicle Emission Reduction Measures: Climate change emissions can be reduced with improved aerodynamics, climate engine-based improved efficiency, vehicle weight reduction, and rolling and inertia resistance improvements.	Not applicable: This measure is beyond the scope of the proposed project and beyond the control of the Project Applicant.
CAT-11	Reduced Venting and Leaks in Oil and Gas Systems: A model rule would be developed to be considered for adoption by the Air Pollution Control Districts.	Not applicable: This measure is beyond the scope of the proposed project and beyond the control of the Project Applicant.
CAT-12	Hydrogen Highway: The California Hydrogen Highway Network (CA H2 Net) is a State initiative to promote the use of hydrogen as a means of diversifying the sources of transportation energy in order achieve a secure energy future, address environmental, public health, and economic challenges, and work in partnership with other State programs to advance energy efficiency and renewable energy. The CA H2 Net mission is to assure that hydrogen infrastructure is in place as fuel cells and other hydrogen technologies reach commercial readiness.	Not applicable: This measure is beyond the scope of the proposed project and beyond the control of the Project Applicant.

ID	Strategy	OVOV Policy/Project Feature
Implementing Agency: Cal/EPA/Integrated Waste Management Board		
CAT-13	Achieve 50% Statewide Recycling Goal: Achieving the State's 50 percent waste diversion mandate as established by the Integrated Waste Management Act of 1989, (AB 939, Sher, Chapter 1095, Statutes of 1989), will reduce climate change emissions associated with energy intensive material extraction and production as well as methane emission from landfills.	**Project is Consistent:** The project would be in compliance with the Statewide 50% recycling goal. **Policy CO 1.3.1:** Explore, evaluate, and implement methods to shift from using non-renewable resources to use of renewable resources in all aspects of land use planning and development. **Policy CO 1.3.2:** Promote reducing, reusing, and recycling in all Land Use designations and cycles of development. **Policy CO 1.3.3:** Provide informational material to the public about programs to conserve non-renewable resources and recover materials from the waste stream. **Policy CO 8.2.11:** Implement recycling in all public buildings, parks, and public facilities, including for special events. **Policy CO 8.4.1:** Encourage and promote the location of enclosed materials recovery facilities (MRF) within the Santa Clarita Valley. **Policy CO 8.4.2:** Adopt mandatory residential recycling programs for all residential units, including single-family and multi-family dwellings. **Policy CO 8.4.3:** Allow and encourage composting **of** greenwaste, where appropriate. **Policy CO 8.4.4:** Promote commercial and industrial recycling, including recycling of construction and demolition debris. **Policy CO 8.4.5:** Develop and implement standards for refuse and recycling receptacles and enclosures to accommodate recycling in all development. **Policy CO 8.4.6:** Introduce and assist with the placement of receptacles for recyclable products in public places, including at special events. **Policy CO 8.4.7:** Provide information to the public on recycling opportunities and facilities, and support various locations and events to promote public participation in recycling. **Policy CO 8.4.8:** Take an active role in promoting, incubating, and encouraging businesses that would qualify under the Recycling Market Development Zone program or equivalent, including those that manufacture products made from recycled products, salvage, and resource recovery business parks. **Policy LU 7.5.1:** Ensure that all new development provides adequate space for recycling receptacles and bins on site. **Policy LU 7.5.2:** Promote the use of recycled building materials.

ID	Strategy	OVOV Policy/Project Feature
CAT-14	Landfill Methane Capture: Landfills can install direct gas use projects or electricity projects with backup flare systems to capture and use methane.	Not applicable: This measure is beyond the scope of the proposed project and beyond the control of the Project Applicant.
CAT-15	Zero Waste—High Recycling: Additional recovery of recyclable materials from landfills will reduce the climate change emissions associated with energy intensive material extraction and production as well as methane emission from landfills. Transforming organics/biomass and plastic waste into marketable products will also reduce the amount of material going to landfill, and therefore will further reduce climate change emissions.	**Project is Consistent:** See measure discussed above in CAT-13.
Implementing Agency: Resources Agency/Department of Forestry		
CAT-16	Forest Management: Strategies for storing more carbon through forest management activities can involve a range of management activities such as increasing either the growth of individual trees, the overall age of trees prior to harvest, or dedicating land to older aged trees.	Not applicable: This measure is beyond the scope of the proposed project and beyond the control of the Project Applicant.
CAT-17	Forest Conservation: Conservation projects are designed to minimize/prevent the climate change emissions that are associated with the conversion of forestland to non-forest uses by adding incentives to maintain an undeveloped forest landscape.	**Project is Consistent** **Policy CO 3.4.2:** Consider principles of forest management in land use decisions for projects adjacent to the National Forest, including limiting the use of invasive species, discouraging off-road vehicle use, maintaining fuel modification zones and fire access roads, and other measures as appropriate, in accordance with the goals set forth in the Angeles National Forest Land Management Plan.
CAT-18	Fuels Management/Biomass: Fire management and biomass development projects could be accelerated by establishing a new state goal of thinning, removing, and treating public and privately owned forestland.	Not applicable: This measure is beyond the scope of the proposed project and beyond the control of the Project Applicant.

ID	Strategy	OVOV Policy/Project Feature
CAT-19	Urban Forestry: This strategy would expand the State Urban Forestry Program. A new state-wide goal of planting 5 million trees in urban areas by 2020 would be achieved through the expansion of local urban forestry programs.	**Project is Consistent:** **Policy CO 10.1.9:** Preserve forested areas, agricultural lands, wildlife habitat and corridors, wetlands, watersheds, groundwater recharge areas, and other open space that provides natural carbon sequestration benefits. **Policy CO 10.2.1:** Encourage provision of vegetated open space on a development project's site, which may include shallow wetlands and ponds, drought tolerant landscaping, and pedestrian hardscape that includes vegetated areas. **Policy CO 10.2.4:** Seek opportunities to incorporate site features into the open space of a project design, which may include significant trees, vegetation, terrain, or water features, to provide thermal, acoustic, and aesthetic benefits.
CAT-20	Afforestation/Reforestation: Reforestation projects focus on restoring native tree cover on lands that were previously forested and are now covered with other vegetative types.	Not applicable: This measure is beyond the scope of the proposed project and beyond the control of the Project Applicant.
Implementing Agency: Resources Agency/Department of Water Resources		
CAT-21	Water Use Efficiency: Approximately 19 percent of all electricity, 30 percent of all natural gas, and 88 million gallons of diesel are used to convey, treat, distribute and use water and wastewater. Saving water saves energy. Saving water that gets treated as wastewater saves more energy. Saving water that gets heated or additionally pressurized saves still more.	**Project is Consistent:** **Policy CO 4.1.1:** In coordination with applicable water suppliers, adopt and implement a water conservation strategy for public and private development. **Policy CO 4.1.2:** Provide examples of water conservation in landscaping through use of low water use landscaping in public spaces such as parks, landscaped medians and parkways, plazas, and around public buildings. **Policy CO 4.1.3:** Require low water use landscaping in new residential subdivisions and other private development projects, including a reduction in the amount of turf-grass. **Policy CO 4.1.4:** Provide informational materials to applicants and contractors on the Castaic Lake Water Agency's Landscape Education Programs, and/or other information on xeriscape, native California plants, and water-conserving irrigation techniques as materials become available. **Policy CO 4.1.5:** Promote the use of low-flow and/or waterless plumbing fixtures and appliances in all new non-residential development and residential development of five or more dwelling units. **Policy CO 4.1.6:** Support amendments to the County Building Code that would promote upgrades to water and energy efficiency when issuing permits for renovations or additions to existing buildings.

ID	Strategy	OVOV Policy/Project Feature
		Policy CO 4.1.7: Apply water conservation policies to all pending development projects, including approved tentative subdivision maps, to the extent permitted by law. Where precluded from adding requirements by vested entitlements, encourage water conservation in construction and landscape design. **Policy CO 4.1.8:** Upon the availability of non-potable water services, discourage and consider restrictions on the use of potable water for washing outdoor surfaces. **Policy CO 4.2.1:** In cooperation with the Sanitation District and other affected agencies, expand opportunities for use of recycled water for the purposes of landscape maintenance, construction, water recharge, and other uses as appropriate. **Policy CO 4.2.2:** Require new development to provide the infrastructure needed for delivery of recycled water to the property for use in irrigation, even if the recycled water main delivery lines have not yet reached the site, where deemed appropriate by the reviewing authority. **Policy CO 4.2.3:** Promote the installation of rainwater capture and gray water systems in new development for irrigation, where feasible and practicable. **Policy CO 4.2.4:** Identify and protect areas with substantial potential for groundwater recharge, and promote recharge of groundwater basins throughout the watershed (excluding the river bed). **Policy CO 4.2.5:** Participate and cooperate with other agencies to complete, adopt, and implement an Integrated Regional Water Management Plan to build a diversified portfolio of water supply, water quality, and resource stewardship priorities for the Santa Clarita Valley. **Policy LU 4.5.2:** Encourage the provision of usable open space that is accessible to employees and visitors, and discourage the provision of large areas of water-consuming landscaping that are not usable or accessible.

ID	Strategy	OVOV Policy/Project Feature
Implementing Agency: Resources Agency/Energy Commission		
CAT-22/25	Building Energy Efficiency Standards in Place and in Progress: The Energy Action Plan and the Integrated Energy Policy Report both call for ongoing updating of the standards, including meeting energy efficiency goals, addressing demand response and promoting the combination of solar photovoltaics and high-energy efficiency buildings. As part of the process of updating the Building Energy Efficiency Standards, the Energy Commission evaluates new and emerging technology for possible inclusion in the standards.	**Project is Consistent:** **Policy CO 8.1.3:** Implement the ordinances developed through the County's Green Building Program. **Policy CO 8.2.1:** Ensure that all new County buildings, and all major renovations and additions, meet adopted green building standards, with a goal of achieving the LEED (Leadership in Energy and Environmental Design) Silver rating or above, or equivalent, where appropriate. **Policy CO 8.2.2:** Ensure energy efficiency of existing public buildings through energy audits and repairs, and retrofit buildings with energy efficient heating and air conditioning systems and lighting fixtures. **Policy CO 8.2.3:** Support purchase of renewable energy for public buildings, which may include installing solar photovoltaic systems to generate electricity for County buildings and operations and other methods as deemed appropriate and feasible, in concert with significant energy conservation efforts. **Policy CO 8.2.5:** Support installation of photovoltaic and other renewable energy equipment on public facilities, in concert with significant energy conservation efforts. **Policy CO 8.2.8:** Promote the purchase of energy-efficient and recycled products, and vendors and contractors who use energy-efficient vehicles and products, consistent with adopted purchasing policies. **Policy CO 8.2.9:** Reduce heat islands through installation of trees to shade parking lots and hardscapes, and use of light-colored reflective paving and roofing surfaces. **Policy CO 8.2.11:** Implement recycling in all public buildings, parks, and public facilities, including for special events. **Policy CO 8.3.1:** Evaluate development proposals for consistency with the ordinances developed through the County's Green Building Program. **Policy CO 8.3.2:** Promote construction of energy efficient buildings through the certification requirements of the ordinances developed through the County's Green Building Program. **Policy CO 8.3.3:** Promote energy efficiency and water conservation upgrades to existing non-residential buildings at the time of major remodel or additions.

ID	Strategy	OVOV Policy/Project Feature
		Policy CO 8.3.4: Encourage new residential development to include on-site solar photovoltaic systems, or pre-wiring, in at least 50% of the residential units, in concert with other significant energy conservation efforts. **Policy CO 8.3.5:** Encourage on-site solar generation of electricity in new retail and office commercial buildings and associated parking lots, carports, and garages, in concert with other significant energy conservation efforts. **Policy CO 8.3.6:** Require new development to use passive solar heating and cooling techniques in building design and construction, which may include but are not be limited to building orientation, clerestory windows, skylights, placement and type of windows, overhangs to shade doors and windows, and use of light colored roofs, shade trees, and paving materials. **Policy CO 8.3.7:** Encourage the use of trees and landscaping to reduce heating and cooling energy loads, through shading of buildings and parking lots. **Policy CO 8.3.8:** Encourage energy-conserving heating and cooling systems and appliances, and energy-efficiency in windows and insulation, in all new construction. **Policy CO 8.3.10:** Provide incentives and technical assistance for installation of energy-efficient improvements in existing and new buildings. **Policy CO 8.3.11:** Consider allowing carbon off-sets for large development projects, if appropriate, which may include funding off-site projects or purchase of credits for other forms of mitigation, provided that any such mitigation shall be measurable and enforceable. **Policy LU 7.1.2:** Promote the use of solar panels and renewable energy sources in all projects. **Policy LU 7.1.3:** Encourage development of energy-efficient buildings, and discourage construction of new buildings for which energy efficiency cannot be demonstrated.

ID	Strategy	OVOV Policy/Project Feature
CAT-23/26	Appliance Energy Efficiency Standards in Place and in Progress: The Energy Commission adopts new standards for a variety of appliances. As part of the process of updating the Appliance Energy Efficiency Standards, the CEC evaluates new and emerging technology for increasing the energy efficiency of appliances and equipment for possible inclusion in the standards.	**Project is Consistent:** See measures discussed above in CAT-22.
CAT-24	Fuel-Efficient Replacement Tires & Inflation Programs: State legislation established a statewide program to encourage the production and use of more efficient tires.	Not applicable: This measure is beyond the scope of the proposed project and beyond the control of the Project Applicant.
CAT-27	Cement Manufacturing: This strategy involves cost-effective reductions to reduce energy consumption and to lower carbon dioxide emissions in the cement industry.	Not applicable: This measure is beyond the scope of the proposed project and beyond the control of the Project Applicant.
CAT-28	Municipal Utility Energy Efficiency Programs/ Demand Response: The Energy Commission and the California PUC are collaborating on additional energy efficiency programs beyond those programs already adopted.	Not applicable: This measure is beyond the scope of the proposed project and beyond the control of the Project Applicant.
CAT-29	Municipal Utility Renewable Portfolio Standard: Achieve the 20 percent goal by 2010 and 33 percent goal by 2020.	Not applicable: This measure is beyond the scope of the proposed project and beyond the control of the Project Applicant.
CAT-30	Municipal Utility Combined Heat and Power: This strategy constitutes cost-effective reductions from fossil fuel consumption in the commercial and industrial sector through application of on-site power production to meet both heat and electricity loads.	Not applicable: This measure is beyond the scope of the proposed project and beyond the control of the Project Applicant.
CAT-31	Municipal Utility Electricity Sector Carbon Policy: The Energy Commission and the CPUC are collaborating on additional programs to address ways to transition investor-owned utilities away from carbon-intensive electricity sources.	Not applicable: This measure is beyond the scope of the proposed project and beyond the control of the Project Applicant.

ID	Strategy	OVOV Policy/Project Feature
CAT-32	Alternative Fuels: Non-Petroleum Fuels: This strategy involves increasing the use of non-petroleum fuels in California's transportation sector.	Not applicable: This measure is beyond the scope of the proposed project and beyond the control of the Project Applicant.
Implementing Agency: Business, Transportation, and Housing Agency		
CAT-33	Measures to Improve Transportation Energy Efficiency: This strategy builds on current efforts to provide a framework for expanded and new initiatives including incentives, tools and information that advance cleaner transportation and reduce climate change emissions.	**Project is Consistent:** **Policy LU 2.1.2:** On the Land Use Map, integrate land use designations in a manner that promotes healthy, walkable communities, by providing an appropriate mix of residential and service uses in proximity to one another. **Policy LU 2.3.2:** Either vertical or horizontal integration of uses shall be allowed in a mixed use development, with an emphasis on tying together the uses with appropriate pedestrian linkages. **Policy LU 2.3.4:** Adequate public spaces and amenities shall be provided in a mixed- use development to support both commercial and residential uses, including but not limited to plazas, landscaped walkways, village greens, and greenbelts. **Policy LU 2.3.5:** Mixed use developments shall be designed to create a pedestrian-scale environment through appropriate street and sidewalk widths, block lengths, relationship of buildings to streets, and use of public spaces. **Policy LU 2.3.6:** Provide parking alternatives in mixed-use developments, including subterranean parking and structured parking to limit the amount of surface area devoted to vehicle storage. **Policy LU 3.1.3:** Promote opportunities for live-work units to accommodate residents with home-based businesses. **Policy LU 3.1.4:** Promote development of workforce housing to meet the needs of those employed in the Santa Clarita Valley. **Policy LU 3.1.7:** Promote development of housing for students attending local colleges, in consideration of access to campuses to the extent practicable. **Policy LU 3.2.1:** Require provision of adequate walkways in urban residential neighborhoods that provide safe and accessible connections to destinations such as schools, parks, and neighborhood commercial centers. **Policy LU 3.2.2:** In planning residential neighborhoods, include pedestrian linkages, landscaped parkways with sidewalks, and separated trails for pedestrians and bicycles, where appropriate and feasible.

ID	Strategy	OVOV Policy/Project Feature
		Policy LU 4.2.3: Encourage businesses to locate in all appropriate areas of the community to encourage job creation in closer proximity to workforce housing. **Policy LU 5.1.1:** Require safe, secure, clearly-delineated, adequately-illuminated walkways and bicycle facilities in all commercial and business centers. **Policy LU 5.1.2:** Require connectivity between walkways and bikeways serving neighborhoods and nearby commercial areas, schools, parks, and other supporting services and facilities. **Policy LU 5.1.3:** Ensure that adequate bus turnouts, served by walkways and comfortable, safe, and convenient waiting facilities, are provided for transit users within residential, shopping, and business developments. **Policy LU 5.2.1:** Designate higher-density residential uses in areas served by public transit and a full range of support services. **Policy LU 5.2.2:** Provide for location of neighborhood commercial uses in proximity to the neighborhoods they serve, to encourage cycling and walking to local stores. **Policy LU 5.2.3:** Promote location of non-polluting businesses providing employment opportunities in proximity to neighborhoods, to encourage walking to work. **Policy LU 5.2.4:** Encourage transit-oriented development (TOD) through designation of land uses that allow compact, mixed-use development in proximity to rail stations and multi-modal transit facilities, in conformance with applicable policies. **Policy LU 5.2.5:** Encourage the mix of compatible uses in areas where, though not served by rail or transit, mixed uses will achieve more walkable neighborhoods and trip reduction, in conformance with applicable policies. **Policy C 1.1.1:** Reduce dependence on the automobile, particularly single-occupancy vehicle use, by providing safe and convenient access to transit, bikeways, and walkways. **Policy C 1.1.2:** Promote expansion of alternative transportation options to increase accessibility to all demographic and economic groups throughout the community, including mobility-impaired persons, senior citizens, low-income persons, and youth.

ID	Strategy	OVOV Policy/Project Feature
		Policy C 1.1.3: Work with local and regional agencies and employers to promote an integrated, seamless transportation system that meets access needs, including local and regional bus service, dial-a-ride, taxis, rail, van pools, car pools, bus pools, bicycling, walking, and automobiles. **Policy C 1.1.6:** Provide adequate facilities, including but not limited to bicycle parking and storage, expansion of park-and-ride lots, and provision of adequate station and transfer facilities in appropriate locations. **Policy C 1.1.12:** Encourage the City of Santa Clarita to implement recommendations of its Non-Motorized Transportation Plan to expand opportunities for alternative travel modes. **Policy C 1.1.13:** Design new activity centers and improve existing activity centers to prioritize walking, bicycling and circulator transit for internal circulation of person-travel. **Policy C 1.2.1:** Develop coordinated plans for land use, circulation, and transit to promote transit-oriented development that concentrates higher density housing, employment, and commercial areas in proximity to transit corridors. **Policy C 1.2.2:** Create walkable communities, with paseos and walkways connecting residential neighborhoods to multi-modal transportation services such as bus stops and rail stations. **Policy C 1.2.3:** Require that new commercial and industrial development provide walkway connections to public sidewalks and transit stops, where available. **Policy C 1.2.4:** Consider location, availability, and accessibility of transit in evaluating new development plans. **Policy C 1.2.5:** In mixed- use projects, require compact development and a mix of land uses to locate housing, workplaces, and services within walking or bicycling distance of each other. **Policy C 1.2.6:** Provide flexible standards for parking and roadway design in transit-oriented development areas to promote transit use, where appropriate. **Policy C 1.2.7:** In pedestrian-oriented areas, provide a highly connected circulation grid with relatively small blocks to encourage walking. **Policy C 1.2.8:** Provide safe pedestrian connections across barriers, which may include but are not limited to major traffic corridors, drainage and flood control facilities, utility easements, grade

ID	Strategy	OVOV Policy/Project Feature
		separations, and walls. **Policy C 1.2.9:** Emphasize providing right-of-way for non-vehicular transportation modes so that walking and bicycling are the easiest, most convenient modes of transportation available for short trips. **Policy C 1.2.11:** Reduce vehicle miles traveled (VMT) through the use of smart growth concepts. **Policy C 2.1.1:** Protect mobility on arterial highways by limiting excessive cross traffic, access points, and turning movements; traffic signals on arterial highways should be spaced at least ½-mile apart, and the minimum allowable separation should be at least ¼-mile. **Policy C 2.1.2:** Enhance connectivity of the roadway network to the extent feasible given the constraints of topography, existing development patterns, and environmental resources, by constructing grade separations and bridges; connecting discontinuous streets; extending secondary access into areas where needed; prohibiting gates on public streets; and other improvements as deemed appropriate based on traffic analysis. **Policy C 2.2.6:** Within residential neighborhoods, promote the design of "healthy streets" which may include reduced pavement width, shorter block length, provision of on-street parking, traffic-calming devices, bike routes and pedestrian connectivity, landscaped parkways, and canopy street trees. **Policy C 2.2.7:** Where practical, encourage the use of grid or modified grid street systems to increase connectivity and walkability; where cul-de-sacs are provided, promote the use of walkways connecting cul-de-sac bulbs to adjacent streets and/or facilities to facilitate pedestrian access; where street connectivity is limited and pedestrian routes are spaced over 500 feet apart, promote the use of intermediate pedestrian connections through or between blocks. **Policy C 2.2.14:** Streets should be designed in context with the terrain and the natural and built features of the area, but excessively circuitous streets should be avoided to minimize unnecessary vehicle, bicycle and pedestrian mileage.

ID	Strategy	OVOV Policy/Project Feature
CAT-34	Smart Land Use and Intelligent Transportation: Strategies include: Promoting jobs and housing proximity and transit-oriented development; Encouraging high density residential/commercial development along transit/rail corridor; Valuing and congestion pricing; Implementing intelligent transportation systems, traveler information/ traffic control, incident management; Accelerating the development of broadband infrastructure; and Comprehensive, integrated, multimodal/intermodal transportation planning.	**Project is Consistent:** The proposed project would promote mixed use development where appropriate to create more livable neighborhoods, walkable business districts, and to reduce vehicle trips, while ensuring land use compatibility. The project would also promote the design of "healthy streets" which may include traffic-calming devices, bike routes and pedestrian connectivity, landscaped parkways, and canopy street trees. See measures discussed above in CAT-33.
Implementing Agency: Department of Food and Agriculture		
CAT-35	Conservation tillage/cover crops: Conservation tillage and cover crops practices are increasingly being used by California farmers for a variety of reasons, including improved soil tilth, improved water use efficiency, reduced tillage requirements, saving labor and fuel, and reduced fertilizer inputs.	Not applicable: This measure is beyond the scope of the proposed project and beyond the control of the Project Applicant.
CAT-36	Enteric Fermentation: To reduce climate change emissions resulting from enteric fermentation, feed adjustments may be made that improve milk and meat productivity.	Not applicable: This measure is beyond the scope of the proposed project and beyond the control of the Project Applicant.
Implementing Agency: State and Consumer Services Agency		
CAT-37	Green Buildings Initiative: Executive Order, S-20-04, sets an ambitious goal of reducing energy use in public and private buildings by 20 percent by the year 2015, as compared with 2003 levels.	**Project is Consistent:** See measures discussed above in CAT-22.
Implementing Agency: Public Utilities Commission		
CAT-38	Accelerated Renewable Portfolio Std to 33 percent by 2020 (includes load-serving entities).	Not applicable: This measure is beyond the scope of the proposed project and beyond the control of the Project Applicant.
CAT-39	California Solar Initiative: The solar initiative includes installation of 1 million solar roofs or an equivalent 3,000 MW by 2017 on homes and businesses.	**Project is Consistent:** Solar thermal and photovoltaic systems will be installed where economically feasible. See measures discussed above in CAT-22.

ID	Strategy	OVOV Policy/Project Feature
CAT-40	Investor Owned Utility Energy Efficiency Programs: In September 2004, the PUC adopted aggressive savings targets for the investor-owned utility energy efficiency programs through 2013.	Not applicable: This measure is beyond the scope of the proposed project and beyond the control of the Project Applicant.
CAT-41	Investor-Owned Utility (IOU) Additional Energy Efficiency Programs/Demand Response: In September 2004, the PUC adopted aggressive savings targets for the IOUs' energy efficiency programs through 2013.	Not applicable: This measure is beyond the scope of the proposed project and beyond the control of the Project Applicant.
CAT-42	IOU Combined Heat and Power Initiative: This strategy encourages the installation of on-site power production to meet both heat and electricity loads, known as combined heat and power projects (CHP).	Not applicable: This measure is beyond the scope of the proposed project and beyond the control of the Project Applicant.
CAT-43	IOU Electricity Sector Carbon Policy: The PUC is currently investigating various strategies and incentives to encourage the IOUs to make cost-effective procurement decisions that are based in part on reducing climate change emissions.	Not applicable: This measure is beyond the scope of the proposed project and beyond the control of the Project Applicant.

Source: California Environmental Protection Agency, Climate Action Team, Climate Action Team Report to Governor Schwarzenegger and the Legislature, *(2006).*

Consistency with OPR Guidance

The OPR climate change technical advisory recommended that the lead agency determine significance of the impacts and impose mitigation measures that are necessary to reduce GHG emissions. Similar to the Attorney General's list of measures, the technical advisory provides a recommended list of measures Lead Agencies may incorporate in projects to reduce GHG emissions. As listed below in **Table 3.4-10, Consistency with Office of Planning and Research Suggested Measures**, the OVOV proposed Area Plan and General Plan would be consistent with OPR's recommended measures.

Table 3.4-10
Consistency with Office of Planning and Research Suggested Measures

ID	Measures	OVOV Policy/Project Feature
Land Use and Transportation		
OPR-1	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.	**Project is Consistent:** **Policy LU 2.1.2:** On the Land Use Map, integrate land use designations in a manner that promotes healthy, walkable communities, by providing an appropriate mix of residential and service uses in proximity to one another. **Policy LU 2.3.2:** Either vertical or horizontal integration of uses shall be allowed in a mixed- use development, with an emphasis on tying together the uses with appropriate pedestrian linkages. **Policy LU 2.3.4:** Adequate public spaces and amenities shall be provided in a mixed- use development to support both commercial and residential uses, including but not limited to plazas, landscaped walkways, village greens, and greenbelts. **Policy LU 2.3.5:** Mixed use developments shall be designed to create a pedestrian-scale environment through appropriate street and sidewalk widths, block lengths, relationship of buildings to streets, and use of public spaces. **Policy LU 2.3.6:** Provide parking alternatives in mixed-use developments, including subterranean parking and structured parking to limit the amount of surface area devoted to vehicle storage. **Policy LU 3.1.3:** Promote opportunities for live-work units to accommodate residents with home-based businesses. **Policy LU 3.1.4:** Promote development of workforce housing to meet the needs of those employed in the Santa Clarita Valley. **Policy LU 3.1.7:** Promote development of housing for students attending local colleges, in consideration of access to campuses to the extent practicable. **Policy LU 3.2.1:** Require provision of adequate walkways in urban residential neighborhoods that provide safe and accessible connections to destinations such as schools, parks, and neighborhood commercial centers. **Policy LU 3.2.2:** In planning residential neighborhoods, include pedestrian linkages, landscaped parkways with sidewalks, and separated trails for pedestrians and bicycles, where appropriate and feasible. **Policy LU 4.2.3:** Encourage businesses to locate in all appropriate areas of the community to encourage job creation in closer proximity to workforce housing.

ID	Measures	OVOV Policy/Project Feature
		Policy LU 5.1.1: Require safe, secure, clearly-delineated, adequately-illuminated walkways and bicycle facilities in all commercial and business centers. **Policy LU 5.1.2:** Require connectivity between walkways and bikeways serving neighborhoods and nearby commercial areas, schools, parks, and other supporting services and facilities. **Policy LU 5.1.3:** Ensure that adequate bus turnouts, served by walkways and comfortable, safe, and convenient waiting facilities, are provided for transit users within residential, shopping, and business developments. **Policy LU 5.2.1:** Designate higher-density residential uses in areas served by public transit and a full range of support services. **Policy LU 5.2.2:** Provide for location of neighborhood commercial uses in proximity to the neighborhoods they serve, to encourage cycling and walking to local stores. **Policy LU 5.2.3:** Promote location of non-polluting businesses providing employment opportunities in proximity to neighborhoods, to encourage walking to work. **Policy LU 5.2.4:** Encourage transit-oriented development (TOD) through designation of land uses that allow compact, mixed-use development in proximity to rail stations and multi-modal transit facilities, in conformance with applicable policies. **Policy LU 5.2.5:** Encourage the mix of compatible uses in areas where, though not served by rail or transit, mixed uses will achieve more walkable neighborhoods and trip reduction, in conformance with applicable policies. **Policy C 1.1.1:** Reduce dependence on the automobile, particularly single-occupancy vehicle use, by providing safe and convenient access to transit, bikeways, and walkways. **Policy C 1.1.2:** Promote expansion of alternative transportation options to increase accessibility to all demographic and economic groups throughout the community, including mobility-impaired persons, senior citizens, low-income persons, and youth. **Policy C 1.1.3:** Work with local and regional agencies and employers to promote an integrated, seamless transportation system that meets access needs, including local and regional bus service, dial-a-ride, taxis, rail, van pools, car pools, bus pools, bicycling, walking, and automobiles.

ID	Measures	OVOV Policy/Project Feature
		Policy C 1.1.6: Provide adequate facilities, including but not limited to bicycle parking and storage, expansion of park-and-ride lots, and provision of adequate station and transfer facilities in appropriate locations. **Policy C 1.1.12:** Encourage the City of Santa Clarita to implement recommendations of its Non-Motorized Transportation Plan to expand opportunities for alternative travel modes. **Policy C 1.1.13:** Design new activity centers and improve existing activity centers to prioritize walking, bicycling and circulator transit for internal circulation of person-travel. **Policy C 1.2.1:** Develop coordinated plans for land use, circulation, and transit to promote transit-oriented development that concentrates higher density housing, employment, and commercial areas in proximity to transit corridors. **Policy C 1.2.2:** Create walkable communities, with paseos and walkways connecting residential neighborhoods to multi-modal transportation services such as bus stops and rail stations. **Policy C 1.2.3:** Require that new commercial and industrial development provide walkway connections to public sidewalks and transit stops, where available. **Policy C 1.2.4:** Consider location, availability, and accessibility of transit in evaluating new development plans. **Policy C 1.2.5:** In mixed- use projects, require compact development and a mix of land uses to locate housing, workplaces, and services within walking or bicycling distance of each other. **Policy C 1.2.6:** Provide flexible standards for parking and roadway design in transit-oriented development areas to promote transit use, where appropriate. **Policy C 1.2.7:** In pedestrian-oriented areas, provide a highly connected circulation grid with relatively small blocks to encourage walking. **Policy C 1.2.8:** Provide safe pedestrian connections across barriers, which may include but are not limited to major traffic corridors, drainage and flood control facilities, utility easements, grade separations, and walls. **Policy C 1.2.9:** Emphasize providing right-of-way for non-vehicular transportation modes so that walking and bicycling are the easiest, most convenient modes of transportation available for short trips. **Policy C 1.2.11:** Reduce vehicle miles traveled (VMT) through the use of smart growth concepts.

ID	Measures	OVOV Policy/Project Feature
OPR-2	Encourage infill, redevelopment, and higher density development, whether in incorporated or unincorporated settings.	**Project is Consistent:** **Policy LU 1.1.5:** Increase infill development and re-use of underutilized sites within and adjacent to developed urban areas to achieve maximum benefit from existing infrastructure and minimize loss of open space, through redesignation of vacant sites for higher density and mixed-use, where appropriate.
OPR-3	Encourage new developments to integrate housing, civic, and retail amenities (jobs, schools, parks, shopping opportunities) to help reduce VMT resulting from discretionary automobile trips.	**Project is Consistent:** See measures discussed above in OPR-1.
OPR-4	Apply advanced technology systems and management strategies to improve operational efficiency of transportation systems and movement of people, goods and services.	**Project is Consistent:** **Policy C 2.1.1:** Protect mobility on arterial highways by limiting excessive cross traffic, access points, and turning movements; traffic signals on arterial highways should be spaced at least ½-mile apart, and the minimum allowable separation should be at least ¼-mile. **Policy C 2.1.2:** Enhance connectivity of the roadway network to the extent feasible given the constraints of topography, existing development patterns, and environmental resources, by constructing grade separations and bridges; connecting discontinuous streets; extending secondary access into areas where needed; prohibiting gates on public streets; and other improvements as deemed appropriate based on traffic analysis. **Policy C 2.1.3:** Protect and enhance the capacity of the roadway system by upgrading intersections to meet level of service standards, widening and/or restriping for additional lanes, synchronizing traffic signals, and other means as appropriate. **Policy C 2.1.4:** Ensure that future dedication and acquisition of right-of-way is based on the adopted Circulation Plan, proposed land uses, and projected demand. **Policy C 2.1.5:** Periodically monitor levels of service, traffic accident patterns, and physical conditions of the existing street system, and upgrade roadways as needed through the Capital Improvement Program. **Policy C 2.2.3:** Coordinate circulation plans of new development projects with each other and the surrounding street network, within both City and County areas. **Policy C 2.2.4:** Strive to maintain a Level of Service (LOS) D or better on most roadway segments and intersections to the extent practical; in some locations, a LOS E may be acceptable, or a LOS F may be necessary, for limited durations during peak traffic periods.

ID	Measures	OVOV Policy/Project Feature
		Policy C 2.2.5: Adopt common standards for pavement width in consideration of capacity needs to serve projected travel demand, provided that a reduction in pavement width may be allowed in order to reduce traffic speeds, protect resources, enhance pedestrian mobility, or as otherwise deemed appropriate by the reviewing authority. **Policy C 2.2.6:** Within residential neighborhoods, promote the design of "healthy streets" which may include reduced pavement width, shorter block length, provision of on-street parking, traffic-calming devices, bike routes and pedestrian connectivity, landscaped parkways, and canopy street trees. **Policy C 2.2.7:** Where practical, encourage the use of grid or modified grid street systems to increase connectivity and walkability; where cul-de-sacs are provided, promote the use of walkways connecting cul-de-sac bulbs to adjacent streets and/or facilities to facilitate pedestrian access; where street connectivity is limited and pedestrian routes are spaced over 500 feet apart, promote the use of intermediate pedestrian connections through or between blocks. **Policy C 2.2.8:** Local street patterns should be designed to create logical and understandable travel paths for users and to provide access between neighborhoods for local residents while discouraging cut-through traffic; cul-de-sac length should not exceed 600 feet, and "dog-leg" cul-de-sacs with one or more turns between the bulb and the outlet should be avoided where possible. **Policy C 2.2.9:** Medians constructed in arterial streets should be provided with paved crossover points for emergency vehicles, where deemed necessary by the Fire Department. **Policy C 2.2.10:** The street system design, including block length, width, horizontal and vertical alignments, curves, and other design characteristics, should function safely and effectively without the subsequent need for excessive traffic control devices to slow or deflect traffic. **Policy C 2.2.11:** For intersections of collector or larger streets, four-way intersections are preferred over offset intersections. **Policy C 2.2.12:** Private streets, other than driveways and alleyways typically associated with multi-family development, should be constructed to standards for public rights-of-way, except as otherwise approved by the reviewing agency.

ID	Measures	OVOV Policy/Project Feature
		Policy C 2.2.13: Protect the community character of rural areas by requiring use of rural street standards, which may include reduced pavement width, reduced street lighting to protect night skies, rolled curbs, or no curbs, and no sidewalks. **Policy C 2.2.14:** Streets should be designed in context with the terrain and the natural and built features of the area, but excessively circuitous streets should be avoided to minimize unnecessary vehicle, bicycle and pedestrian mileage. **Policy C 2.4.1:** Require design of pavement sections on major and secondary highways to account for truck traffic, to prevent excessive pavement deterioration from truck use. **Policy C 2.4.2:** Establish adequate setbacks from major and secondary highways for sensitive receptors and sensitive uses, so as to minimize impacts on these individuals and uses from noise and air pollution caused by truck traffic. **Policy C 2.4.4:** Adopt regulations for truck parking on public streets, to avoid impacts to residential neighborhoods.
OPR-5	Incorporate features into project design that would accommodate the supply of frequent, reliable and convenient public transit.	**Project is Consistent:** **Policy C 1.3.1:** Continue coordinating with the Metropolitan Transportation Authority (MTA or Metro) to implement the County's Congestion Management Program (CMP) for designated CMP roadways. **Policy C 1.3.3:** Coordinate circulation planning with the Regional Transportation Plan prepared by the Southern California Association of Governments (SCAG), to ensure consistency of planned improvements with regional needs. **Policy C 1.3.4:** Continue coordination with Caltrans on circulation and land use decisions that may affect Interstate 5, State Route 14, and State Route 126, and support programs to increase capacity and improve operations on these highways. **Policy C 4.1.1:** Develop permanent Metrolink facilities with an expanded bus transfer station and additional park-and-ride spaces at the Via Princessa station, or other alternative location as deemed appropriate to meet the travel needs of residents on the Valley's east side. **Policy C 4.1.2:** Coordinate with other agencies to facilitate extension of a passenger rail line from the Santa Clarita Station to Ventura County, which may be used for Metrolink service.

ID	Measures	OVOV Policy/Project Feature
		Policy C 4.1.3: Continue to expand and improve commuter services, including park-and-ride lots, bicycle parking and storage, and waiting facilities, at all Metrolink stations. **Policy C 4.1.4:** Encourage the preservation of abandoned railroad right-of-way for future transportation facilities, where appropriate. **Policy C 4.1.5:** Work with other agencies to increase rail efficiency and public safety through street and track improvements, and grade separations, where needs are identified. **Policy C 4.1.6:** Provide incentives to promote transit-oriented development near rail stations. **Policy C 4.1.7:** Facilitate coordination of planning for any future high speed regional rail systems in the Valley with Metrolink services. **Policy C 4.1.8:** Minimize impacts to passenger rail service and the community from any proposed increase to freight rail service through the Valley. **Policy C 4.2.1:** Continue to work with the Orange Line Development Authority (OLDA) to plan for development of an environmentally sensitive high speed transportation system with a route through the Santa Clarita Valley, including a regional transit hub with associated infrastructure that would provide connections to the Los Angeles Basin, Palmdale Regional Airport, and other destinations. **Policy C 4.2.2:** Coordinate with other agencies as needed to facilitate planning for other high-speed rail alternatives in the Santa Clarita Valley. **Policy C 5.1.1:** Require that new subdivisions provide for two means of access into and out of the development, in order to provide for transit access, where feasible. **Policy C 5.1.2:** For private gated communities, require the developer to accommodate bus access through the entry gate, or provide bus waiting facilities at the project entry with pedestrian connections to residential streets, where appropriate. **Policy C 5.1.3:** Consider the operational characteristics of buses when determining acceptable street designs, including grades and turning radii. **Policy C 5.1.4:** Provide for location of bus stops within ¼-mile of residential neighborhoods, and include paved bus waiting areas in street improvement plans wherever appropriate and feasible. **Policy C 5.1.5:** Locate and design bus turnouts to limit traffic obstruction and to provide sufficient merging length for the bus to re-enter the traffic flow.

ID	Measures	OVOV Policy/Project Feature
		Policy C 5.1.6: Evaluate the feasibility of giving buses priority at signalized intersections to maintain transit service level standards, where appropriate. **Policy C 5.2.1:** Require paved waiting areas, accessible by paved walkways and reasonably direct pedestrian routes, for bus stops in new development; and provide for retrofitting of existing bus stops, where feasible and practicable. **Policy C 5.2.4:** Enhance way-finding signage along walkways and paseos to direct pedestrians to transit stops. **Policy C 5.2.5:** Complementary transportation modes should be interconnected at intermodal transit centers, including provisions for bicycles on buses, bicycle parking at transit centers, and park-and-ride at transit stops. **Policy C 5.3.1:** Continue to provide fixed route service to significant activity areas and neighborhoods with moderate to high density, and serve low-density and rural areas with dial-a-ride, flexible fixed routes, or other transit services as deemed appropriate. **Policy C 5.3.2:** Promote concentrated development patterns in coordination with transit planning to maximize service efficiency and ridership.
OPR-6	Implement street improvements that are designed to relieve pressure on a region's most congested roadways and intersections.	**Project is Consistent:** See measures described above in OPR-4 and -5.
OPR-7	Limit idling time for commercial vehicles, including delivery and construction vehicles.	**Project is Consistent:** The project would be in compliance with current State law, which restricts diesel truck idling to five minutes or less.

ID	Measures	OVOV Policy/Project Feature
Urban Forestry		
OPR-8	Plant trees and vegetation near structures to shade buildings and reduce energy requirements for heating/cooling.	**Project is Consistent:** **Policy CO 8.2.9:** Reduce heat islands through installation of trees to shade parking lots and hardscapes, and use of light-colored reflective paving and roofing surfaces. **Policy CO 8.3.7:** Encourage the use of trees and landscaping to reduce heating and cooling energy loads, through shading of buildings and parking lots.
OPR-9	Preserve or replace on-site trees (that are removed due to development) as a means of providing carbon storage.	**Project is Consistent:** **Policy CO 3.4.2:** Consider principles of forest management in land use decisions for projects adjacent to the National Forest, including limiting the use of invasive species, discouraging off-road vehicle use, maintaining fuel modification zones and fire access roads, and other measures as appropriate, in accordance with the goals set forth in the Angeles National Forest Land Management Plan. **Policy CO 10.1.9:** Preserve forested areas, agricultural lands, wildlife habitat and corridors, wetlands, watersheds, groundwater recharge areas, and other open space that provides natural carbon sequestration benefits. **Policy CO 10.2.1:** Encourage provision of vegetated open space on a development project's site, which may include shallow wetlands and ponds, drought tolerant landscaping, and pedestrian hardscape that includes vegetated areas. **Policy CO 10.2.4:** Seek opportunities to incorporate site features into the open space of a project design, which may include significant trees, vegetation, terrain, or water features, to provide thermal, acoustic, and aesthetic benefits.
Green Buildings		
OPR-10	Encourage public and private construction of LEED (Leadership in Energy and Environmental Design) certified (or equivalent) buildings.	**Project is Consistent:** **Policy CO 8.2.1:** Ensure that all new County buildings, and all major renovations and additions, meet adopted green building standards, with a goal of achieving the LEED (Leadership in Energy and Environmental Design) Silver rating or above, or equivalent, where appropriate. **Policy CO 8.3.1:** Evaluate development proposals for consistency with the ordinances developed through the County's Green Building Program. **Policy CO 8.3.2:** Promote construction of energy efficient buildings through the certification requirements of the ordinances developed through the County's Green Building Program.

ID	Measures	OVOV Policy/Project Feature
Energy Conservation Policies and Actions		
OPR-11	Recognize and promote energy saving measures beyond Title 24 requirements for residential and commercial projects.	**Project is Consistent:** **Policy CO 8.1.1:** Create and adopt a Climate Action Plan within 18 months of the adoption date of the County's General Plan Update that meets State requirements and includes the following components: (a) Plans and programs to reduce GHG emissions to State-mandated targets, including enforceable reduction measures; (b) Mechanisms to ensure regular review of progress towards the emissions reduction targets established by the Climate Action Plan; (c) Procedures for reporting on progress to officials and the public; (d) Procedures for revising the plan as needed to meet GHG emissions reduction targets; and (e) Allocation of funding and staffing for Plan implementation. After adoption of the Climate Action Plan, amend this Area Plan if necessary to ensure consistency with the adopted Climate Action Plan. **Policy CO 8.1.3:** Implement the ordinances developed through the County's Green Building Program. **Policy CO 8.1.4:** Provide information and education to the public about energy conservation and local strategies to address climate change. **Policy CO 8.1.5:** Coordinate various activities within the community and appropriate agencies related to GHG emissions reduction activities. **Policy CO 8.2.1:** Ensure that all new County buildings, and all major renovations and additions, meet adopted green building standards, with a goal of achieving the LEED (Leadership in Energy and Environmental Design) Silver rating or above, or equivalent, where appropriate. **Policy CO 8.2.2:** Ensure energy efficiency of existing public buildings through energy audits and repairs, and retrofit buildings with energy efficient heating and air conditioning systems and lighting fixtures. **Policy CO 8.2.3:** Support purchase of renewable energy for public buildings, which may include installing solar photovoltaic systems to generate electricity for County buildings and operations and other methods as deemed appropriate and feasible, in concert with significant energy conservation efforts. **Policy CO 8.2.4:** Establish maximum lighting levels for public facilities, and encourage reduction of lighting levels to the level needed for security purposes after business hours, in addition to use of downward-directed lighting and use of low-reflective paving surfaces.

ID	Measures	OVOV Policy/Project Feature
		Policy CO 8.2.5: Support installation of photovoltaic and other renewable energy equipment on public facilities, in concert with significant energy conservation efforts. **Policy CO 8.2.6:** Promote use of solar lighting in parks and along paseos and trails, where practical. **Policy CO 8.2.8:** Promote the purchase of energy-efficient and recycled products, and vendors and contractors who use energy-efficient vehicles and products, consistent with adopted purchasing policies. **Policy CO 8.2.9:** Reduce heat islands through installation of trees to shade parking lots and hardscapes, and use of light-colored reflective paving and roofing surfaces. **Policy CO 8.2.10:** Support installation of energy-efficient traffic control devices, street lights, and parking lot lights. **Policy CO 8.2.11:** Implement recycling in all public buildings, parks, and public facilities, including for special events. **Policy CO 8.2.12:** Provide ongoing training to appropriate County employees on sustainable planning, building, and engineering practices. **Policy CO 8.3.3:** Promote energy efficiency and water conservation upgrades to existing non-residential buildings at the time of major remodel or additions. **Policy CO 8.3.4:** Encourage new residential development to include on-site solar photovoltaic systems, or pre-wiring, in at least 50% of the residential units, in concert with other significant energy conservation efforts. **Policy CO 8.3.5:** Encourage on-site solar generation of electricity in new retail and office commercial buildings and associated parking lots, carports, and garages, in concert with significant energy conservation efforts. **Policy CO 8.3.6:** Require new development to use passive solar heating and cooling techniques in building design and construction, which may include but are not be limited to building orientation, clerestory windows, skylights, placement and type of windows, overhangs to shade doors and windows, and use of light colored roofs, shade trees, and paving materials. **Policy CO 8.3.7:** Encourage the use of trees and landscaping to reduce heating and cooling energy loads, through shading of buildings and parking lots. **Policy CO 8.3.8:** Encourage energy-conserving heating and cooling systems and appliances, and energy-efficiency in windows and insulation, in all new construction.

ID	Measures	OVOV Policy/Project Feature
		Policy CO 8.3.9: Limit excessive lighting levels, and encourage a reduction of lighting when businesses are closed to a level required for security. **Policy CO 8.3.10:** Provide incentives and technical assistance for installation of energy-efficient improvements in existing and new buildings. **Policy CO 8.3.11:** Consider allowing carbon off-sets for large development projects, if appropriate, which may include funding off-site projects or purchase of credits for other forms of mitigation, provided that any such mitigation shall be measurable and enforceable. **Policy LU 7.1.2:** Promote the use of solar panels and renewable energy sources in all projects. **Policy LU 7.1.3:** Encourage development of energy-efficient buildings, and discourage construction of new buildings for which energy efficiency cannot be demonstrated.
OPR-12	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.	**Project is Consistent:** See measures discussed above in OPR-1, -4, and -5.
OPR-13	Educate the public, schools, other jurisdictions, professional associations, business and industry about reducing GHG emissions.	**Project is Consistent:** **Policy CO 8.1.4:** Provide information and education to the public about energy conservation and local strategies to address climate change. **Policy CO 8.1.5:** Coordinate various activities within the community and appropriate agencies related to GHG emissions reduction activities.
OPR-14	Replace traffic lights, streetlights, and other electrical uses to energy efficient bulbs and appliances.	**Project is Consistent:** See measures discussed above in OPR-11.
OPR-15	Purchase Energy Star equipment and appliances for public agency use.	**Project is Consistent:** See measures discussed above in OPR-11.
OPR-16	Incorporate on-site renewable energy production, including installation of photovoltaic cells or other solar options.	**Project is Consistent:** **Policy CO 8.3.4:** Encourage new residential development to include on-site solar photovoltaic systems, or pre-wiring, in at least 50% of the residential units, in concert with other significant energy conservation efforts. **Policy CO 8.3.5:** Encourage on-site solar generation of electricity in new retail and office commercial buildings and associated parking lots, carports, and garages, in concert with other significant energy conservation efforts.

ID	Measures	OVOV Policy/Project Feature
OPR-17	Execute an Energy Savings Performance Contract with a private entity to retrofit public buildings. This type of contract allows the private entity to fund all energy improvements in exchange for a share of the energy savings over a period of time.	**Project is Consistent:** See measures discussed above in OPR-11.
OPR-18	Design, build, and operate schools that meet the Collaborative for High Performance Schools (CHPS) best practices.	Not applicable: This measure is beyond the scope of the proposed project and beyond the control of the Project Applicant.
OPR-19	Retrofit municipal water and wastewater systems with energy efficient motors, pumps and other equipment, and recover wastewater treatment methane for energy production.	**Project is Consistent:** See measures discussed above in OPR-11.
OPR-20	Convert landfill gas into energy sources for use in fueling vehicles, operating equipment, and heating buildings.	Not applicable: This measure is beyond the scope of the proposed project and beyond the control of the Project Applicant.
OPR-21	Purchase government vehicles and buses that use alternatives fuels or technology, such as electric hybrids, biodiesel, and ethanol. Where feasible, require fleet vehicles to be low emission vehicles. Promote the use of these vehicles in the general community.	**Project is Consistent:** The on-road vehicles that travel to and from the proposed project site would be in compliance with applicable CARB and/or US EPA emission standards that in effect at the time of purchase.
OPR-22	Offer government incentives to private businesses for developing buildings with energy and water efficient features and recycled materials. The incentives can include expedited plan checks and reduced permit fees.	Not applicable: This measure is beyond the scope of the proposed project and beyond the control of the Project Applicant.
OPR-23	Offer rebates and low-interest loans to residents that make energy-saving improvements on their homes.	Not applicable: This measure is beyond the scope of the proposed project and beyond the control of the Project Applicant.
OPR-24	Create bicycle lanes and walking paths directed to the location of schools, parks and other destination points.	**Project is Consistent:** See measures described above in OPR-1.
Programs to Reduce Vehicle Miles Traveled		
OPR-25	Offer government employees financial incentives to carpool, use public transportation, or use other modes of travel for daily commutes.	**Project is Consistent:** See measures discussed above in OPR-4 and -5.
OPR-26	Encourage large businesses to develop commute trip reduction plans that encourage employees who commute alone to consider alternative transportation modes.	**Project is Consistent:** See measures discussed above in OPR-1, -4 and -5.

ID	Measures	OVOV Policy/Project Feature
OPR-27	Develop shuttle systems around business district parking garages to reduce congestion and create shorter commutes.	**Project is Consistent:** See measures discussed above in OPR-4.
OPR-28	Create an online ridesharing program that matches potential carpoolers immediately through email.	Not applicable: This measure is beyond the scope of the proposed project and beyond the control of the Project Applicant.
OPR-29	Develop a Safe Routes to School program that allows and promotes bicycling and walking to school.	**Project is Consistent:** See measures discussed above in OPR-1.
Programs to Reduce Solid Waste		
OPR-30	Create incentives to increase recycling and reduce generation of solid waste by residential users.	**Project is Consistent:** **Policy CO 1.3.1:** Explore, evaluate, and implement methods to shift from using non-renewable resources to use of renewable resources in all aspects of land use planning and development. **Policy CO 1.3.2:** Promote reducing, reusing, and recycling in all Land Use designations and cycles of development. **Policy CO 1.3.3:** Provide informational material to the public about programs to conserve non-renewable resources and recover materials from the waste stream. **Policy CO 8.2.11:** Implement recycling in all public buildings, parks, and public facilities, including for special events. **Policy LU 7.5.1:** Ensure that all new development provides adequate space for recycling receptacles and bins on site. **Policy LU 7.5.2:** Promote the use of recycled building materials.
OPR-31	Implement a Construction and Demolition Waste Recycling Ordinance to reduce the solid waste created by new development.	**Project is Consistent:** The demolition and construction process would include efforts to separate debris and recycle a minimum of 50 percent of the basic building materials, pursuant to AB 939.
OPR-32	Add residential/commercial food waste collection to existing greenwaste collection programs.	**Project is Consistent:** See measures discussed above in OPR-30.

Source: Office of Planning and Research, "CEQA and Climate Change: Addressing Climate Change Through CEQA Review," http://www.opr.ca.gov/ceqa/pdfs/june08-ceqa.pdf. 2008.

Consistency with the Attorney General's Recommended General Plan Measures

As previously discussed, the Attorney General has published a list of GHG reduction measures that can be included as General Plan design features, required changes to the General Plan, or mitigation

measures. The measures are intended to provide recommendations to lead agencies that may be helpful in carrying out their duties under CEQA with respect to greenhouse gases and climate change impacts. As listed below in **Table 3.4-11, Attorney General's Recommended General Plan Mitigation Measures**, the OVOV proposed Area Plan and General Plan would be consistent with the Attorney General's recommended measures.

Table 3.4-11
Attorney General's Recommended General Plan Mitigation Measures

ID	Suggested Mitigation Measures	OVOV Policy
Conservation Element		
AG-1	Climate Action Plan or Policy: Include a comprehensive climate change action plan that requires a baseline inventory of greenhouse gas emissions from all sources by a date certain; greenhouse gas emissions reduction targets and deadlines; and enforceable greenhouse gas emissions reduction measures.	**Project is Consistent:** **Policy CO 8.1.1:** Create and adopt a Climate Action Plan within 18 months of the adoption date of the County's General Plan Update that meets State requirements and includes the following components: (a) Plans and programs to reduce GHG emissions to State-mandated targets, including enforceable reduction measures; (b) Mechanisms to ensure regular review of progress towards the emissions reduction targets established by the Climate Action Plan; (c) Procedures for reporting on progress to officials and the public; (d) Procedures for revising the plan as needed to meet GHG emissions reduction targets; and (e) Allocation of funding and staffing for Plan implementation. After adoption of the Climate Action Plan, amend this Area Plan if necessary to ensure consistency with the adopted Climate Action Plan.
AG-2	Climate Action Plan Implementation Program: Include mechanisms to ensure regular review of progress toward the emission reduction targets established by the Climate Action Plan, report progress to the public and responsible officials, and revise the plan as appropriate, using principles of adaptive management. Allocate funding to implement the plan. Fund staff to oversee implementation of the plan.	**Project is Consistent:** See measures described above in AG-1.
AG-3	Strengthen local building codes for new construction and renovation to require a higher level of energy efficiency.	**Project is Consistent:** **Policy CO 8.1.3:** Implement the ordinances developed through the County's Green Building Program. **Policy CO 8.2.2:** Ensure energy efficiency of existing public buildings through energy audits and repairs, and retrofit buildings with energy efficient heating and air conditioning systems and lighting fixtures.

ID	Suggested Mitigation Measures	OVOV Policy
		Policy CO 8.2.3: Support purchase of renewable energy for public buildings, which may include installing solar photovoltaic systems to generate electricity for County buildings and operations and other methods as deemed appropriate and feasible, in concert with significant energy conservation efforts. **Policy CO 8.2.5:** Support installation of photovoltaic and other renewable energy equipment on public facilities, in concert with significant energy conservation efforts. **Policy CO 8.2.8:** Promote the purchase of energy-efficient and recycled products, and vendors and contractors who use energy-efficient vehicles and products, consistent with adopted purchasing policies. **Policy CO 8.2.9:** Reduce heat islands through installation of trees to shade parking lots and hardscapes, and use of light-colored reflective paving and roofing surfaces. **Policy CO 8.2.11:** Implement recycling in all public buildings, parks, and public facilities, including for special events. **Policy CO 8.3.1:** Evaluate development proposals for consistency with the ordinances developed through the County's Green Building Program. **Policy CO 8.3.2:** Promote construction of energy efficient buildings through the certification requirements of the ordinances developed through the County's Green Building Program. **Policy CO 8.3.3:** Promote energy efficiency and water conservation upgrades to existing non-residential buildings at the time of major remodel, or additions. **Policy CO 8.3.4:** Encourage new residential development to include on-site solar photovoltaic systems, or pre-wiring, in at least 50% of the residential units, in concert with other significant energy conservation efforts. **Policy CO 8.3.5:** Encourage on-site solar generation of electricity in new retail and office commercial buildings and associated parking lots, carports, and garages, in concert with significant energy conservation efforts. **Policy CO 8.3.6:** Require new development to use passive solar heating and cooling techniques in building design and construction, which may include but are not be limited to building orientation, clerestory windows, skylights, placement and type of windows, overhangs to shade doors and windows, and use of light colored roofs, shade trees, and paving materials.

ID	Suggested Mitigation Measures	OVOV Policy
		Policy CO 8.3.7: Encourage the use of trees and landscaping to reduce heating and cooling energy loads, through shading of buildings and parking lots. **Policy CO 8.3.8:** Encourage energy-conserving heating and cooling systems and appliances, and energy-efficiency in windows and insulation, in all new construction. **Policy CO 8.3.10:** Provide incentives and technical assistance for installation of energy-efficient improvements in existing and new buildings. **Policy CO 8.3.11:** Consider allowing carbon off-sets for large development projects, if appropriate, which may include funding off-site projects or purchase of credits for other forms of mitigation, provided that any such mitigation shall be measurable and enforceable. **Policy LU 7.1.2:** Promote the use of solar panels and renewable energy sources in all projects. **Policy LU 7.1.3:** Encourage development of energy-efficient buildings, and discourage construction of new buildings for which energy efficiency cannot be demonstrated.
AG-4	Require that all new government buildings, and all major renovations and additions, meet identified green building standards.	**Policy CO 8.2.1:** Ensure that all new County buildings, and all major renovations and additions, meet adopted green building standards, with a goal of achieving the LEED (Leadership in Energy and Environmental Design) Silver rating or above, or equivalent, where appropriate.
AG-5	Adopt a "Green Building Program" to require or encourage green building practices and materials. The program could be implemented through, e.g., a set of green building ordinances.	**Project is Consistent:** See measures described above in AG-3 and -4.
AG-6	Require orientation of buildings to maximize passive solar heating during cool seasons, avoid solar heat gain during hot periods, enhance natural ventilation, and promote effective use of daylight. Orientation should optimize opportunities for on-site solar generation.	**Project is Consistent:** See measures described above in AG-3.
AG-7	Provide permitting-related and other incentives for energy efficient building projects, e.g., by giving green projects priority in plan review, processing and field inspection services.	**Project is Consistent:** See measures described above in AG-3.

ID	Suggested Mitigation Measures	OVOV Policy
AG-8	Conduct energy efficiency audits of existing buildings by checking, repairing, and readjusting heating, ventilation, air conditioning, lighting, water heating equipment, insulation, and weatherization. Offer financial incentives for adoption of identified efficiency measures.	**Project is Consistent:** See measures described above in AG-3.
AG-9	Partner with community services agencies to fund energy efficiency project, including heating, ventilation, air conditioning, lighting, water heating equipment, insulation, and weatherization, for low-income residents.	**Project is Consistent:** **Policy CO 8.1.5:** Coordinate various activities within the community and appropriate agencies related to GHG emissions reduction activities.
AG-10	Target local funds, including redevelopment and Community Development Block Grant resources, to assist affordable housing developers in incorporating energy efficient designs and features.	**Project is Consistent:** See measures described above in AG-3.
AG-11	Provide innovative, low-interest financing for energy efficiency and alternative energy projects. For example, allow property owners to pay for energy efficiency improvements and solar system installation through long-term assessments on individual property tax bills.	**Project is Consistent:** See measures described above in AG-3.
AG-12	Fund incentives to encourage the use of energy efficient vehicles, equipment and lighting. Provide financial incentives for adoption of identified efficiency measures.	**Project is Consistent:** **Policy C 4.1.6:** Provide incentives to promote transit-oriented development near rail stations. **Policy CO 8.3.10:** Provide incentives and technical assistance for installation of energy-efficient improvements in existing and new buildings. **Policy CO 8.2.4:** Establish maximum lighting levels for public facilities, and encourage reduction of lighting levels to the level needed for security purposes after business hours, in addition to use of downward-directed lighting and use of low-reflective paving surfaces. **Policy CO 8.2.6:** Promote use of solar lighting in parks and along paseos and trails, where practical. **Policy CO 8.2.10:** Support installation of energy-efficient traffic control devices, street lights, and parking lot lights. **Policy CO 8.2.12:** Provide ongoing training to appropriate County employees on sustainable planning, building, and engineering practices. **Policy CO 8.3.9:** Limit excessive lighting levels, and encourage a reduction of lighting when businesses are closed to a level required for security.

ID	Suggested Mitigation Measures	OVOV Policy
AG-13	Require environmentally responsible government purchasing. Require or give preference to products that reduce or eliminate indirect greenhouse gas emissions, e.g., by giving preference to recycled products over those made from virgin materials.	**Project is Consistent:** **Policy CO 8.2.8:** Promote the purchase of energy-efficient and recycled products, and vendors and contractors who use energy-efficient vehicles and products, consistent with adopted purchasing policies.
AG-14	Require that government contractors take action to minimize greenhouse gas emissions, e.g., by using low or zero-emission vehicles and equipment.	**Project is Consistent:** **Policy CO 4.1.4:** Provide informational materials to applicants and contractors on Castaic Lake Water Agency's Landscape Education Programs, and/or other information on xeriscape, native California plants, and water-conserving irrigation techniques as materials become available. See additional measures described above in AG-13.
AG-15	Adopt a "heat island" mitigation plan that requires cool roofs, cool pavements, and strategically placed shade trees. (Darker colored roofs, pavement, and lack of trees may cause temperatures in urban environments to increase by as much as 6–8 degrees Fahrenheit as compared to surrounding areas. Adopt a program of building permit enforcement for re-roofing to ensure compliance with existing state building requirements for cool roofs on non-residential buildings.	**Project is Consistent:** **Policy CO 4.3.3:** Provide flexibility for design standards for street width, sidewalk width, parking, and other impervious surfaces when it can be shown that such reductions will not have negative impacts and will provide the benefits of stormwater retention, groundwater infiltration, reduction of heat islands, enhancement of habitat and biodiversity, saving of significant trees or planting of new trees, or other environmental benefit. **Policy CO 4.3.4:** Encourage and promote the use of new materials and technology for improved stormwater management, such as pervious paving, green roofs, rain gardens, and vegetated swales. **Policy CO 8.2.9:** Reduce heat islands through installation of trees to shade parking lots and hardscapes, and use of light-colored reflective paving and roofing surfaces. **Policy CO 8.3.6:** Require new development to use passive solar heating and cooling techniques in building design and construction, which may include but are not be limited to building orientation, clerestory windows, skylights, placement and type of windows, overhangs to shade doors and windows, and use of light colored roofs, shade trees, and paving materials. **Policy CO 10.2.1:** Encourage provision of vegetated open space on a development project's site, which may include shallow wetlands and ponds, drought tolerant landscaping, and pedestrian hardscape that includes vegetated areas. See additional measures described above in AG-3 and -4.

ID	Suggested Mitigation Measures	OVOV Policy
AG-16	Adopt a comprehensive water conservation strategy. The strategy may include, but not be limited to, imposing restrictions on the time of watering, requiring water-efficient irrigation equipment, and requiring new construction to offset demand so that there is no net increase in water use.	**Project is Consistent:** **Policy CO 4.1.1:** In coordination with applicable water suppliers, adopt and implement a water conservation strategy for public and private development. **Policy CO 4.1.2:** Provide examples of water conservation in landscaping through use of low water use landscaping in public spaces such as parks, landscaped medians and parkways, plazas, and around public buildings. **Policy CO 4.1.3:** Require low water use landscaping in new residential subdivisions and other private development projects, including a reduction in the amount of turf-grass. **Policy CO 4.1.4:** Provide informational materials to applicants and contractors on Castaic Lake Water Agency's Landscape Education Programs, and/or other information on xeriscape, native California plants, and water-conserving irrigation techniques as materials become available. **Policy CO 4.1.5:** Promote the use of low-flow and/or waterless plumbing fixtures and appliances in all new non-residential development and residential development of five or more dwelling units. **Policy CO 4.1.6:** Support amendments to the County Building Code that would promote upgrades to water and energy efficiency when issuing permits for renovations or additions to existing buildings. **Policy CO 4.1.7:** Apply water conservation policies to all pending development projects, including approved tentative subdivision maps, to the extent permitted by law. Where precluded from adding requirements by vested entitlements, encourage water conservation in construction and landscape design. **Policy CO 4.1.8:** Upon the availability of non-potable water services, discourage and consider restrictions on the use of potable water for washing outdoor surfaces. **Policy CO 4.2.1:** In cooperation with the Sanitation District and other affected agencies, expand opportunities for use of recycled water for the purposes of landscape maintenance, construction, water recharge, and other uses as appropriate.

ID	Suggested Mitigation Measures	OVOV Policy
		Policy CO 4.2.2: Require new development to provide the infrastructure needed for delivery of recycled water to the property for use in irrigation, even if the recycled water main delivery lines have not yet reached the site, where deemed appropriate by the reviewing authority. **Policy CO 4.2.3:** Promote the installation of rainwater capture and gray water systems in new development for irrigation, where feasible and practicable. **Policy CO 4.2.4:** Identify and protect areas with substantial potential for groundwater recharge, and promote recharge of groundwater basins throughout the watershed (excluding the river bed). **Policy CO 4.2.5:** Participate and cooperate with other agencies to complete, adopt, and implement an Integrated Regional Water Management Plan to build a diversified portfolio of water supply, water quality, and resource stewardship priorities for the Santa Clarita Valley. **Policy LU 4.5.2:** Encourage the provision of usable open space that is accessible to employees and visitors, and discourage the provision of large areas of water-consuming landscaping that are not usable or accessible.
AG-17	Adopt water conservation pricing, e.g., tiered rate structures, to encourage efficient water use.	**Project is Consistent:** The project would be consistent to the extent that the municipal water district servicing the area would implement water conservation pricing.
AG-18	Adopt water-efficient landscape ordinances.	**Project is Consistent:** See measures described above in AG-16.
AG-19	Strengthen local building codes for new construction and implement a program to renovate existing buildings to require a higher level of water efficiency.	**Project is Consistent:** See measures described above in AG-16.
AG-20	Adopt energy and water efficiency retrofit ordinances that require upgrades as a condition of issuing permits for renovations or additions, and on the sale of residences and buildings.	**Project is Consistent:** See measures described above in AG-16.
AG-21	Provide individualized water audits to identify conservation opportunities. Provide financial incentives for adopting identified efficiency measures.	**Project is Consistent:** See measures described above in AG-16.
AG-22	Provide water audits for large landscape accounts. Provide financial incentives for efficient irrigation controls and other efficiency measures.	**Project is Consistent:** See measures described above in AG-16.

ID	Suggested Mitigation Measures	OVOV Policy
AG-23	Require water efficiency training and certification for irrigation designers and installers, and property managers.	**Project is Consistent:** See measures described above in AG-16.
AG-24	Implement or expand city or countywide recycling and composting programs for residents and businesses. Require commercial and industrial recycling.	**Project is Consistent:** **Policy CO 1.3.1:** Explore, evaluate, and implement methods to shift from using non-renewable resources to use of renewable resources in all aspects of land use planning and development. **Policy CO 1.3.2:** Promote reducing, reusing, and recycling in all Land Use designations and cycles of development. **Policy CO 1.3.3:** Provide informational material to the public about programs to conserve non-renewable resources and recover materials from the waste stream. **Policy CO 8.2.11:** Implement recycling in all public buildings, parks, and public facilities, including for special events. **Policy CO 8.4.1:** Encourage and promote the location of enclosed materials recovery facilities (MRF) within the Santa Clarita Valley. **Policy CO 8.4.2:** Adopt mandatory residential recycling programs for all residential units, including single-family and multi-family dwellings. **Policy CO 8.4.3:** Allow and encourage composting **of** greenwaste, where appropriate. **Policy CO 8.4.4:** Promote commercial and industrial recycling, including recycling of construction and demolition debris. **Policy CO 8.4.5:** Develop and implement standards for refuse and recycling receptacles and enclosures to accommodate recycling in all development. **Policy CO 8.4.6:** Introduce and assist with the placement of receptacles for recyclable products in public places, including at special events. **Policy CO 8.4.7:** Provide information to the public on recycling opportunities and facilities, and support various locations and events to promote public participation in recycling. **Policy CO 8.4.8:** Take an active role in promoting, incubating, and encouraging businesses that would qualify under the Recycling Market Development Zone program or equivalent, including those that manufacture products made from recycled products, salvage, and resource recovery business parks.

ID	Suggested Mitigation Measures	OVOV Policy
		Policy LU 7.5.1: Ensure that all new development provides adequate space for recycling receptacles and bins on site. **Policy LU 7.5.2:** Promote the use of recycled building materials.
AG-25	Extend the types of recycling services offered (e.g., to include food and green waste recycling).	**Project is Consistent:** See measures described above in AG-24.
AG-26	Establish methane recovery in local landfills and wastewater treatment plants to generate electricity.	**Project is Consistent:** The project would be consistent to the extent that the local landfills and wastewater treatment plants in the area would implement methane recovery to generate electricity.
AG-27	Implement Community Choice Aggregation (CCA) for renewable electricity generation. (CCA allows cities and counties, or groups of them, to aggregate the electric loads of customers within their jurisdictions for purposes of procuring electrical services. CCA allows the community to choose what resources will serve their loads and can significantly increase renewable energy.)	Not applicable: This measure is beyond the scope of the proposed project and beyond the control of the Project Applicant.
AG-28	Preserve existing conservation areas (e.g., forested areas, agricultural lands, wildlife habitat and corridors, wetlands, watersheds, and groundwater recharge areas) that provide carbon sequestration benefits.	**Project is Consistent** **Policy CO 3.4.2:** Consider principles of forest management in land use decisions for projects adjacent to the National Forest, including limiting the use of invasive species, discouraging off-road vehicle use, maintaining fuel modification zones and fire access roads, and other measures as appropriate, in accordance with the goals set forth in the Angeles National Forest Land Management Plan. **Policy CO 10.1.9:** Preserve forested areas, agricultural lands, wildlife habitat and corridors, wetlands, watersheds, groundwater recharge areas, and other open space that provides natural carbon sequestration benefits. **Policy CO 10.2.1:** Encourage provision of vegetated open space on a development project's site, which may include shallow wetlands and ponds, drought tolerant landscaping, and pedestrian hardscape that includes vegetated areas. **Policy CO 10.2.4:** Seek opportunities to incorporate site features into the open space of a project design, which may include significant trees, vegetation, terrain, or water features, to provide thermal, acoustic, and aesthetic benefits.

ID	Suggested Mitigation Measures	OVOV Policy
		Policy CO 10.2.5: Where appropriate, allow density transfers and density-controlled development (clustering) in accordance with the provisions of the Zoning Ordinance to encourage retention of open space, provided that all residential lots meet the minimum lot size requirements of a Community Standards District, where applicable.
AG-29	Establish a mitigation program for development of conservation areas. Impose mitigation fees on development of such lands and use funds generated to protect existing, or create replacement, conservation areas.	**Project is Consistent:** See measures described above in AG-28.
AG-30	Provide public education and information about options for reducing greenhouse gas emissions through responsible purchasing, conservation, and recycling.	**Project is Consistent:** **Policy CO 8.1.4:** Provide information and education to the public about energy conservation and local strategies to address climate change. **Policy CO 8.1.5:** Coordinate various activities within the community and appropriate agencies related to GHG emissions reduction activities.
Land Use Element		
AG-31	Adopt land use designations to carry out policies designed to reduce greenhouse gas emissions, e.g., policies to minimize or reduce vehicle miles traveled, encourage development near existing public transportation corridors, encourage alternative modes of transportation, and promote infill, mixed use, and higher density development.	**Project is Consistent:** **Policy C 1.1.1:** Reduce dependence on the automobile, particularly single-occupancy vehicle use, by providing safe and convenient access to transit, bikeways, and walkways. **Policy C 1.1.2:** Promote expansion of alternative transportation options to increase accessibility to all demographic and economic groups throughout the community, including mobility-impaired persons, senior citizens, low-income persons, and youth. **Policy C 1.1.3:** Work with local and regional agencies and employers to promote an integrated, seamless transportation system that meets access needs, including local and regional bus service, dial-a-ride, taxis, rail, van pools, car pools, bus pools, bicycling, walking, and automobiles. **Policy C 1.1.6:** Provide adequate facilities, including but not limited to bicycle parking and storage, expansion of park-and-ride lots, and provision of adequate station and transfer facilities in appropriate locations. **Policy C 1.1.12:** Encourage the City of Santa Clarita to implement recommendations of its Non-Motorized Transportation Plan to expand opportunities for alternative travel modes.

ID	Suggested Mitigation Measures	OVOV Policy
		Policy C 1.1.13: Design new activity centers and improve existing activity centers to prioritize walking, bicycling and circulator transit for internal circulation of person-travel. **Policy C 1.2.1:** Develop coordinated plans for land use, circulation, and transit to promote transit-oriented development that concentrates higher density housing, employment, and commercial areas in proximity to transit corridors. **Policy C 1.2.2:** Create walkable communities, with paseos and walkways connecting residential neighborhoods to multi-modal transportation services such as bus stops and rail stations. **Policy C 1.2.3:** Require that new commercial and industrial development provide walkway connections to public sidewalks and transit stops, where available. **Policy C 1.2.4:** Consider location, availability, and accessibility of transit in evaluating new development plans. **Policy C 1.2.5:** In mixed use projects, require compact development and a mix of land uses to locate housing, workplaces, and services within walking or bicycling distance of each other. **Policy C 1.2.6:** Provide flexible standards for parking and roadway design in transit-oriented development areas to promote transit use, where appropriate. **Policy C 1.2.7:** In pedestrian-oriented areas, provide a highly connected circulation grid with relatively small blocks to encourage walking. **Policy C 1.2.8:** Provide safe pedestrian connections across barriers, which may include but are not limited to major traffic corridors, drainage and flood control facilities, utility easements, grade separations, and walls. **Policy C 1.2.9:** Emphasize providing right-of-way for non-vehicular transportation modes so that walking and bicycling are the easiest, most convenient modes of transportation available for short trips. **Policy C 1.2.11:** Reduce vehicle miles traveled (VMT) through the use of smart growth concepts. **Policy C 1.3.1:** Continue coordinating with the Metropolitan Transportation Authority (MTA or Metro) to implement the County's Congestion Management Program (CMP) for designated CMP roadways.

ID	Suggested Mitigation Measures	OVOV Policy
		Policy C 1.3.3: Coordinate circulation planning with the Regional Transportation Plan prepared by the Southern California Association of Governments (SCAG), to ensure consistency of planned improvements with regional needs. **Policy C 1.3.4:** Continue coordination with Caltrans on circulation and land use decisions that may affect Interstate 5, State Route 14, and State Route 126, and support programs to increase capacity and improve operations on these highways. **Policy C 2.1.1:** Protect mobility on arterial highways by limiting excessive cross traffic, access points, and turning movements; traffic signals on arterial highways should be spaced at least ½-mile apart, and the minimum allowable separation should be at least ¼-mile. **Policy C 2.2.6:** Within residential neighborhoods, promote the design of "healthy streets" which may include reduced pavement width, shorter block length, provision of on-street parking, traffic-calming devices, bike routes and pedestrian connectivity, landscaped parkways, and canopy street trees. **Policy C 2.2.7:** Where practical, encourage the use of grid or modified grid street systems to increase connectivity and walkability; where cul-de-sacs are provided, promote the use of walkways connecting cul-de-sac bulbs to adjacent streets and/or facilities to facilitate pedestrian access; where street connectivity is limited and pedestrian routes are spaced over 500 feet apart, promote the use of intermediate pedestrian connections through or between blocks. **Policy C 2.2.14:** Streets should be designed in context with the terrain and the natural and built features of the area, but excessively circuitous streets should be avoided to minimize unnecessary vehicle, bicycle and pedestrian mileage. **Policy C 4.1.1:** Develop permanent Metrolink facilities with an expanded bus transfer station and additional park-and-ride spaces at the Via Princessa station, or other alternative location as deemed appropriate to meet the travel needs of residents on the Valley's east side. **Policy C 4.1.2:** Coordinate with other agencies to facilitate extension of a passenger rail line from the Santa Clarita Station to Ventura County, which may be used for Metrolink service.

ID	Suggested Mitigation Measures	OVOV Policy
		Policy C 4.1.3: Continue to expand and improve commuter services, including park-and-ride lots, bicycle parking and storage, and waiting facilities, at all Metrolink stations. **Policy C 4.1.4:** Encourage the preservation of abandoned railroad right-of-way for future transportation facilities, where appropriate. **Policy C 4.1.5:** Work with other agencies to increase rail efficiency and public safety through street and track improvements, and grade separations, where needs are identified. **Policy C 4.1.6:** Provide incentives to promote transit-oriented development near rail stations. **Policy C 4.1.7:** Facilitate coordination of planning for any future high speed regional rail systems in the Valley with Metrolink services. **Policy C 4.1.8:** Minimize impacts to passenger rail service and the community from any proposed increase to freight rail service through the Valley. **Policy C 4.2.1:** Continue to work with the Orange Line Development Authority (OLDA) to plan for development of an environmentally sensitive, high speed transportation system with a route through the Santa Clarita Valley, including a regional transit hub with associated infrastructure that would provide connections to the Los Angeles Basin, Palmdale Regional Airport, and other destinations. **Policy C 4.2.2:** Coordinate with other agencies as needed to facilitate planning for other high-speed rail alternatives in the Santa Clarita Valley. **Policy C 5.1.1:** Require that new subdivisions provide for two means of access into and out of the development, in order to provide for transit access, where feasible. **Policy C 5.1.2:** For private gated communities, require the developer to accommodate bus access through the entry gate, or provide bus waiting facilities at the project entry with pedestrian connections to residential streets, where appropriate. **Policy C 5.1.3:** Consider the operational characteristics of buses when determining acceptable street designs, including grades and turning radii. **Policy C 5.1.4:** Provide for location of bus stops within ¼-mile of residential neighborhoods, and include paved bus waiting areas in street improvement plans wherever appropriate and feasible.

ID	Suggested Mitigation Measures	OVOV Policy
		Policy C 5.1.5: Locate and design bus turnouts to limit traffic obstruction and to provide sufficient merging length for the bus to re-enter the traffic flow. **Policy C 5.1.6:** Evaluate the feasibility of giving buses priority at signalized intersections to maintain transit service level standards, where appropriate. **Policy C 5.2.1:** Require paved waiting areas, accessible by paved walkways and reasonably direct pedestrian routes, for bus stops in new development; and provide for retrofitting of existing bus stops, where feasible and practicable. **Policy C 5.2.4:** Enhance way-finding signage along walkways and paseos to direct pedestrians to transit stops. **Policy C 5.2.5:** Complementary transportation modes should be interconnected at intermodal transit centers, including provisions for bicycles on buses, bicycle parking at transit centers, and park-and-ride at transit stops. **Policy C 5.3.1:** Continue to provide fixed route service to significant activity areas and neighborhoods with moderate to high density, and serve low-density and rural areas with dial-a-ride, flexible fixed routes, or other transit services as deemed appropriate. **Policy C 5.3.2:** Promote concentrated development patterns in coordination with transit planning to maximize service efficiency and ridership. **Policy CO 1.3.1:** Explore, evaluate, and implement methods to shift from using non-renewable resources to use of renewable resources in all aspects of land use planning and development. **Policy LU 2.1.2:** On the Land Use Map, integrate land use designations in a manner that promotes healthy, walkable communities, by providing an appropriate mix of residential and service uses in proximity to one another. **Policy LU 2.3.2:** Either vertical or horizontal integration of uses shall be allowed in mixed use development, with an emphasis on tying together the uses with appropriate pedestrian linkages. **Policy LU 2.3.4:** Adequate public spaces and amenities shall be provided in a mixed- use development to support both commercial and residential uses, including but not limited to plazas, landscaped walkways, village greens, and greenbelts.

ID	Suggested Mitigation Measures	OVOV Policy
		Policy LU 2.3.5: Mixed use developments shall be designed to create a pedestrian-scale environment through appropriate street and sidewalk widths, block lengths, relationship of buildings to streets, and use of public spaces. **Policy LU 2.3.6:** Provide parking alternatives in mixed-use developments, including subterranean parking and structured parking to limit the amount of surface area devoted to vehicle storage. **Policy LU 3.1.3:** Promote opportunities for live-work units to accommodate residents with home-based businesses. **Policy LU 3.1.4:** Promote development of workforce housing to meet the needs of those employed in the Santa Clarita Valley. **Policy LU 3.1.7:** Promote development of housing for students attending local colleges, in consideration of access to campuses to the extent practicable. **Policy LU 3.2.1:** Require provision of adequate walkways in urban residential neighborhoods that provide safe and accessible connections to destinations such as schools, parks, and neighborhood commercial centers. **Policy LU 3.2.2:** In planning residential neighborhoods, include pedestrian linkages, landscaped parkways with sidewalks, and separated trails for pedestrians and bicycles, where appropriate and feasible. **Policy LU 4.2.3:** Encourage businesses to locate in all appropriate areas of the community to encourage job creation in closer proximity to workforce housing. **Policy LU 5.1.1:** Require safe, secure, clearly-delineated, adequately-illuminated walkways and bicycle facilities in all commercial and business centers. **Policy LU 5.1.2:** Require connectivity between walkways and bikeways serving neighborhoods and nearby commercial areas, schools, parks, and other supporting services and facilities. **Policy LU 5.1.3:** Ensure that adequate bus turnouts, served by walkways and comfortable, safe, and convenient waiting facilities, are provided for transit users within residential, shopping, and business developments. **Policy LU 5.2.1:** Designate higher-density residential uses in areas served by public transit and a full range of support services.

ID	Suggested Mitigation Measures	OVOV Policy
		Policy LU 5.2.2: Provide for location of neighborhood commercial uses in proximity to the neighborhoods they serve, to encourage cycling and walking to local stores. **Policy LU 5.2.3:** Promote location of non-polluting businesses providing employment opportunities in proximity to neighborhoods, to encourage walking to work. **Policy LU 5.2.4:** Encourage transit-oriented development (TOD) through designation of land uses that allow compact, mixed-use development in proximity to rail stations and multi-modal transit facilities, in conformance with applicable policies. **Policy LU 5.2.5:** Encourage the mix of compatible uses in areas where, though not served by rail or transit, mixed uses will achieve more walkable neighborhoods and trip reduction, in conformance with applicable policies.
AG-32	Identify and facilitate the development of land uses not already present in local districts – such as supermarkets, parks and recreation fields, and schools in neighborhoods; or residential uses in business districts – to reduce vehicle miles traveled and allow bicycling and walking to these destinations.	**Project is Consistent:** See measures described above in AG-31.
AG-33	Create neighborhood commercial districts.	**Project is Consistent:** See measures described above in AG-31.
AG-34	Require bike lanes and bicycle/pedestrian paths.	**Project is Consistent:** See measures described above in AG-31.
AG-35	Prohibit projects that impede bicycle and walking access, e.g., large parking areas that cannot be crossed by non-motorized vehicles, and new residential communities that block through access on existing or potential bicycle and pedestrian routes.	**Project is Consistent:** See measures described above in AG-31.
AG-36	Site schools to increase the potential for students to walk and bike to school.	**Project is Consistent:** See measures described above in AG-31.
AG-37	Enact policies to limit or discourage low-density development that segregates employment, services, and residential areas.	**Project is Consistent:** See measures described above in AG-31.
AG-38	Where there are growth boundaries, adopt policies providing certainty for infill development.	**Project is Consistent:** See measures described above in AG-31.
AG-39	Require best management practices in agriculture and animal operations to reduce emissions, conserve energy and water, and utilize alternative energy sources, including biogas, wind, and solar.	Not applicable: This measure is beyond the scope of the proposed project and beyond the control of the Project Applicant.

ID	Suggested Mitigation Measures	OVOV Policy
Circulation Element		
AG-40	In conjunction with measures that encourage public transit, ride sharing, bicycling and walking, implement circulation improvements that reduce vehicle idling. For example, coordinate controlled intersections so that traffic passes more efficiently through congested areas.	**Project is Consistent:** See measures described above in AG-31.
AG-41	Create an interconnected transportation system that allows a shift in travel from private passenger vehicles to alternative modes, including public transit, ride sharing, car sharing, bicycling, and walking. Before funding transportation improvements that increase vehicle miles traveled, consider alternatives such as increasing public transit or improving bicycle or pedestrian travel routes.	**Project is Consistent:** See measures described above in AG-31.
AG-42	Give funding preference to investment in public transit over investment in infrastructure for private automobile traffic.	**Project is Consistent:** See measures described above in AG-31.
AG-43	Include safe and convenient bicycle and pedestrian access in all transportation improvement projects. Ensure that non-motorized transportation systems are connected and not interrupted by impassable barriers, such as freeways and include amenities such as secure bicycle parking.	**Project is Consistent:** See measures described above in AG-31.
AG-44	Provide adequate and affordable public transportation choices including expanded bus routes and service and other transit choices such as shuttles, light rail, and rail where feasible.	**Project is Consistent:** See measures described above in AG-31.
AG-45	Assess transportation impact fees on new development in order to maintain and increase public transit service.	**Project is Consistent:** See measures described above in AG-31.
AG-46	Provide public transit incentives, including free and reduced fare areas.	**Project is Consistent:** See measures described above in AG-31.
AG-47	Adopt a comprehensive parking policy that discourages private vehicle use and encourages the use of alternative transportation. For example, reduce parking for private vehicles while increasing options for alternative transportation; eliminate minimum parking requirements for new buildings; "unbundle" parking (require that parking is paid for separately and is not included in rent for residential or commercial space); and set appropriate pricing for parking.	**Project is Consistent:** See measures described above in AG-31.

ID	Suggested Mitigation Measures	OVOV Policy
AG-48	Develop school transit plans to substantially reduce automobile trips to, and congestion surrounding, schools. (According to some estimates, parents driving their children to school account for 20–25% of the morning commute.) Plans may address, e.g., necessary infrastructure improvements and potential funding sources; replacing older diesel buses with low or zero-emission vehicles; mitigation fees to expand school bus service; and Safe Routes to School programs and other formal efforts to increase walking and biking by students.	**Project is Consistent:** See measures described above in AG-31.
AG-49	Create financing programs for the purchase or lease of vehicles used in employer ride sharing programs.	**Project is Consistent:** See measures described above in AG-31.
AG-50	Enter into partnerships to create and expand polluting vehicle buy-back programs to include vehicles with high greenhouse gas emissions.	**Project is Consistent:** See measures described above in AG-31.
AG-51	Provide public education and information about options for reducing motor vehicle-related greenhouse gas emissions. Include information on trip reduction; trip linking; public transit; biking and walking; vehicle performance and efficiency (e.g., keeping tires inflated); low or zero-emission vehicles; and car and ride sharing.	**Project is Consistent:** See measures described above in AG-31.
Housing Element		
AG-52	Improve the jobs-housing balance and promote a range of affordable housing choices near jobs, services and transit.	**Project is Consistent:** See measures described above in AG-31.
AG-53	Concentrate mixed use, and medium to higher density residential development in areas near jobs, transit routes, schools, shopping areas and recreation.	**Project is Consistent:** See measures described above in AG-31.
AG-54	Increase density in single-family residential areas located near transit routes or commercial areas. For example, promote duplexes in residential areas and increased height limits of multi-unit buildings on main arterial streets, under specified conditions.	**Project is Consistent:** See measures described above in AG-31.
AG-55	Encourage transit-oriented developments.	**Project is Consistent:** See measures described above in AG-31.
AG-56	Impose minimum residential densities in areas designated for transit-oriented, mixed-use development to ensure higher density in these areas.	**Project is Consistent:** See measures described above in AG-31.

ID	Suggested Mitigation Measures	OVOV Policy
AG-57	Designate mixed -use areas where housing is one of the required uses.	**Project is Consistent:** See measures described above in AG-31.
AG-58	In areas designated for mixed use, adopt incentives for the concurrent development of different land uses (e.g., retail with residential).	**Project is Consistent:** See measures described above in AG-31.
AG-59	Promote infill, mixed use, and higher density development by, for example, reducing developer fees; providing fast-track permit processing; reducing processing fees; funding infrastructure loans; and giving preference for infrastructure improvements in these areas.	**Project is Consistent:** See measures described above in AG-31.
Open Space Element		
AG-60	Preserve forested areas, agricultural lands, wildlife habitat and corridors, wetlands, watersheds, groundwater recharge areas and other open space that provide carbon sequestration benefits.	**Project is Consistent** **Policy CO 3.4.2:** Consider principles of forest management in land use decisions for projects adjacent to the National Forest, including limiting the use of invasive species, discouraging off-road vehicle use, maintaining fuel modification zones and fire access roads, and other measures as appropriate, in accordance with the goals set forth in the Angeles National Forest Land Management Plan. **Policy CO 10.1.9:** Preserve forested areas, agricultural lands, wildlife habitat and corridors, wetlands, watersheds, groundwater recharge areas, and other open space that provides natural carbon sequestration benefits. **Policy CO 10.2.1:** Encourage provision of vegetated open space on a development project's site, which may include shallow wetlands and ponds, drought tolerant landscaping, and pedestrian hardscape that includes vegetated areas. **Policy CO 10.2.4:** Seek opportunities to incorporate site features into the open space of a project design, which may include significant trees, vegetation, terrain, or water features, to provide thermal, acoustic, and aesthetic benefits. **Policy CO 10.2.5:** Where appropriate, allow density transfers and density-controlled development (clustering) in accordance with the provisions of the Zoning Ordinance to encourage retention of open space, provided that all residential lots meet the minimum lot size requirements of a Community Standards District, where applicable.

ID	Suggested Mitigation Measures	OVOV Policy
AG-61	Establish a mitigation program for development of those types of open space that provide carbon sequestration benefits. Require like-kind replacement for, or impose mitigation fees on development of such lands. Use funds generated to protect existing, or create replacement, open space.	**Project is Consistent:** See measures described above in AG-60.
AG-62	Allow alternative energy projects in areas zoned for open space where consistent with other uses and values.	**Project is Consistent:** See measures described above in AG-60.
AG-63	Protect existing trees and encourage the planting of new trees. Adopt a tree protection and replacement ordinance, e.g., requiring that trees larger than a specified diameter that are removed to accommodate development must be replaced at a set ratio.	**Project is Consistent:** See measures described above in AG-60.
AG-64	Connect parks and publicly accessible open space through shared pedestrian/bike paths and trails to encourage walking and bicycling.	**Project is Consistent:** See measures described above in AG-60.
Safety Element		
AG-65	Address expected effects of climate change that may impact public safety, including increased risk of wildfires, flooding and sea level rise, salt-water intrusion; and health effects of increased heat and ozone, through appropriate policies and programs.	**Project is Consistent:** **Policy CO 10.1.6:** Delineate open space uses within hazardous areas to protect public health and safety, which may include areas subject to seismic rupture, flooding, wildfires, or unsafe levels of noise or air pollution. **Policy LU 3.3.2:** In areas subject to wildland fire danger, ensure that land uses have adequate setbacks, fuel modification areas, and emergency access routes. **Policy LU 3.3.4:** Evaluate service levels for law enforcement and fire protection as needed to ensure that adequate response times are maintained as new residential development is occupied.
AG-66	Adopt programs for the purchase, transfer or extinguishment of development rights in high-risk areas.	No applicable policies.
AG-67	Monitor the impacts of climate change. Use adaptive management to develop new strategies, and modify existing strategies, to respond to the impacts of climate change.	No applicable policies.

Source: Department of Justice, "The California Environmental Quality Act – Addressing Global Warming Impacts at the Local Agency Level," http://ag.ca.gov/globalwarming/pdf/GW_mitigation_measures.pdf. 2008.

Consistency with CAPCOA Recommended Measures

As previously discussed, the CAPCOA CEQA and Climate Change white paper includes a list of GHG reduction measures that can be included as general plan design features, required changes to the general plan, or mitigation measures. The measures are intended to provide recommendations to lead agencies that may be helpful in carrying out their duties under CEQA with respect to greenhouse gases and climate change impacts. A consistency analysis of the OVOV General Plan and Area Plan and the CAPCOA recommended measures is provided in **Appendix 3.4**. As shown in the analysis, the OVOV General Plan and Area Plan would be generally consistent with the CAPCOA measures.

Effectiveness of Proposed Area Plan Policies

The proposed policies are designed to directly and indirectly reduce greenhouse gas emissions, and to sequester carbon dioxide. Implementation of these policies would reduce potential Area Plan air quality impacts under this criterion. However, given the level of increase in GHG emissions from existing conditions, impacts are considered potentially significant.

Effectiveness of Proposed General Plan Goals, Objectives and Policies

The proposed goals, objectives and policies are designed to directly and indirectly reduce greenhouse gas emissions, and to sequester carbon dioxide. Implementation of these goals, objectives, and policies would reduce potential General Plan air quality impacts under this criterion. However, given the level of increase in GHG emissions from existing conditions, impacts are considered potentially significant.

Plan to Plan Analysis

The existing General Plan and Area Plan and the OVOV General Plan and Area Plan incorporate goals, objectives and policies that would reduce GHG emissions through effective land use planning, or in the case of OVOV, implementation of Greenhouse Gas policies that would further reduce impacts. However, both Plans would potentially increase the level of GHG emissions from existing conditions by substantial margins. As a result, impacts are considered potentially significant.

MITIGATION FRAMEWORK

The following mitigation measure shall be implemented for activities that would occur under the proposed plan. Additional mitigation measures to reduce the project's criteria pollutant emissions are found in **Section 3.3, Air Quality**. Many of these measures would also reduce the project's GHG emissions.

3.4-1 Prior to the issuance of building permits, the applicant shall provide evidence of green building practices and design elements that reduce GHG emissions, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards (See, e.g., California Department of Housing and Community Development's Green Building & Sustainability Resources handbook at www.hcd.ca.gov/hpd/green_build.pdf; e.g., the American Institute of Architects at http://www.wiki.aia.org/Wiki%20Pages/Home.aspx)

3.4-2 Prior to the issuance of building permits, the applicant shall provide evidence of energy-efficient designs, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards, such as those found in the Leadership in Energy and Environmental Design ("LEED") Green Building Ratings and/or comply with Title 24, Part 11, the California Green Building Standards Code.

3.4-3 Prior to the issuance of building permits, the applicant shall provide evidence of energy efficient lighting, heating and cooling systems, appliances, equipment, and control systems, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards. (Information about ENERGY STAR-certified products are available at http://www.energystar.gov/index.cfm?fuseaction=find_a_product; see also the California Energy Commission's database of appliances meeting federal or state energy standards at http://www.appliances.energy.ca.gov; see the Electronic Product Environmental Assessment Tool for ranking of energy efficient computer equipment at http://www.epeat.net/AboutEPEAT.aspx; see the Online Guide to Energy Efficient Commercial Equipment at http://www.aceee.org/ogeece/ch1_index.htm)

3.4-4 Prior to the issuance of building permits, the applicant shall provide evidence of light colored "cool" roofs and cool pavements, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards. (See Consumer Energy Center, Cool Roofs at http://www.consumerenergycenter.org/coolroof/)

3.4-5 Prior to the issuance of building permits, the applicant shall provide evidence of efficient lighting (including LEDs) for traffic, street, and other outdoor lighting purposes, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards. (See http://www.energy.ca.gov/efficiency/partnership/case_studies/Tech AsstCity.pdf).

3.4-6 Prior to the issuance of building permits, the applicant shall provide evidence of efficient pumps and motors for pools and spas, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards. (See http://www.consumerenergycenter.org/home/outside/pools_spas.html).

3.4-7 Prior to the issuance of building permits, the applicant shall provide evidence of the ability to install solar, and solar hot water heaters, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards. (See http://www.gosolarcalifornia.org/builders/index.html; see also the California Public Utility Commission's website for solar water heating incentives at http://www.cpuc.ca.gov/puc/energy/solar/swh.htm).

3.4-8 Prior to the issuance of building permits for, the applicant shall provide evidence to of water-efficient landscapes, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards. (See http://www.water.ca.gov/wateruseefficiency/landscapeordinance/technical.cfm; see also http://www.ciwmb.ca.gov/organics/Xeriscaping).

3.4-9 Prior to the issuance of building permits, the applicant shall provide evidence of water efficient irrigation systems and devices, such as soil-based irrigation controls and use water-efficient irrigation methods, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards. (See http://www1.eere.energy.gov/femp/program/waterefficiency_bmp5.html; see also http://www.water.ca.gov/wateruseefficiency/landscape/).

3.4-10 Prior to the issuance of building permits, the applicant or their contractor shall submit a site construction management plan for the reuse and recycle construction and demolition waste (including soil, vegetation, concrete, lumber, metal, and cardboard) to the

Department of Public Works for review and approval in accordance with the requirements of the ordinances developed pursuant to the County's Green Building Program and other applicable State and County standards.. (See http://www.ciwmb.ca.gov/condemo/).

3.4-11 Prior to the issuance of building permits, the applicant shall provide evidence of reuse and recycling receptacles in residential, industrial, and commercial projects, in accordance with the requirements of the ordinances developed pursuant to the County's Green Building Program and other applicable State and County standards. (See http://zerowaste.ca.gov; see also http://www.ca-ilg.org/wastereduction).

3.4-12 Prior to the issuance of building permits, the applicant shall provide evidence of consistency with "smart growth" principles to reduce GHG emissions (i.e., ensure mixed-use, infill and higher density projects provide alternatives to individual vehicle travel and promote efficient delivery of goods and services). (See http://www.epa.gov /smartgrowth/ index.htm)

3.4-13 Prior to implementing project approval, the applicant shall preserve existing trees, to the extent feasible and consistent with mitigation measures, encourage the planting of new trees consistent with the final landscape palettes, and create open space where feasible. (See http://www.epa.gov/dced/brownfields.htm)

3.4-14 All residential buildings shall be designed to provide improved insulation and ducting, low E glass, high efficiency air conditioning units, and radiant barriers in attic spaces, as needed, or equivalent to ensure that all residential buildings operate at levels 15 percent better than the standards required by Title 24, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards.

3.4-15 All commercial and public buildings shall be designed to provide improved insulation and ducting, low E glass, high efficiency HVAC equipment, and energy efficient lighting design with occupancy sensors or equivalent to ensure that all commercial and public buildings operate at levels 15 percent better than the standards required by Title 24, in accordance with the requirements of the ordinances adopted pursuant to the County's Green Building Program and other applicable State and County standards.

3.4-16 Consistent with the Governor's Million Solar Roofs Plan, the project applicant or designee, acting as the seller of any single-family residence constructed as part of the development of at least 50 homes that are intended or offered for sale, shall offer a solar energy system option to all customers that enter negotiations to purchase a new production home constructed within the OVOV planning area on land for which an application for a tentative subdivision map has been deemed complete. The seller shall disclose the total installed cost of the solar energy system option, and the estimated cost savings.

3.4-17 Fire stations and public libraries that contain more than 10,000 square feet of floor area within the OVOV planning area shall be designed and constructed so as to achieve LEED silver certification, in accordance with County policy.

SIGNIFICANCE OF IMPACT WITH MITIGATION FRAMEWORK

Based on the above quantitative analysis, the OVOV proposed Area Plan and General Plan could potentially impede or conflict with the State's goal of meeting AB 32 given the increase in GHG emissions. However, as demonstrated by the above analysis, the OVOV proposed Area Plan and General Plan would be consistent with project design features and mitigation measures recommended by CARB, OPR, the California Climate Action Team, and the Office of the Attorney General, and would achieve reductions in GHG emissions from business -as -usual conditions. Nonetheless, the project would result in a potentially significant impact on global climate change.

3.5 AGRICULTURAL RESOURCES

EXECUTIVE SUMMARY

This section describes the existing agricultural resources within the County's Planning Area and analyzes the potential impacts of the proposed Area Plan policies on agricultural resources within the County. The County's Planning Area consists of unincorporated land outside the City's boundaries and adopted Sphere of Influence (SOI) but within the One Valley One Vision (OVOV) Planning Area boundaries. The City's Planning Area consists of its incorporated boundaries and adopted SOI. Both the County and the City Planning Areas comprise the OVOV Planning Area. The **Land Use Policy Map** is consistent with the proposed policies in that it will designate some areas within the County's Planning Area that are considered Important Farmland under the California Department of Conservation (CDC) Farmland Mapping and Monitoring Program (FMMP), as Open Space and Rural Land. There are some areas within the County's Planning Area that have been designated as Important Farmland by the CDC FMMP during their 2004–2006 mapping cycle; however, these areas have since then been approved and are undergoing the processes of conversion to urbanized land uses. Under the next update cycle (2006–2008 FMMP Mapping Cycle) these areas will appropriately not be designated as Important Farmland. Therefore, the proposed **Land Use Policy Map** and proposed Area Plan are consistent with non-conversion of Important Farmland, and would be considered less than significant under the *California Environmental Quality Act (CEQA) Guidelines*. Impacts on agricultural land uses would remain a significant impact in regards to exposing future residents to nuisances associated with agricultural operations or exposing farming activities to nuisances associated with urban uses.

EXISTING CONDITIONS

Agricultural resources are classified by soil categories as defined by the federal government and farmland mapping categories as defined by the state. Soil categories are determined by the United States Soil Conservation Service and classified by agricultural potential. Farmland mapping categories are determined by the CDC.

Federal Soil Categories

The United States Soil Conservation Service groups soils into eight classes based on agricultural potential. This classification is dependent on slope, organic matter, flooding, and erosion hazards. Class I and Class II soils, often referred to as prime soils, are best for agricultural production. Such soils are deep, generally well drained, and easily worked. The western portion of the OVOV Planning Area contains small areas of

soils determined to be soil Classes I and II which are considered Prime Farmland, while a vast portion of the western OVOV Planning Area is grazing land which are soils determined to be Class III to Class VIII. The remainder of the Planning Area contains soils less suitable for agriculture, ranging from Class III to Class VIII.

State Farmland Mapping Categories

The CDC and the California Association of Resource Conservation Districts translate soil survey data into an "Important Farmland Series" of maps for the state's agricultural counties by using the United States Soil Conservation Service soil classifications. These classifications of the CDC's FMMP focus only on those lands that have been recently farmed. Land not recently farmed is not shown on the Important Farmland Series of maps.[1]

The Important Farmland Maps and the Advisory Guidelines for the FMMP identify five agriculture-related categories, as shown in **Figure 3.5-1, Farmland Designations within the OVOV Planning Area**:

- Prime Farmland
- Farmland of Statewide Importance
- Unique Farmland
- Farmland of Local Importance
- Grazing Land

Prime Farmland: Prime Farmland is land with the best combination of physical and chemical features able to sustain long-term production of agricultural crops. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. In order to have the Prime designation, this land must have been used for production of irrigated crops at some time during the four years prior to the mapping date.

Farmland of Statewide Importance: This farmland is similar to Prime Farmland but has minor shortcomings such as greater slopes or less ability to store soil moisture. In order to have the Farmland of Statewide Importance designation, the land must have been used for production of irrigated crops at some time during the four years prior to the mapping date.

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1 The California Department of Conservation Farmland Mapping and Monitoring Program Maps are updated on a biennial basis.

Legend:

- OVOV Planning Area
- SOI Boundary
- City of Santa Clarita Boundary
- Angeles National Forest

Hydrography

- Waterbody and Perennial Stream

Farmland Designations

- Prime Farmland
- Farmland of Statewide Importance
- Unique Farmland
- Farmland of Local Importance
- Grazing Land

Source: City of Santa Clarita - Planning, City Boundary; Thomas Bros., Hydrology, Waterbodies, National Forests, and Streets, August, 2001; LA County - Planning, OVOV Boundary, 2006; ESRI, County Boundaries and Roads, 2006; California Department of Conservation Farmland Mapping and Monitoring Program, Farmlands, 2008; and EIP Associates - Edited SCAG Landuse, March 24, 2003.

2 1 0 2

APPROXIMATE SCALE IN MILES

SOURCE: City of Santa Clarita - Planning - 2009; Impact Sciences, Inc. - August 2009

FIGURE **3.5-1**

Farmland Designations within the OVOV Planning Area

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Unique Farmland: This farmland is of lesser quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated but may include non-irrigated orchards or vineyards as found in some climatic zones in California. In order to have the Unique Farmland designation, the land must have been cropped at some time during the four years prior to the mapping date.

Farmland of Local Importance: This designation consists of soils of importance to the local agricultural economy as determined by each county's board of supervisors. Los Angeles County defines farmland of local importance as producing lands that would meet the standard criteria for Prime Farmland or Farmland of Statewide Importance but are not irrigated.

Grazing Land: Grazing Land consists of existing vegetation that is suited to the grazing of livestock. The minimum mapping unit for Grazing Land is 40 acres.

State of California Agricultural Lands

As documented by the FMMP, the state's important farmlands and grazing lands decreased by 170,982 acres (267 square miles) between 2002 and 2004.[2] The highest-quality agricultural soils, known as Prime Farmland, comprised 46 percent of the loss (78,575 acres). Accelerated urban development in the San Joaquin Valley and other inland locations contributed to a 10 percent increase (101,825 acres) in statewide urbanization in the 2002–2004 period relative to the 2000–2002 period. Both higher urbanization rates and a larger share of new urban lands for inland counties characterized development patterns during the 2004 mapping cycle. Ten counties accounted for 65 percent of all urbanization, led by Riverside and San Bernardino at 23 percent of the statewide total.[3]

Housing was the largest component of new urban acreage, with developments ranging from small infill sites to planned community units of 600 acres or more. Commercial uses (shopping, offices) and community facilities (schools, parks) were constructed in conjunction with the residential developments. Large site-specific developments included warehouse distribution facilities.

Commodity markets and other factors affect land management decisions, causing shifts both in and out of irrigated agricultural use. Conversion from grasslands to orchards, vineyards, and specialty crops were frequent in the late 1990s and early 2000s, but slowed significantly between the 2002 and 2004 updates (from 173,523 to 80,598 acres).[4]

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2 California Department of Conservation Division of Land Resource Protection, Farmland Mapping and Monitoring Program, *California Farmland Conversion Report 2002-2004*, December 2006.

3 Ibid., 1.

4 Ibid., 2.

Land was removed from irrigated categories to uses aside from urban at almost the same rate as the prior update (189,980 acres in 2000–2002 and 188,109 acres in 2002–2004).[5] This includes land idling, non-irrigated cropping, conversion to wildlife areas, low-density residential uses, mining, or confined animal agriculture facilities.

Nearly 40 percent of conversions out of agricultural uses statewide were to Other Land in the most recent update, an indicator that agricultural land-use dynamics in California are more complex than urbanization alone. The summary statistics for the conversion of land from agricultural use to non-agricultural use is described further in **Table 3.5-1, California Agricultural Land Conversion 2002–2004.**[6]

As shown in **Table 3.5-1**, the CDC has added an optional designation within its summary table called Land Committed to Nonagricultural Use. Land Committed to Nonagricultural Use is described by the CDC as existing farmland, grazing land, and vacant areas that have a permanent commitment for development.[7] This designation allows local governments to provide detail on the nature of changes expected to occur to this land in the future.[8] Therefore, according to the CDC approximately 58,242 acres of Important Farmland (approximately 19,319 acres of Prime Farmland; 3,469 acres of Farmland of Statewide Importance; 6,058 acres of Unique Farmland, 7 acres of Irrigated Land, and 29,389 acres of Farmland of Local Importance) is expected to be converted to urbanized development in 2004 within the State of California.

Additionally, as shown in **Table 3.5-1** (in Part III) the CDC provides a breakdown of each land use category that was recorded during the 2002–2004 conversion period. The information within the table is raw data from Geographical Information Systems (GIS) within each county of the state which provided detail on every acre of change that occurred during the 2002–2004 time period. The changes recorded in Part III above results from revising the two-year-old linework based on new aerial photos and field verification.[9]

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5 California Department of Conservation Division of Land Resource Protection, Farmland Mapping and Monitoring Program, *California Farmland Conversion Report 2002-2004*, December 2006, 2.

6 California Department of Conservation, "Farmland Mapping and Monitoring Program," Land Resource Protection, October 31, 2008. The latest data available for the California Agricultural Land Conversion is from the 2002–2004 conversion report. Data for 2004–2006 is being compiled at this time.

7 California Department of Conservation, California Farmland Conversion Report 2002-2004, (2006), 6.

8 Ibid., 6.

9 Ibid., 9.

Table 3.5-1
California Agricultural Land Conversion 2002–2004

PART I
Summary and Change by Land Use Category

LAND USE CATEGORY	Total Acreage Inventoried 2002	Total Acreage Inventoried 2004	2002–2004 Acreage Changes: Acres Lost (-)	Acres Gained (+)	Total Acreage Changed	Net Acreage Changed
Prime Farmland	5,154,782	5,076,207	108,028	29,453	137,481	-78,575
Farmland of Statewide Importance	2,731,723	2,691,258	56,850	16,385	73,235	-40,465
Unique Farmland	1,289,076	1,275,092	49,024	35,040	84,064	-13,984
Irrigated Farmland	542,422	536,802	9,120	3,500	12,620	-5,620
Non-irrigated Farmland	9,076	7,461	1,721	106	1,827	-1,615
Farmland of Local Importance	2,848,040	2,854,727	92,452	99,139	191,591	6,687
Important Farmland Subtotal	**12,575,119**	**12,441,547**	**317,195**	**183,623**	**500,818**	**-133,572**
Grazing Land	16,390,842	16,353,432	107,900	70,490	178,390	-37,410
Agricultural Land Subtotal	**28,965,961**	**28,794,979**	**425,095**	**254,113**	**679,208**	**-170,982**
Urban and Built-up Land	3,277,833	3,379,658	8,665	110,490	119,155	101,825
Other Land	12,902,121	12,969,764	79,139	146,782	225,921	67,643
Water Area	704,435	705,949	195	1,709	1,904	1,514
Total Area Inventoried	**45,850,350**	**45,850,350**	**513,094**	**513,094**	**1,026,188**	**0**

PART II
Land Committed to Nonagricultural Use

LAND USE CATEGORY	Total Acreage 2004
Prime Farmland	19,319
Farmland of Statewide Importance	3,469
Unique Farmland	6,058
Irrigated Farmland	7
Non-irrigated Farmland	0
Farmland of Local Importance	29,389
IMPORTANT FARMLAND SUBTOTAL	**58,242**
Grazing Land	56,023
AGRICULTURAL LAND SUBTOTAL	**114,265**
Urban and Built-up Land	0
Other Land	45,898
Water Area	0
TOTAL ACREAGE REPORTED	**160,163**

PART III Land Use Conversion from 2002 to 2004

LAND USE CATEGORY		Prime Farmland	Farmland of Statewide Importance	Unique Farmland	Farmland of Local Importance	Interim Categories	Subtotal Important Farmland	Grazing Land	Total Agricultural Land	Urban and Built-up Land	Other Land	Total Converted To Another Use
Prime Farmland[1]	to:	--	84	1,968	40,702	--	42,754	15,785	58,539	20,771	28,718	108,028
Farmland of Statewide Importance	to:	103	--	411	28,657	--	29,171	4,644	33,815	7,055	15,980	56,850
Unique Farmland	to:	1,031	183	--	13,722	--	14,936	18,089	33,025	2,972	13,027	49,024
Irrigated Farmland	to:	--	--	--	--	18	18	5,246	5,264	335	3,521	9,120
Non-irrigated Farmland	to:	--	--	--	--	338	338	1,186	1,524	0	197	1,721
Farmland of Local Importance	to:	13,284	8,348	14,701	--	--	36,333	11,646	47,979	18,621	25,852	92,452
Important Farmland Subtotal		**14,418**	**8,615**	**17,080**	**83,081**	**356**	**123,550**	**56,596**	**180,146**	**49,754**	**87,295**	**317,195**
Grazing Land	to:	6,292	3,394	12,844	6,859	1,403	30,792	--	30,792	20,671	56,437	107,900
Agricultural Land Subtotal		**20,710**	**12,009**	**29,924**	**89,940**	**1,759**	**154,342**	**56,596**	**210,938**	**70,425**	**143,732**	**425,095**
Urban and Built-up Land	to:	990	463	345	988	65	2,851	1,055	3,906	--	4,759	8,665
Other Land	to:	7,753	3,913	4,771	8,211	1,782	26,430	12,839	39,269	40,065	--	79,334
Total Acreage Converted	**to:**	**29,453**	**16,385**	**35,040**	**99,139**	**3,606**	**183,623**	**70,490**	**254,113**	**110,490**	**148,491**	**513,094**

Source: California Department of Conservation, Department of Land Resource Protection, Farm Land Management Program, 2000–2002 Agricultural Land Conversion Report, Table A-42, accessed at http://www.consrv.ca.gov/DLRP/fmmp/stats_reports/farmland_conv_reports.htm.

[1] *Conversion to Unique Farmland due to delineation of potted plant nurseries throughout the county.*

[2] *The 2002–2004 Land Use Conversion was the most current data at time of publication according to the California Department of Conservation – Farmland Mapping and Monitoring Program, May 12, 2008. http://www.conservation.ca.gov/dlrp/fmmp/products/Pages/ReportsStatistics.aspx.*

According to Part III of **Table 3.5-1** above, a total of 29,453 acres of Agricultural Land, Urban and Built-up Land, and Other Land was converted to Prime Farmland, while a total of 108,025 acres of Prime Farmland that was inventoried was converted to non-Prime Farmland designations. A total of 16,385 acres of Agricultural Land, Urban and Built-up Land, and Other Land was converted to Farmland of Statewide Importance, while a total of 56,850 acres of Farmland of Statewide Importance was converted to non-Farmland of Statewide Importance designations. A total of 35,040 acres of Agricultural Land, Urban Land and Built-Up Land, and Other Land was converted to Unique Farmland, while a total of 49,024 acres of Unique Farmland was converted to Non-Unique Farmland designations. A total of 99,139 acres of Agricultural Land, Urban Land and Built-Up Land, and Other Land was converted to Farmland of Local Importance, while a total of 92,452 acres of Farmland of Local Importance was converted to Non-Farmland of Local Importance designations.

State of California Land Use Conversion

California experienced record agricultural land decreases between 2002 and 2004, as overall urbanization increased by 10 percent (101,825 acres) over the 2000–2002 period. Yet urbanization alone did not account for the 78,575-acre net loss in Prime Farmland, 40,465-acre net loss of Farmland of Statewide Importance, and the 13,984-acre net loss of Unique Farmland, between 2002 and 2004. Land idling, ecological restoration projects, and other conversions contributed to a net loss of 138,644 acres of irrigated land statewide (the total net acreage change of Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Irrigated Farmland from 2002 to 2004).

The conversion of grazing and pasture areas to vineyards, orchards, and specialty crops is one trend that had helped offset agricultural land loses.[10] In the last decade this trend has declined. Agricultural upgrades of this kind totaled 80,598 acres between 2002 and 2004, less than half of the 2000–2002 acreage.

Table 3.5-2, Top Counties with Irrigated Land Converted to Urban Land, shows the top 10 counties in the State of California that converted irrigated land to urbanized land. Los Angeles County was not one of the top 10 counties with irrigated land that was converted to urban land in the last two cycle periods.

10 California Department of Conservation, California Farmland Conversion Report 2002–2004, (2006), 11.

Table 3.5-2
Top Counties with Irrigated Land Converted to Urban Land

2000–2002 Period		2002–2004 Period	
County	Acres of Urban Land	County	Acres of Urban Land
San Joaquin	4,518	Kern	4,275
Riverside	2,488	Stanislaus	3,460
San Bernardino	2,195	Riverside	2,485
Tulare	1,861	San Joaquin	2,239
Stanislaus	1,778	Fresno	2,081
Orange	1,547	Sacramento	1,431
Kern	1,212	Tulare	1,377
Fresno	1,147	San Bernardino	1,243
Yolo	960	Merced	1,058
Santa Clara	858	Imperial	1,047

Source: California Department of Conservation Division of Land Resource Protection, Farmland Mapping and Monitoring Program, California Farmland Conversion Report 2002-2004, May 2008.

Net Land Use Changes in the State of California

Urban land in California expanded by 101,825 acres (159 square miles) between 2002 and 2004, a 10 percent increase compared to the 2000–2002 period. Prime Farmland accounted for 19 percent of the urbanization, and 9 percent occurred on other irrigated classes.

The new irrigated farmland loss, 138,644 acres was more than twice as large as it has been during the prior update (53,963 acres). Prime Farmland loss during the 2002–2004 cycle was the largest in FMMP's history (78,575 acres).

County Planning Area

Farmland Categories

Within the County's Planning Area, the acreage of Important Farmlands as designated on the state's Farmland Map is shown in **Table 3.5-3, Important Farmland Designations**:

Table 3.5-3
Important Farmland Designations

Important Farmland Designations	Acres
Prime Farmland	1,235
Unique Farmland	364
Farmland of Local Importance	130
Farmland of Statewide Importance	178
Total Important Farmland	**1,907**

These designated farmlands occur in scattered locations within the County's Planning Area, as shown above in **Figure 3.5-1**. The largest areas of Important Farmland are located along the Santa Clara River in the western portion of the County's Planning Area, north and south of State Route 126 in the area slated for development of Newhall Ranch. Designated farmlands extend along the east side of Interstate 5 along Castaic Creek, along San Francisquito Canyon, and near the intersection of Bouquet Canyon Road and Vasquez Canyon Road, are generally smaller in scale; some are used for horse ranches, non-irrigated cropland, improved pasture lands, and vineyards. Additionally, Prime Farmland is located in the northeastern portion of the County's Planning Area along Sierra Highway and along a small portion between California State Route 14 and Placerita Canyon Road. Where appropriate, these lands will be protected from urban development through designation of a Rural Land category on the Area Plan land use map. For isolated remnants of farmland which no longer are used for agricultural production, urban land use designations are utilized.

The largest category of designated farmland in the County Planning Area is Grazing Land, which includes 63,635 acres within the County's Planning Area. Much of this land will remain vacant in the undeveloped foothills within the County's Planning Area and adjacent to U.S. Forest Service Land. Land use designations for these areas are designated as Rural Land, allowing low-density development on large lots to maintain the rural and open character of designated Grazing Land.

Existing Agricultural Uses in the County's Planning Area

Approximately 2,773 acres of existing agricultural uses are located within the County's Planning Area. Existing agricultural uses within the County's Planning Area include

- 6 acres of Dairy, Livestock and Associated Facilities,

- 547 acres of Horse Ranches,
- 1,663 acres of Irrigated Cropland and Improved Pasture,
- 275 acres of Non-Irrigated Cropland and Improved Pasture Land,
- 2 acres of Nurseries,
- 65 acres of Orchards and Vineyards,
- 212 acres of Other Agriculture, and
- 2 acres of Poultry Operations.[11]

Agricultural uses are located primarily in the western portion of the County's Planning Area, as seen in **Figure 3.5-2, Agricultural Production within the OVOV Planning Area.** Limited agricultural uses exist in the far eastern portion of the County's Planning Area, which include areas adjacent to Soledad Canyon Road. Irrigated croplands and improved pasture lands are located primarily along State Route 126, Interstate 5, and Castaic Creek, in the western portion of the County's Planning Area. Horse ranches, non-irrigated croplands and improved pasture lands are concentrated along Interstate 5, San Francisquito Canyon, and Bouquet Canyon Road. Active orchards and vineyards are also located along Sierra Highway in the northeast portion of the OVOV Planning Area.

Agricultural Preserves within the County's Planning Area

Agricultural Opportunity Areas

Agricultural Opportunity Areas (AOAs) are a Los Angeles County identification tool that indicates land where commercial agriculture is taking place and/or is believed to have a future potential based on the presence of prime agricultural soils, compatible adjacent land uses, and existing County land use policy. Local planning efforts can identify AOAs in their community-based plans, and the County supports communities in establishing more detailed land use policy related to agricultural levels at the community level.

The intent of the Area Plan is to protect the County's agricultural resources from the intrusion of incompatible land uses that conflict with or preclude viable agricultural activity. Agricultural uses are

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11 Caitlin Morais, City of Santa Clarita, e-mail correspondence with Judith Charles, Impact Sciences, Inc. October 13, 2008.

encouraged in appropriate areas throughout the County and are not limited by the mapped boundaries of designated AOAs. Applications for non-agricultural uses in these areas are evaluated for their impact on adjacent agricultural operations.

Williamson Act Contracted Lands

Commonly referred to as the Williamson Act, the California Land Conservation Act of 1965[12] enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use. In return, landowners receive property tax assessments which are much lower than normal because they are based upon farming and open space uses as opposed to full market value. To compensate for this loss in revenue, local governments receive an annual subvention from the state via Open Space Subvention Act of 1971. The only Williamson Act contract in the County is for the preservation of open space on Catalina Island. There are no Williamson Act contracted lands within the County's Planning Area.

Urban-Agricultural Interface

Retaining valuable farmland in the County is expected to be difficult as projected growth in the County over the next 20 years is expected to continue. Increased population growth accompanying development may result in the conversion of farms and land with prime soil to non-agricultural uses. This scenario is especially troublesome for the North County area, which contains most of the Prime Farmland in the County, and is also experiencing the most rapid population growth.

Residents of new housing developments often voice concern over odors, dust, and pesticides from neighboring farms. In an effort to avoid such conflicts, the County designates areas surrounding agricultural lands as rural, allowing for rural development that is compatible with agricultural activities. Furthermore, the County encourages agricultural activities and agricultural development that do not affect the water quality of the County's water bodies.

Agricultural Water

The active agricultural land that is within the County's Planning Area uses water to produce viable crops. The amount of agricultural water that is used on these active agricultural lands within the County's Planning Area boundaries is further discussed in **Section 3.13, Water Service,** of this environmental impact report (EIR). The Agricultural Land that is within the County's Planning Area uses approximately

12 California Government Code, Section 51200, Williamson Act.

5.9 acre-feet of water per acre per year. One policy area that has significantly impacted agricultural activities is that of water supply. Historically, water supplies within the Antelope Valley region have been used primarily for agriculture. However, due to population growth, water demands from residential and commercial uses have increased significantly. With drought conditions worsening the County's water supply, there are growing conflicts in northern County communities about how best to use existing water resources; for agricultural activities or for new development. Los Angeles County recognizes the importance of balancing the water needs of both farmers and residents.

Agricultural Pests and Diseases

The Ventura County Initial Study Assessment Guidelines[13] present criteria for determining whether a proposed use may have a significant adverse impact on agriculture by the introduction of or increased potential for agricultural pests and/or diseases.[14] The Ventura County Initial Study Assessment Guidelines define this issue as "pests/diseases mean the direct or indirect introduction of biological organisms that may be harmful to agricultural production. Indirect introduction can occur when a use will cause a decrease in beneficial organisms or natural or man made protection against harmful biological organisms." Any proposed non-agricultural land use/development located on or within 0.25 mile of property currently in, or suitable for, agricultural production may have an impact.

The Ventura County Initial Study Assessment Guidelines use the following definitions:

Disease – An abnormal condition of an organism or part, especially as a consequence of infection, weakness, or environmental stress, that impairs normal physiological functioning.

Biological Organism – A living entity, a plant, animal, bacterium, virus, or other entity that lives and is capable of reproduction.

Pest – Any plant, animal or living organism that is harmful to agricultural production.

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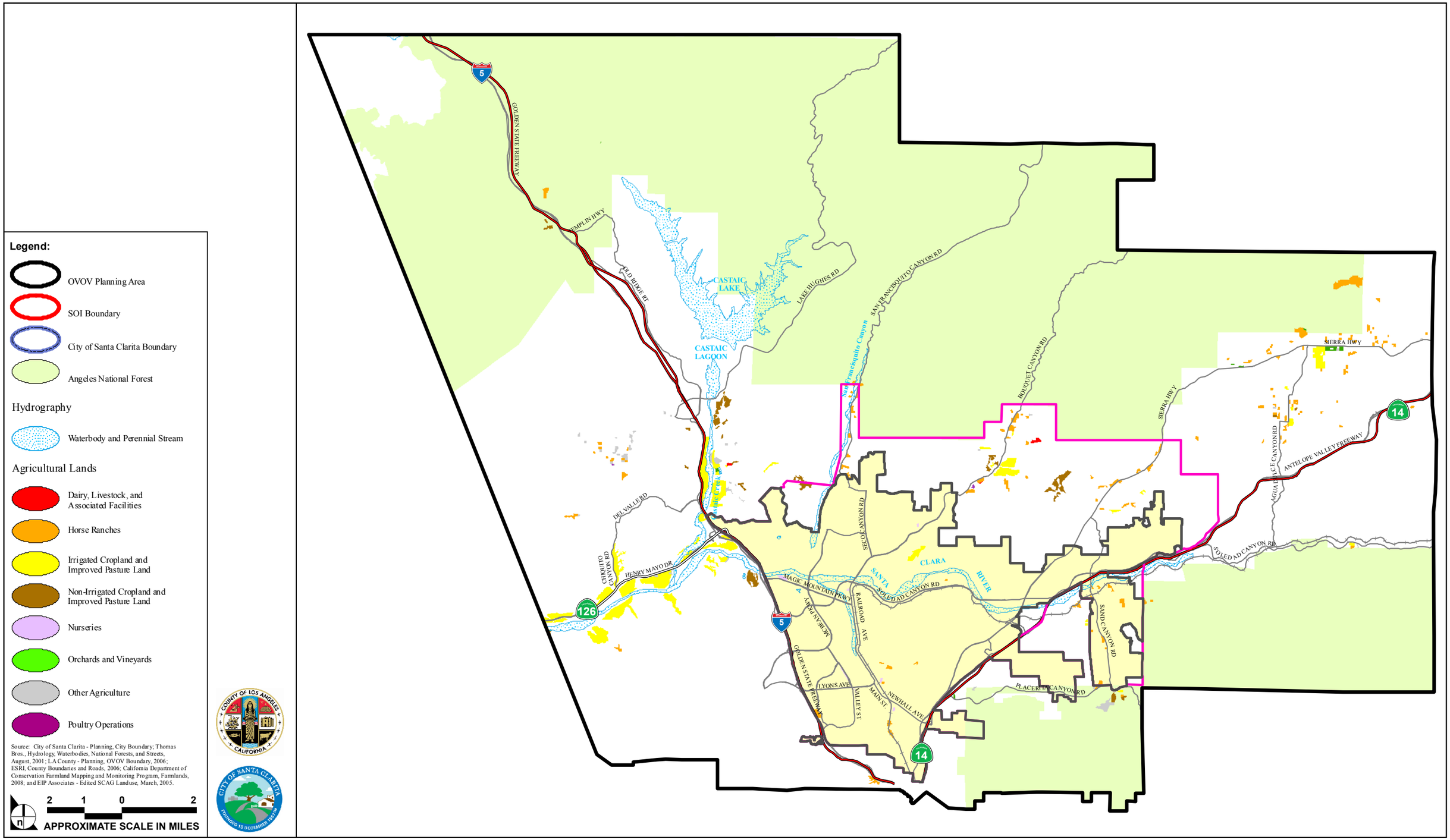
13 The Ventura County Initial Study Assessment Guidelines is being used in this document as a response to the Ventura County Agricultural Commissioner's Office comment to the NOP regarding the possibility of pests impacting development that is proposed adjacent to agricultural lands.

14 Ventura County, Initial Study Assessment Guidelines, February 2006, p. 42.



SOURCE: City of Santa Clarita Planning - 2009; Impact Sciences, Inc. - August 2009

FIGURE **3.5-2**

Agriculture Production within the OVOV Planning Area

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The proposed Area Plan contains non-agricultural land uses that are within 0.25 mile of existing active agricultural areas. The County Agriculture Commissioner monitors all aspects of the agricultural production in the County and has the duty to exercise the powers and duties of that office to protect the environment, as it relates to agricultural activities, from adverse effects of biological organisms released into the environment and to protect beneficial biological organisms in the County. The Agricultural Commissioner is authorized to import, collect, release, destroy, and propagate of beneficial organisms when such action is deemed to be in the best interest of agricultural activities in the County and its environment.

THRESHOLDS OF SIGNIFICANCE

In order to assist in determining whether a project will have a significant effect on the environment, the *State CEQA Guidelines*, Appendix G, identify criteria for conditions that may be deemed to constitute a substantial or potentially adverse change in physical conditions.

Significant agricultural resources impacts will result if

- there is a conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Department of Conservation Division of Land Resource Protection, to non-agricultural use; and,
- there will be exposure of future residents to nuisances associated with agricultural operations or expose farms to nuisances associated with urban uses.

IMPACT ANALYSIS

The following text discusses the potential impacts on agricultural resources within the County's Planning Area per the proposed Area Plan policies and the *State CEQA Guidelines* thresholds of significance criteria.

Impact 3.5-1: There is a conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the Department of Conservation Division of Land Resource Protection, to non-agricultural use.

The CDC updates their Important Farmland Maps through the FMMP on a biennial basis. The latest update for the County of Los Angeles is for 2004–2006. Under the current **Land Use Policy Map** areas of Important Farmland (according to the 2004–2006 FMMP Map) are currently designated as Urbanized

land uses, as shown on **Figure 3.5-1**. The following is a list of the areas that are designated as Important Farmland under the 2004–2006 FMMP Mapping, but are currently under an urbanized state:

- Prime Farmland, Farmland of Statewide Importance, and Unique Farmland west of Interstate 5, north and south along California Route 126 These areas have already been designated as Specific Plan (SP) under the currently adopted Land Use Policy Map. These areas are within the Newhall Ranch Specific Plan, which have been previously approved by the Los Angeles County Board of Supervisors, and will be converted, to urban uses over a buildout period of 20 years. The EIR for the Specific Plan analyzed the impacts of the conversion of these important farmland areas to urbanized land uses.

- Two areas of Prime Farmland and Unique Farmland along the western side of Interstate 5, south of California Route 126. These areas have already been designated for urban uses as Major Commercial (C) (under the currently adopted Land Use Policy Map. These areas are no longer used as farmland and portions have been recently developed with a shopping center and an office building. The Area Plan anticipates additional commercial development in these areas, as they have relatively close topography, are within close proximity to major transportation corridors, and can provide additional employment opportunities for Santa Clarita Valley residents.

- Areas of Prime Farmland, and Farmland of Statewide Importance located along I-5 on its eastern side north of Del Valle Road. These areas are already designated as Public and Semi-Public Facility (P) under the existing **Land Use Policy Map**. These designations are appropriate because these areas are owned by the County of Los Angeles and are part of the Peter Pitchess Detention Center (also known as the Wayside Honor Rancho).

- Areas of Prime Farmland, Unique Farmland, and Farmland of Statewide Importance located on the eastern side of Bouquet Canyon Road These areas are no longer used as farmland and are the subject of a pending development application (Tract 52193). The Area Plan anticipates residential development in these areas, as they have relatively level topography, are adjacent to major highways, and can provide additional housing opportunities for a growing population.

Upon implementation of the Area Plan, the proposed **Land Use Policy Map** will continue to designate these areas as urbanized land use.

Although this is not consistent with the proposed policies and would represent a significant impact under *State CEQA Guidelines*, the updated 2006–2008 Important Farmland Map for the County of Los Angeles should declassify these areas as Important Farmland due to the urbanization that has occurred on these lands since the last FMMP update, in 2004–2006. This would reduce impacts on these parcels to a less than significant level.

There will also be areas of Important Farmland within the County Planning Area that will be designated as Rural Land where appropriate **(Policy LU 1.1.7** and **Policy CO 10.1.9)**. These areas of Important Farmland are located as described below:

- An area of Farmland of Statewide Importance located in between the tributary of San Francisquito Canyon and San Francisquito Canyon Road, which will be designated as Rural Land under the proposed **Land Use Policy Map**;
- An area of Prime Farmland and Unique Farmland located on the western side of Bouquet Canyon Road, which will be designated Rural Land 2 (RL2) on the proposed **Land Use Policy Map**;
- An area of Prime Farmland located just south of Sierra Highway, which will be designated as Rural Land 20 (RL20) on the proposed **Land Use Policy Map**; and
- An area of Prime Farmland located south of California Route 14 and north of Placerita Canyon Road, which will be designated as Rural Land 20 (RL20) on the proposed **Land Use Policy Map**.

Proposed **Policy LU 1.1.7** will help to conserve these above mentioned existing lands designated as Prime Farmland, Unique Farmland, and Farmland of Statewide Importance. The Open Space designation is intended to identify and reserve land for both natural and active open space uses, including public and private parks, conservancy lands, nature preserves, wildlife habitats, water bodies and adjacent riparian habitat, wetlands areas dedicated to open space use, drainage easements, cemeteries, golf courses, and other open space areas dedicated for public and private uses. Typical uses include recreation, horticulture, limited agriculture, animal grazing, and habitat preservation. The Rural Land designation would provide for non-urban lands that are used for low-density residential uses on large lots, in areas characterized by rural development interspersed with natural open space. Agricultural lands would be included and used for grazing, horticulture, row, field, and tree crops, and limited keeping of livestock, horses and other large animals.

Important Farmland (land designated as Prime Farmland, Unique Farmland, and Farmland of Statewide Importance) is being lost to urban expansion near existing cities. For farmers, urban encroachment adversely affects the efficiency of remaining farming operations due to increase air pollution, livestock predation by pets, crops disease resulting from inadequate care of off-farm ornamental plants, restrictions on pesticide use and burning, and requirements to set aside on-farm buffer zones. At the same time, production costs increase due to rising land values, water scarcity, theft, and vandalism of farm equipment, crop pilferage, road congestion, and personal injury liability resulting from trespassing on farms. By reducing the profitability of remaining farming operations, urban encroachment tends to have a spiraling effect, encouraging further losses of farms to urban development.

The amount of Important Farmland that is being converted within County's Planning Area is relatively small compared to the inventoried amount of Important Farmland within the State of California. However, when comparing the amount of Important Farmland that would be converted in the County's Planning Areas, compared to the amount of inventoried acres of Important Farmland within the County

of Los Angeles, the amount that would be converted from implementation of the Area Plan, would be substantial. This is due to the potential decrease of county and state agricultural economies due to the conversion of these Important Farmlands to urban land-uses. However, the implementation of the Area Plan would conserve the areas designated as Important Farmland (as discussed above) through the below mentioned policies (land designated as Prime Farmland, Unique Farmland, and Farmland of Statewide Importance) as designated by the CDC FMMP

Proposed Area Plan Policies

Policy LU 1.1.7: Preserve and protect important agricultural resources, including farmland and grazing land, through designating these areas as Rural Land on the Land Use Map where appropriate.

Policy CO 10.1.9: Preserve forested areas, agricultural lands, wildlife habitat and corridors, wetlands, watersheds, groundwater recharge areas, and other open space that provides nature carbon sequestration benefits.

Effectiveness of Proposed Area Plan Policies

Implementation of **Policy LU 1.1.7,** and **Policy CO 10.1.9**, as discussed above, would provide the conservation needs for Prime Farmland, Unique Farmland, and Farmland of Statewide Importance located within the County's Planning Area, and thus would not result in the urbanization of these Important Farmlands. The **Land Use Policy Map** would, therefore, be consistent in providing that these Important Farmland areas are designated as Rural Land on the proposed **Land Use Policy Map**; therefore, impacts would be less than significant.

Plan to Plan Analysis

Both the existing and Proposed Area Plans provide policies that protect farmlands of significance. Consequently, both Plans would result in similar impacts to agricultural resources.

Impact 3.5-2: Potentially expose future residents to nuisances associated with agricultural operations or expose farms to nuisances associated with urban uses.

Implementation of the Area Plan will result in urbanized land uses being adjacent to Open Space and Rural Land designations that will contain existing agricultural operations. Typically where non-agricultural land uses extend into agricultural areas or where they exist side by side, agricultural operations often become the subject of nuisance complaints. As a result, some agricultural operations are

forced to cease or curtail operations, others are discouraged from making investments in farm improvements, and efficient agricultural production is generally discouraged due to burdensome litigation against farmers.

The implementation of the Area Plan could result in nuisance complaints from future residents in regards to the operations of existing agricultural operations. Additionally, nuisance complaints from existing agricultural operators could be voiced in regards to urbanized land uses being in close proximity of the agricultural operations. Nuisance complaints such as pilferage, vandalism, excessive noise, odors, pesticide overspray, and increased rodent/pest populations could result from the existence of agriculturally active operations existing adjacent to urbanized areas. Therefore, implementation of the Area Plan could result in a significant impact in regards to exposing future residents to nuisances associated with agricultural operations or exposing farming activities to nuisances associated with urban uses.

In regards to pest management from agricultural land uses, the Ventura County Agricultural Commissioner's Office is primarily concerned with the possible transport of pest and disease into agricultural operations adjacent to urban development through physical transport by vehicular traffic, not through trespass incidents from pedestrians or animals of residential developments.[15] If development of newly designated urbanized land occurs adjacent to agricultural areas, access to these newly designated urbanized land uses will be introduced, which could cause the transportation and introduction of pest and disease onto the agriculturally active land, causing a potentially significant impact. The Los Angeles County Agricultural Commissioner is authorized to implement or cooperate in management or mitigation programs to be conducted against such plant, environmental, or nuisance pests as can be controlled in an economically, ecologically, and biologically sound manner to protect agriculture. Since the County's Planning Area does not contain any policies that will reduce the impacts associated with possible exposure of future residents and employees to agricultural pests and diseases; impacts would be potentially significant.

The Area Plan does not include any policies that would

- reduce the impacts associated with possible exposure of future residents to nuisances associated with agricultural operations,
- reduce the impacts of exposure from currently established farms to nuisances associated with adjacent urban uses, or

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15 Personal Communication with Ms. Rita Graham, Agricultural Planner, Ventura County Agricultural Commissioner's Office, Oct. 23, 2007.

- reduce exposure to future residents of agricultural pests and diseases.

Proposed Area Plan Policies

The proposed Area Plan does not include any policies that address possible exposure of (1) future residents to nuisances associated with agricultural operations, or (2) currently established farms to nuisances associated with adjacent urban uses. The potential for development within the County's Planning Area and the possibility that new development would be located next to agriculturally active lands is unknown at this time. Therefore, any future individual projects that are developed within the County's Planning Area shall be analyzed on a project-by-project basis, and mitigation measures would be recommended as needed.

Effectiveness of Area Plan Policies

The proposed Area Plan does not contain any policies that would reduce the exposure of future residents to nuisances associated with agricultural operations or expose farms to nuisances exposed from urban uses. Therefore, these impacts could potentially be significant. However, analysis of these potential impacts and implementation of mitigation measures would be required on an individual project-by project basis, to determine the potential of future residents being exposed to nuisances from agriculturally active land within the County's Planning Area.

Plan to Plan Analysis

Both the existing Area Plan and the proposed Area Plan do not include goals or policies that address the exposure of humans to nuisances associated with agricultural operations, thus potential impacts would be similar in both plans.

MITIGATION FRAMEWORK

Impacts on agricultural land use within the County's Planning Area would be significant because the proposed Area Plan does not contain any policies that would reduce the exposure of future residents to nuisances associated with agricultural operations or expose farms to nuisances exposed from urban uses.

SIGNIFICANCE OF IMPACT WITH MITIGATION FRAMEWORK

Since the Important Farmlands that are designated under the 2004–2006 FMMP mapping cycle would be conserved through the policies provided above, impacts would be less than significant. The Important Farmland that is designated under the 2004–2006 FMMP mapping cycle have been approved and are in

the process of being urbanized. Therefore, the CDC, upon completion of their 2006–2008 FMMP mapping cycle, shall show that these areas have been declassified as Important Farmland designations.

Impacts on agricultural land uses would remain a significant impact in regards to exposing future residents to nuisances associated with agricultural operations or exposing farming activities to nuisances associated with urban uses.

3.6 AESTHETICS

EXECUTIVE SUMMARY

This section describes those resources that define the visual character and quality of the County's Planning Area. The County's Planning Area consists of unincorporated land outside the City's boundaries and adopted Sphere of Influence (SOI) but within the One Valley One Vision (OVOV) Planning Area boundaries. The City's Planning Area consists of its incorporated boundaries and adopted SOI. Both the County and the City Planning Areas comprise the OVOV Planning Area. Resources within the County's Planning Area as well as the City's Planning Area include a variety of natural and man-made elements as well as the viewsheds to those elements that serve as visual landmarks and contribute to the unique character of the County's Planning Area. Although specific scenic resources in the County's Planning Area are identified in this section, it is not intended to provide an exhaustive inventory, as the nature of these resources is somewhat subjective and not easily quantified. Implementation of the proposed Area Plan would increase development within the County's Planning Area, which, if unregulated, would contribute to the obstruction of views, damage scenic resources, conflict with the Valley's rural character, and generate substantial levels of light and glare. However, the proposed Area Plan includes policies that would ensure the protection of scenic resources and corridors, promote quality construction that enhances the County Planning Area's urban form, increase open space, and landscaping, and limit light overspill. For these reasons, implementation of the County's Area Plan would result in a less than significant impact on aesthetics.

EXISTING CONDITIONS

The OVOV Planning Area is dominated by a physical setting that offers residents and visitors a variety of scenic experiences due to the mixture of topography, flora and fauna, and a rich historical and cultural heritage. Memorable and distinctive scenery provides residents with a sense of place and identity, heightening the feeling of belonging and instilling a sense of uniqueness and civic pride. Together, the City and County Planning Areas comprise the Santa Clarita Valley, which is the valley of the Santa Clara River. The Santa Clara River Valley stretches through northwest Los Angeles County and Ventura County and the Santa Clara River winds through the valley before it empties into the Pacific Ocean between the cities of Oxnard and Ventura. The Santa Clarita Valley is bounded and visually framed by the eastern Santa Susana Mountains, western portions of the San Gabriel Mountains, and southern slopes of the Sierra Pelona Mountains (see **Figure 3.6-1, Scenic Resources within the OVOV Planning Area**). In addition to the major ridgelines forming the boundaries of the Valley, prominent scenic resources include rivers and creeks, canyons, and forestlands.

Angeles National Forest land, most of which is undeveloped and protected, occupies much of the County's Planning Area. The natural topography of the Santa Clara River and its many tributary canyons, in conjunction with the National Forest holdings, has focused growth in the Santa Clarita Valley on the more central, level areas between the Valley's two major freeways. Most of the development has occurred adjacent to the Golden State (Interstate 5) and Antelope Valley (State Route 14) freeways, concentrating urbanization within a "V"-shaped area formed by these two major transportation routes.

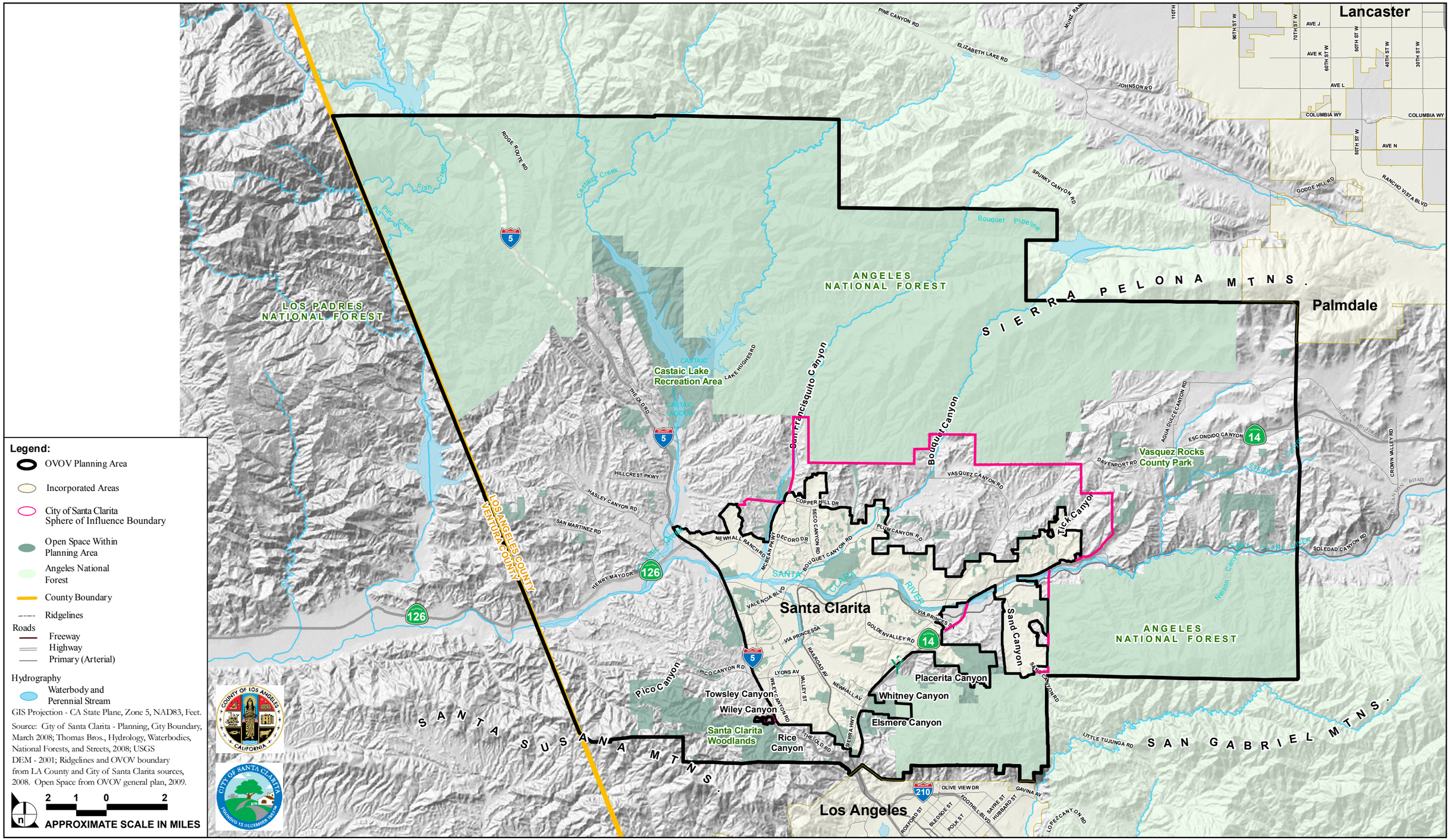
Overview of Scenic Resources

The following overview on scenic resources includes text extracted from the Draft Conservation and Open Space Element of the County's Area Plan (August 2009).

A community's scenic resources contribute to one's experience of "place" and influence the quality of life in that community. "Aesthetic value" refers to the perception of the natural beauty of an area as well as the elements that create or enhance its visual quality. While aesthetic value is subjective, it is typically included as a criterion for evaluating those elements that contribute to the visual quality that distinguishes an area. Most communities identify scenic resources as an important asset, although what is considered "scenic" may differ based on the environmental setting. Scenic resources that define a valley community differ from those that define a coastal or mountain community.

"Scenic resources" can include natural open spaces, topographic formations and landscapes that contribute to a high level of visual quality. These are significant resources that can be maintained and enhanced to promote a desired aesthetic value in the future. Many people associate natural landforms and landscapes with scenic resources, such as oak woodlands, lakes, rivers, streams, and some historical areas. Developed open spaces and the built environment constitute scenic resources and include parks, trails and pathways, nature centers, archaeological, and architectural features.

"Viewsheds" constitute the range of vision in which scenic resources may be observed. They are defined by physical features that frame the boundaries or context to one or more scenic resources. A region's topography can lend aesthetic value through the creation of public view corridors of ridgelines and mountains and through the visual backdrop created by mountains and hillsides. Viewsheds and scenic vistas may include views of a range of resources, whether natural or man made, and are also considered important scenic resources for preservation.



SOURCE: City of Santa Clarita, County of Los Angeles, Valleywide General Plan - March 2009

FIGURE **3.6-1**

Scenic Resources within the OVOV Planning Area

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Scenic Resources

The following discussion of scenic resources (i.e., major topographic features, woodlands, water bodies, open space, recreational areas, undeveloped land, urban form, beautification and walkable communities, historical resources and landmarks) in the County's Planning Area includes text extracted from the Technical Background Report for the Santa Clarita Valleywide General Plan (February 2004).

The physical characteristics of the County's Planning Area, in conjunction with the large amount of undeveloped land, offer Valley residents and visitors a vast array of open space that provides plentiful scenic opportunities. The visual elements exhibited within these open spaces include major topographic features, woodlands, and rivers and other water bodies as well as green and urban parkways. Historical resources and landmarks may also be included within the open space inventory. Woodlands and floodplain areas are prime examples of scenic resources that derive much of their majesty from quantity; although the health of the resource also substantially affects visual quality, as unhealthy trees and polluted watercourses can substantially diminish the quality of these resources.

Major Topographic Features

Major topographic features within and surrounding the County's Planning Area represent a significant scenic resource since they provide visual relief from the otherwise flat urban horizon. The San Gabriel, Sierra Pelona and Santa Susana Mountains are the most prominent scenic resources. These mountains contain well-defined ridgelines and canyons, as described below.

Ridgelines

Ridgelines project from the lower foothills of the San Gabriel and Sierra Pelona mountain ranges to the Valley floor. Both the County and the City of Santa Clarita (City) have recognized the hillside areas of the Valley to be important resources and have adopted hillside management regulations to restrict development on steeper slopes, but the current hillside ordinances of the two agencies differ as to both process and intent. The County's ordinance applies to average slopes of 25 percent and greater, while the City regulates development on areas with an average cross slope of greater than 10 percent. The ordinances also vary in terms of development requirements for hillside areas. While both the County and the City regulate density of development based upon slope steepness, the City's ordinance also regulates building placement to preserve designated ridgelines. The County has not delineated significant ridgelines throughout the entire Planning Area, but has done so within the Castaic Area Community Standards District (CSD) and the San Francisquito Canyon CSD. As part of the OVOV planning effort, the

County and City plan to reach an agreement on a coordinated approach to ridgeline preservation and hillside protection.[1]

Canyons

Sloping from the ridgelines are numerous foothill and canyon zones, which are important scenic resources that have remained undeveloped and in a natural state due to slope constraints. The canyons are characterized by variable terrain that supports a variety of native biota. The following describes major scenic canyon areas in the OVOV Planning Area (see **Figure 3.6-1**).

- Placerita Canyon, running east and west in the southerly portion of the OVOV Planning Area, is characterized by shaded oak groves, a seasonal stream lined with cottonwoods, willows and sycamores, sandstone formations, and many other plant and animal communities. Its historic "Oak of the Golden Dream" is the site of California's first gold discovery in 1842, and is a designated State Historic Landmark. The Canyon contains a seasonal waterfall and hiking trails, including a trail leading to the top of the Santa Clara Divide in the San Gabriel Mountains. From this vantage point, one can view the entire Santa Clarita Valley to the north and the San Fernando Valley to the south, with long-range views beyond. The Placerita State Park and Nature Center is located within the canyon.

- Whitney Canyon is located at the intersection of Sierra Highway and Newhall Avenue, just east of State Route 14 in the OVOV Planning Area, and serves as the gateway to Angeles National Forest and the Rim of the Valley Trail Corridor. Due to its location between Elsmere and Placerita Canyons, Whitney Canyon is the middle link for the continuation of the Rim of the Valley Trail Corridor and the natural wildlife corridor through these canyons into Towsley Canyon and the Santa Clarita Woodlands. The canyon area contains oak forests, waterfalls, chaparral, coastal sage scrub, and a riparian watershed area; 442 acres are publicly owned for preservation as natural open space, through a partnership between the City of Santa Clarita and a conservation authority.

- Elsmere Canyon lies within the Angeles National Forest, near the intersection of Sierra Highway and Newhall Avenue, east of State Route 14 in the OVOV Planning Area. Encompassing 2,700 acres, about half the canyon area is within the National Forest. Like other canyons in the OVOV Planning Area, Elsmere Canyon has served as a popular film site for western movies. A proposal to locate a landfill in the Canyon was withdrawn in 2004 based on public concerns about environmental quality, and in 2007 the property owner donated 400 acres of Elsmere Canyon to the Mountains and Recreation and Conservation Authority for use as an open space preserve. Elsmere canyon contains abundant wildlife, riparian habitat, coastal sage, and oak woodlands, and provides a wildlife corridor from the Santa Susana Mountains to the San Gabriel range.

- Bouquet Canyon, in the northerly portion of the OVOV Planning Area, follows the course of Bouquet Creek, generally from Bouquet Reservoir south to the junction of Bouquet Canyon Road and Soledad

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1 Draft Conservation and Open Space Element of the *Draft Los Angeles County General Plan* (September 2008).

Canyon Road. The canyon contains oak, willow, and sycamore groves, and the development character north of Saugus is rural.

- San Francisquito Canyon runs north and south from Saugus to Green Valley in the OVOV Planning Area, and is a rural environment supporting numerous equestrian ranches. The Canyon also contains sites of historic significance, such as the Harry Carey Historic Ranch.

- Sand Canyon, located in the eastern portion of the City's Planning Area, runs northward from the steep slopes in the Angeles National Forest to the Santa Clara River floodplain. The character of the canyon ranges from heavy woodland to large, rustic rural estates with abundant trees. Views from the upper reaches of the canyon include the valley floor.

- Pico Canyon, located in the northern portion of the Santa Clarita Woodlands Park in the western portion of the OVOV Planning Area, has been used extensively for oil extraction. The canyon was once occupied by Mentryville, an oil boomtown, and now contains valley and coast live oaks and views of the valley floor. The Mentryville historic site is contained within a State Park.

- Towsley Canyon, located in the central portion of the Santa Clarita Woodlands Park in the OVOV Planning Area, offers visitors a diverse natural area. Evidence of Native American heritage and early California oil interests are visible, along with unique geologic formations in "The Narrows." The Canyon contains numerous hiking trails along with Ed Davis Park.

- Tick Canyon lies in the Soledad Basin and is a tributary of the Santa Clara River channel, between Mint Canyon to the west and Tapia and Spring Canyons to the east, in the OVOV Planning Area. The Canyon was mined for various minerals during early settlement of the Valley.

- Wiley Canyon forms a portion of the pass through which Interstate 5 passes as it enters the OVOV Planning Area from the south. The upper reaches of the canyon provide a sense of enclosure and include views of scrub-filled hillsides and stands of oak trees, while the northerly portion of the canyon offers expansive views of the Santa Clarita Valley.

- Rice Canyon is located south of Wiley Canyon in the southwestern portion of the OVOV Planning Area, and offers views of rugged topography, coastal sage scrub, and stands of oak trees.

Woodlands

The Angeles National Forest and Los Padres National Forest are large undeveloped and protected tracts of land within the County's Planning Area. Oak woodlands within these forests also extend into rural portions of the County's Planning Area, contributing to its rural and scenic character. Oak woodlands occur in scattered locations, primarily in the southerly portions of the County's Planning Area, and contain a diverse habitat including six species of oak. Cottonwood-willow riparian forests are found primarily along the Santa Clara River and its tributaries.

Significant Ecological Areas (SEAs) are identified in the unincorporated areas of the OVOV Planning Area by the County of Los Angeles as ecologically fragile or important land, or as providing habitat for sensitive animal and plant communities such as oak woodland and cottonwood-willow riparian forest areas. These SEAs support a variety of woodland habitat, including oak and riparian woodlands. The woodlands include Interior Live Oak Woodland, Valley Oak Woodland, Coast Live Oak Woodland, and Southern Cottonwood-Willow Riparian Forest. Interior Live Oak Woodland is located at the southern boundary of the OVOV Planning Area, abutting the Angeles National Forest and the Santa Susanna Mountains ridgeline. Valley Oak Woodland is concentrated in a single location south of State Route 126 and west of Interstate 5. Coast Live Oak Woodland exists in a limited number of pockets in the southern portions of the OVOV Planning Area. The oak woodland habitat is extremely diverse, containing six species of oak. Southern Cottonwood-Willow Riparian Forest borders the Santa Clara River and its tributaries.

Water Bodies

Rivers and streams located in canyon bottoms provide scenic visual relief from urbanization as well as habitat for wildlife. A river or streambed is a significant visual feature that influences the character of an area by providing (1) visual relief from the urbanized area, (2) a habitat for migrating birds, and (3) the topographic low point to which all land drains. The following are major water bodies of scenic value in the County's Planning Area (see **Figure 3.6-1**).

- The Santa Clara River flows approximately 100 miles from its headwaters near Acton to the Pacific Ocean, and is one of only two natural river systems remaining in Southern California, providing the County's Planning Area with a unique scenic resource. The Santa Clara River flows east to west through a valley formed between the Santa Susana Mountains and the Transverse Ranges. Over 4,000 acres of high quality riparian habitat have been preserved in a natural state along the length of the River. Some of the major tributaries to the Upper Santa Clara River watershed include Castaic Creek, San Francisquito Canyon, Bouquet Canyon, Sand Canyon, Mint Canyon, Oaks Springs Canyon and the South Fork of the Santa Clara River. Newhall Creek, Placerita Creek, and Towsley Creek are tributaries to the South Fork.

- Castaic Lake is a major water body within the northern portion of the OVOV Planning Area, and consists of two separate lakes: the main Reservoir and the Lagoon. The main Reservoir is a V-shaped body of water with approximately 34 miles of shoreline. The west side of the lake is surrounded by parkland and sandy beaches. The Lagoon feeds Castaic Creek, a significant tributary to the Santa Clara River.

- Bouquet Creek and San Francisquito Creek are major tributaries to the Santa Clara River, and are two of the few perennial creeks in the County's Planning Area. Bouquet Creek is unchannelized from the city limits to Bouquet Reservoir, where it has neither levees nor any concrete bottoms.

- Newhall Creek, Placerita Creek, and Towsley Creek are tributaries to the South Fork of the Santa Clara River, which in turn is a tributary to the main Santa Clara River. Newhall Creek enters the South Fork near 16th Street.

- Sand Canyon and Oak Springs Canyon flow south to north into the Santa Clara River.

Open Space and Recreational Areas

Open space in the OVOV Planning Area includes portions of the Angeles National Forest, agricultural uses, public and private recreational uses such as parks, trails, golf courses, and other areas reserved for passive recreation, and land zoned as open space. Open space also includes vacant lands (i.e., lands that are abandoned farmland) and undeveloped lands. Bodies of water, such as the Santa Clara River, and water storage facilities are also considered to be open space areas. Agricultural land is an important aesthetic resource and has wildlife habitat value. Cultivated fields and grass pasture contribute to the open appearance of the landscape as well as the working landscape.

Park and recreational facilities are significant scenic resources dispersed throughout the OVOV Planning Area. Specifically, there are two state parks, the Castaic Lake Recreation Area, and Placerita Canyon State Park, which are operated by the County, and located within the County's Planning Area (see **Figure 3.6-1**).

- The Castaic Lake Recreation Area is a major recreational and scenic resource in the northwest section of the OVOV Planning Area. The Castaic Lake Recreation Area includes 8,800 acres and consists of two separate lakes.[2] The main Reservoir has approximately 34 miles of shoreline. On the south side of the dam is the Afterbay, or Lagoon. Parkland and sandy beaches surround the west side.

- Placerita Canyon State Park and Nature Center is situated in the transition zone between the San Gabriel Mountains and the Mojave Desert, located approximately 5 miles east of Newhall, in the unincorporated portion of the OVOV Planning Area. Designated as a State Historic Landmark, the purpose of Placerita Canyon State Park is to preserve and protect the site of the first discovery of gold in California in 1842. This area contains sandstone formations, seasonal streams and riparian oak woodlands, as well as stands of cottonwood and native sycamore trees. In addition, the location provides significant linkages between the Angeles National Forest, the Santa Susana Mountains, the Simi Hills, and the Santa Monica Mountains.

- Vasquez Rocks Park, located in the unincorporated community of Agua Dulce northwest of State Route 14, is an area of unique geologic formations that has been the site of hundreds of films. Sculpted by seismic activity along the Elkhorn fault, the rock formations were compressed, folded, and tilted as much as 50 degrees up to nearly 150 feet in height. Erosion has shaped the coarse-grained yellow sandstone into jutting and sweeping formations interspersed with shale and basalt layers.

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2 State of California, Department of Parks and Recreation, 2003.

The County Department of Parks and Recreation currently maintains 16 developed County's Planning Area parks comprising 1,355 acres, as shown in **Figure 3.16-1, Parks, Recreation, and Open Space Resources**. The County also has two state owned parks comprising an acreage of 9,041 acres. These parks range from local parks such as the 2.2-acre Tesoro Adobe Park to regional parks such as the 224.3-acre William S. Hart Park. The City of Santa Clarita Department of Parks, Recreation and Community Services currently maintains 20 City parks totaling 245.9 acres. These parks range in size from slightly more than 0.5 acre to 80 acres, and include numerous recreational facilities included in the City's neighborhood, community, special-use facilities, and regional parks. The City's Central Park is a multi-use park intended to serve the entire metropolitan region of the Santa Clarita Valley, and is classified as a regional park. This park provides facilities for league sports, cultural enrichment, historical protection, and passive open space.

Other open spaces that can be considered scenic resources include undeveloped lands, floodways, and specialized facilities such as golf courses that provide amenities to visitors and residents. Cemeteries, schoolyards, and landscaped developments are also considered scenic resources since they provide contrast from adjacent uses based on landscaping quality, size, and configuration of open space.

Many open space areas that have remained undeveloped or that have been "naturalized" provide important habitat for wildlife. Natural open space linkages may include open space dedications, easements, or greenbelts. Open space elements can also be found within large-scale development projects including but not limited to public plazas, entry courts, and planned development common areas.

Undeveloped lands

Much of the land in the northern, eastern, and western portions of the OVOV Planning Area remains undeveloped. East of Canyon Country, large tracts of undeveloped property border State Route 14, extending to the boundaries of the Angeles National Forest. Similarly, much of the area to the west of Interstate 5 and along State Route 126 remains as open space or agricultural land. Open space and agricultural lands throughout the OVOV Planning Area provide a buffer to the County and City's built environment and convey a scenic sense of rural character.

Urban Form, Community Design, and Beautification

At a macro scale, looking at the distribution of land uses throughout the Santa Clarita Valley, development has been shaped by the National Forest lands occupying the mountain ranges to the north, east, and south of the Valley communities. The Land Use Map of the Area Plan has reinforced the concentration of urban land uses within the central portions of the Valley by designating significant open

space and non-urban rural residential uses between more developed areas and the National Forest lands. The intent of these designations is to maintain urban uses within the flatter portions of the Valley that have access to infrastructure, roads, and public facilities, and to minimize encroachment of urban development into hillside areas. The overall urban form has also preserved open space near the Santa Clara River throughout most of the Valley, in order to protect water quality and provide scenic views, recreational trails, and habitat preservation.[3]

At the intermediate scale, or neighborhood level of urban form, the Area Plan provides opportunities in some areas to create more urban environments with mixed uses, walkable pathways, and ready access to public transit. At the scale of site-specific development, the Area Plan contains policies to encourage the maintenance of neighborhood character in the various villages throughout the planning area, and to ensure that each new development incorporates measures for pedestrian accessibility, multi-modal opportunities, water conservation and quality, energy conservation, and other similar measures.

Urban Form

Urban form refers to the combination of individual elements in the built environment which together make up the cities and neighborhoods. Elements include houses, schools, parking lots, shopping centers, streets, parks, business centers, offices, and public buildings. The physical setting and history of the Santa Clarita Valley have combined to create several distinctive communities, each with its own special character, development patterns, and lifestyles. Communities within the City of Santa Clarita include Newhall, Valencia, Saugus, and Canyon Country. Subcommunities include Sand Canyon, Placerita Canyon, and Hasley Canyon. Communities on unincorporated County land include Agua Dulce, Northlake, Castaic, Val Verde and the proposed Newhall Ranch Specific Plan. Topographically, many neighborhoods are separated from adjacent development by ridgelines or canyons. The location of the Santa Clara River and Interstate 5, both of which transect the OVOV Planning Area, also act as barriers that separate communities. The following text describes examples of urban form that are presently found within the County's Planning Area.

Residential Neighborhoods

Residential neighborhoods can be characterized as either Traditional Residential, Suburban Subdivision, Rural Large Lot Homes, or Mixed Density. These categories are defined below.

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3 *Los Angeles County Preliminary Draft Santa Clarita Valley Area Plan*, October 2008.

Traditional Residential. This urban form typifies much of the older residential developments. Streets are laid out in an interconnected grid with houses set back at generally consistent distances from the street, often with extensive front yard landscaping and parkways. Houses are designed to open to the street, with garages located to the side or rear. These neighborhoods were typically built during the 1930-50s, and exhibit a diversity of architectural styles. Newhall exemplifies this urban form.

Suburban Subdivision. This type of neighborhood locates residences on lots along a curvilinear street pattern, often with cul-de-sacs. Houses generally exhibit a single architectural type with limited variety. Many of these homes are fronted by the garage with the housing unit oriented inward way form the street. Stevenson Ranch and Castaic typify these neighborhoods.

Rural Large Lot Homes. This type of neighborhood is often separated from commercial and urban centers. Homes are often custom built by individuals, rather than produced in tracts by a single developer. Building sizes vary and architectural styles tend to reflect the rural and desert character of the Santa Clarita Valley. Agua Dulce contains examples of these neighborhoods.

Mixed Density. This type of neighborhood incorporates a variety of housing types including single-family detached and attached units, low-rise townhomes, and garden apartments. Only a few mixed density neighborhoods, which are primarily newer developments, exist in the County's Planning Area. Newer neighborhoods in Stevenson Ranch exhibit the mixed-density form.

Commercial Districts

Commercial districts can be characterized as either a Commercial Corridor, Commercial Corridor Strip Center, Main Street Corridor, Regional Shopping Center Mall, Regional Center, or Community Center. These categories are defined below.

Commercial Corridor. Typical of older retail areas, mixed commercial districts contain small retail shops, located on comparatively small lots (typically 10,000 to 18,000 square feet), with no or limited parking to the rear of shops. Storefronts are generally located along the sidewalk and are architecturally similar. Large windows open to the sidewalk allowing passersby to view retail goods. Building mass is homogenous and typically limited to one-or two-story structures.

Commercial Corridor (Auto-oriented, independent buildings). In this particular type of commercial corridor, parcels are usually developed as a single building, set back from all property lines on a single parcel. These one-story buildings typically have simple box-like massing and lack a unique or

distinguishing architectural style. Paved surface parking is located in front of or to the sides of buildings with minimal landscaping. Much of this construction was occurred between the 1950s and 1980s.

Commercial Corridor Strip Center. Similar to the preceding category, the strip center locates shops and businesses to the rear of parcels along the street corridor with expanses of parking lots along the frontage. The strip center is often developed on large lots, (typically 20,000 to 100,000 square feet), versus the smaller scale auto-oriented blocks. Multiple driveways provide access to the center. There is little variation in the building design, and distinct massing of elements is not evident. Strip centers may be one to two stories tall.

Main Street Corridor (Town Center). Similar to a traditional "Main Street," retail shops are arranged in a pedestrian-oriented development in this district type. Buildings are adjacent to the sidewalk and close to the street, but far enough to facilitate enhanced streetscape and pedestrian amenities. Parking is angled or directly accessible to the front of shops. Buildings are medium to low scale, of varying mass, with elevations that are modulated, articulated, and visually transparent to provide a sense of comfort and safety for pedestrians.

Regional Shopping Center Mall. The regional shopping mall is typically situated on sites exceeding 40 acres and contains multiple tenants in an integrated complex surrounded by parking. The shopping mall is characterized by large massing and scale, and is often two to three stories. Shopping malls are typically more architecturally appealing than "big box" retail centers and usually exhibit greater façade articulation. The Stevenson Ranch Marketplace is a prime examples of the shopping mall.

Regional Centers (Retail Big Box). These are large, "superblock" developments with extensive parking lots. Buildings are bulky, box-like structures with little variation in massing. These structures also exhibit little building modulation or articulation, focusing on function rather than form. Costco is an example of this type of center.

Community Centers (Supermarket, or Super-Drug). Similar to large, regional centers, these contain buildings with multiple tenants abutted by large parking areas and are developed at a smaller scale (typically on 10- to 14-acre parcels). Buildings exhibit greater modulation and articulation, and generally differentiate massing. Grocery stores, drug stores and other retail uses and community services are located in these centers. Ralphs and Walgreens are examples of these centers.

Industrial Districts

Industrial districts can be characterized as either Campus Business Park or Traditional Heavy Industrial. These two categories are defined below.

Campus Business Park. The business park is typically a collection of medium to large scale buildings developed within a landscaped, campus-like setting. Landscaped parking lots surround each building or group of buildings.

Traditional Heavy Industrial. Traditional industrial areas are typically independently developed sites containing industrial buildings that have continuous, unarticulated facades and homogenous massing. Parking areas with limited landscaping surround the buildings.

Architectural Styles

Each neighborhood or community defines the community characteristics that are considered appropriate for that area. For example, residents in Canyon Country have endorsed rustic and natural building styles with emphasis on materials such as wood, stone, and enhanced paving. Because of its historical character, development in Newhall is subject to a Special Standards District and the Downtown Newhall Specific Plan standards.

Within the County's Planning Area, the design standards for Newhall Ranch are outlined in the adopted Specific Plan. The Community Standards Districts adopted by Los Angeles County maintain desired design characteristics in Agua Dulce and Castaic (see **Regulatory Framework** below for additional information on Community Standards District).

Beautification and Walkable Communities

The County and City seek to create an attractive outdoor urban environment that promotes walkability, and provides a common approach to streetscape design and landscaping along arterial streets and highways and major gateways. Urban parkways are streets in which the presence of high-quality landscaping lends a positive visual character. Major urban parkways usually have landscaped medians that add green space to the streetscape. Secondary urban parkways include locations where mature trees, perhaps originally planted as windrows, dominate the streetscape. Policies and implementation measures have been included in the Land Use Element to promote coordination between the City and the County on uniform approaches to streetscape design, including plant materials, hardscape, and street furniture.

Paths, such as bike and equestrian trails, link and interconnect land uses and areas of activity. Numerous paths traverse the national parks and other hillside areas within the OVOV Planning Area, and provide views of woodlands and topography as well as a place of relative seclusion from the urban environment. A path may also be a formal "paseo" or informal passage route such as a road that serves to provide a quality open space network that is spatially distributed throughout an area. Recent planned developments, such as those in Valencia, have incorporated paseos to provide links between residential areas and other uses.

Another area in which the County and City can coordinate beautification efforts is the provision of unified signs, especially for regional trails, trail heads, and open space and preserve areas. Consistent furniture such as bus shelters, benches, and trash cans can be used to unify streetscapes throughout the Valley.[4]

Historical Resources

The Santa Clarita Valley has an extensive history representing the early settlement of California, the initial development of California's resources, and historic filming sites for Hollywood westerns. This heritage has been extensively preserved in the numerous historical sites throughout the OVOV Planning Area. Not only are these sites historical and cultural resources, but many are also considered scenic resources, as they are representative of and provide glimpses into the Valley's rich past. Historical resources can help to define the visual character of an area by contributing to a sense of place, maintaining a visual link to an area's past, and providing glimpses of historical views. Historic resources within the County's Planning Area considered to have scenic value include, but are not limited to, The Oak of the Golden Dream, where gold was first discovered in California in 1842, and Mentryville, which was established in 1876 as California's pioneer oil town.

Landmarks

A landmark is a significant reference point, often identified by a structure, landscape feature, or freestanding element. Landmarks commonly have singularity, allowing them to be distinguished from features surrounding them. They also provide visual and functional points of reference for residents and visitors within the community, contributing to a distinct sense of place. Landmarks often have architectural, historical, archeological, and/or cultural significance, and many of the historic places and features described above would be considered landmarks. Examples of landmarks in the County's

4 *Los Angeles County Preliminary Draft Santa Clarita Valley Area Plan*, October 2008.

Planning Area include the St. Francis Dam Disaster Site, Beale's Cut, the Oak of the Golden Dream and Vasquez Rocks.

Viewsheds

The following discussion of regional, local and dark sky viewsheds includes text extracted from the Technical Background Report for the Santa Clarita Valleywide General Plan (February 2004).

A "viewshed" is a view corridor from a vantage point to landscapes or features that exhibit high visual quality. A viewshed may be categorized as a regional viewshed, local viewshed, or dark sky viewshed, as defined below:

- Significant Regional Viewshed—A viewshed where a significant number of prominent visual features unique to the Santa Clarita Valley can be identified.
- Significant Local Viewshed—A viewshed where a significant number of prominent visual features unique to the Santa Clarita Valley or the City of Santa Clarita can be identified, but that are secondary in quantity or nature to a Significant Regional Viewshed.
- Dark Sky Viewshed—A location away from artificial or urban light sources, which preserves the nighttime view of stars, planets, constellations, and other celestial bodies.

Viewsheds can be adversely affected by the urbanization of natural areas such as prominent slopes or woodlands. Viewsheds are also sensitive to adverse changes in air quality since smog obscures long-range visibility.

Regional Viewsheds

The Angeles National Forest, the Los Padres National Forest and their ridgelines provide an important visual backdrop for much of the County and City Planning Areas. The forestlands provide long-distance viewsheds from numerous locations in the County's Planning Area including the bottom of the Valley, hillsides, and ridgeline locations. Furthermore, since the County Planning Area is surrounded by mountain ranges, one may obtain panoramic views of the surrounding mountains from primary roadways and numerous locations on the Valley floor.

Scenic drives provide mobile views of a wide variety of topographic and biological features. Extensive, uninterrupted views of wide expanses of land, as well as more intimate vistas along shorter, secluded road segments, are often available. These drives not only provide an important scenic resource for residents, but are often the only aesthetic experience for visitors or passersby.

Scenic vistas are available along Interstate 5, State Route 14, and State Route 126. These vistas are surrounded by undisturbed mountains, ridgelines, and national forest as well as new development, and provide picturesque views. Of these roadways, Interstate 5 and State Route 14, which run through the pass between the Los Angeles Basin and the Santa Clarita Valley, also serve as natural gateways to the Santa Clarita Valley, providing the first views of the area, its topography and vegetation. As development increases, encroachment into hillside areas and high-density development in close proximity to these gateways, particularly where mass grading is required, could adversely affect the visual quality of the entries into the County and City's Planning Area. Similarly, development in close proximity to roadways that provide scenic views for motorists could degrade the natural, sweeping quality of the views provided, particularly if such development occurs in high densities or involves tall structures that could obscure long-range views.

In addition to the major highways, scenic views and vistas can be found along roads through various canyons, including Soledad Canyon Road, Bouquet Canyon Road, San Francisquito Canyon Road, Sand Canyon Road, Placerita Canyon Road, Sierra Highway, Golden Valley Road, Lake Hughes Road and Vasquez Canyon Road. Many of these scenic drives traverse oak- and sycamore-studded canyons along winding streambeds.

The following describes the roadways that offer scenic viewsheds through the County's Planning Area (see **Figure 3.6-1**).

- State Route 14 traverses the OVOV Planning Area southwest to northeast, and reaches an elevation over 3,000 feet above sea level at Escondido Summit in Acton (outside the eastern boundary of the OVOV Planning Area).

- Interstate 5 crosses the OVOV Planning Area south to north. The segment of Interstate 5 between Interstate 210 near Tunnel Station and State Route 126 near Castaic has been studied for nomination to the California Scenic Highway program.

- State Route 126 between Santa Paula (outside of the OVOV Planning Area) and Interstate 5 near Castaic offers views of mostly undeveloped and/or agricultural lands and occasional vistas of the Santa Clara River. This segment of State Route 126 has also been studied for nomination to the California Scenic Highway program.

- Soledad Canyon Road runs east/west along the Santa Clara River through a mostly undeveloped and scenic river canyon. Soledad Canyon is a major migration corridor for birds and other wildlife.

- Bouquet Canyon Road runs north/south from Saugus in Santa Clarita to Leona Valley, including the Bouquet Canyon Reservoir. In Saugus, the road is a four- to six-lane thoroughfare with a bike lane along part of its journey. Approximately 1 mile from the Santa Clarita City Limits, ranches and open space replace the residential development.

- Placerita Canyon Road, south of State Route 14, winds past the Disney Movie Ranch through an oak- and chaparral-studded canyon, past the Placerita Nature Center, and loops north to connect with Sand Canyon Road.

- San Francisquito Canyon Road runs north/south from Saugus in Santa Clarita to Elizabeth Lake.

- Lake Hughes Road runs north/south from Castaic to Lake Hughes. It was built by the California Conservation Corps in 1936; a portion of the original highway runs underneath Castaic Lake.

- Sierra Highway parallels State Route 14 from the southwestern portion of the OVOV Planning Area, turning north approximately 4 miles east of its junction with Interstate 5. Sierra Highway then travels through the rural community and ranches of Agua Dulce, turning south once again to cross State Route 14 in Acton. The area surrounding this highway is mostly rural, especially in the eastern portion of the OVOV Planning Area.

- Sand Canyon Road exists as a predominately two lane undivided roadway that provides for north/south travel between Sierra Highway and Placerita Canyon Road. Sand Canyon Road is designated on the proposed Highway Plan as a Secondary Highway between Sierra Highway and Soledad Canyon Road, as a Major Highway between Soledad Canyon Road and Lost Canyon Road, and as a Limited Secondary Highway between Lost Canyon Road and Placerita Canyon Road/Little Tujunga Canyon Road. From its southern terminus near Placerita Canyon Road, access to the San Fernando Valley communities of Sunland and Tujunga is possible via a connection with Little Tujunga Road Canyon through the Angeles National Forest.

- Golden Valley Road exists as a four lane to six-lane roadway that provides for north/south travel between Soledad Canyon Road and the State Route 14 freeway, and which will ultimately be extended north to connect with Newhall Ranch Road. A northerly segment also exists south of Plum Canyon Road, which will ultimately be extended south to Newhall Ranch Road. It is designated on the proposed Highway Plan as a Major Highway between Newhall Ranch Road and the State Route 14 freeway, and as a Secondary Highway between Plum Canyon Road and Newhall Ranch Road. Golden Valley Road ultimately will be part of the Cross-Valley Connector, which will provide a seamless connection between the Interstate 5/State Route 126 junction and the State Route 14/Golden Valley Road interchange.

Local Viewsheds

The significant topographic and natural resources in the OVOV Planning Area provide local viewsheds to neighborhoods in the unincorporated areas. Examples of local viewsheds include views of hillsides and ridgelines from residential developments. Another type of local viewshed includes views contained within a single canyon. For example, Pico Canyon Service Road provides local views of the canyon and slopes as it ascends to canyon headwaters.

Dark Sky Viewsheds

Dark sky viewsheds are generally available in less urbanized areas, such as in the canyons and canyon roads in the Valley. Areas from which dark sky viewsheds are available include Bouquet Canyon, San Francisquito Canyon, Pico Canyon, Castaic Lake, and the Angeles National Forest.

REGULATORY FRAMEWORK

County of Los Angeles

Existing Plans

The County regulates scenic open space primarily through its General Plan and Area Plan. Policies and programs of the General Plan directed toward the management and protection of the scenic qualities of these areas constitutes the Open Space Plan of Los Angeles County. Open space lands may be subject to additional controls through special management areas such as National Recreation and Forest areas, SEAs, mineral resource areas, hazard areas, and areas subject to cultural heritage protection.

The County adopted the Santa Clarita Valley Area Plan in 1984 with a comprehensive update in 1990 to address specific planning issues within the Santa Clarita Valley. Areas with special significance for resource preservation were depicted on the Land Use Map of the Area Plan, including Open Space, Hillside Management, Significant Ecological Areas, and Floodways/Floodplains. The Area Plan contained a Scenic Highways Plan and plans for Trails and Bikeways, along with goals and policies to promote preservation of open space and conservation of resources. Hillside development policies were included for areas with slopes of 25 percent or greater.

The County has also adopted ordinances to regulate and protect natural resources, including native oak trees, water quality, significant ecological areas, and hillside development. In 2007 the County updated the Master Trails Plan for the Santa Clarita Valley, and has made numerous improvements to park and open space areas.[5]

Hillside Management

To preserve the natural beauty of hillsides in the unincorporated County, land use activities that may result in environmental degradation are subject to regulations and design guidelines that limit hillside development based on slope, soil, natural drainage channels and seismic and fire hazards. By imposing

5 Draft Conservation and Open Space Element of the *Draft Santa Clarita Valley General Plan* (July 2008).

these design conditions, a more sensitive development occurs in a manner that respects the natural topography and biological resources of the area. To this end, the County utilizes the Hillside Management Ordinance and the Hillside Management Conditional Use Permit (CUP) as regulatory mechanisms to consider potential environmental degradation and hillside alteration in areas where the slope is 25 percent or greater. Design guidelines for projects in Hillside Management Areas include the following:

- Minimize grading and removal of native vegetation.
- Preserve distinctive natural features and existing topographical forms.
- Preserve prominent skyline ridge silhouettes; locate roads and structures below skyline ridges.
- Design circulation routes that incorporate existing contours; undulating road patterns, cul-de-sacs, split roadways and varying grades.
- Incorporate hiking, bicycle, walking and equestrian trails where appropriate; integrate trails and open space with existing networks.
- Vary lot sizes, setbacks and building orientation and elevations to ensure views and avoid monotony.
- Preserve steep hillsides by clustering buildings and using other innovative site design approaches.
- Use flag lot design where essential to reduce grading.
- Preserve significant trees and habitats, natural watercourses, wildlife corridors and distinctive natural features.
- Consider the project's appearance from higher, lower or adjacent roads or development.
- Place water tanks and other unsightly forms below ridgelines and in a bermed and naturally landscaped area.

Community Standards Districts

Community Standards Districts (CSDs) are established as supplemental districts to provide a means of implementing special development standards contained in adopted neighborhood, community, area, specific and local coastal plans within the unincorporated areas of Los Angeles County, or to provide a means of addressing special problems which are unique to certain geographic areas within the unincorporated areas of Los Angeles County. The County has developed CSDs for the Castaic Area, Agua Dulce, and San Francisquito Canyon to address planning issues and set specific guidelines for development within these two communities. Regulations in the Castaic Area CSD include lot size requirements for new homes, hillside development restrictions, provisions for trail connections and

protection of native vegetation, and buffering between incompatible uses. In addition, the Castaic Area CSD limits the expansion of trucking-related uses in the Castaic center and prohibits clustered subdivisions in the Hasley Canyon and Sloan Canyon areas. The Agua Dulce CSD includes guidelines for trail preservation, hillside development, native landscaping, signage and outdoor lighting.[6]

THRESHOLDS OF SIGNIFICANCE

Significance Thresholds

In order to assist in determining whether a project will have a significant effect on the environment, the *California Environmental Quality Act (CEQA) Guidelines*, Appendix G identify criteria for conditions that may be deemed to constitute a substantial or potentially substantial adverse change in physical conditions.

Potentially significant impacts on aesthetics resources would occur if the proposed Area Plan would:

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

IMPACT ANALYSIS

This impact analysis section evaluates the potential effects of the proposed Area Plan goals, objectives, and policies on aesthetic and scenic resources within the County's Planning Area using the *State CEQA Guidelines* thresholds of significance.

Scenic Vistas

Impact 3.6-1 **Implementation of the proposed Area Plan could result in a potentially significant impact on a scenic vista.**

As previously discussed, scenic vistas within the County's Planning Area are both panoramic and focal. The ridgelines of the Sierra Pelona, San Gabriel and Santa Susana Mountains provide panoramic views of

6 Draft Conservation and Open Space Element of the *Draft Los Angeles County General Plan* (September 2008).

the Santa Clarita Valley. Scenic vistas of these mountains are extensively offered from primary roadways and other vantage points throughout the Valley floor as well as the County's trail system. Scenic drives through the canyons and the highways leading into the Valley offer more focused scenic vistas. The scenic resources that compose scenic vistas include major topographic features such as ridgelines and canyons, woodlands, biological resources, water bodies, open space, parkland, and historic resources.

The proposed Area Plan would designate land for urban uses throughout the County's Planning Area. Presently vacant lands could become developed with urban uses. If unregulated, new development under buildout of the proposed Area Plan has the potential to degrade the quality of existing scenic vistas. For example, hillside development could result in mass grading of ridgelines and other natural topographic features as well as the removal of vegetation, including native woodlands. Development on the Valley floor could obstruct long-range views of the surrounding mountains if new structures have prohibitive building heights and placement. Development within open space areas could adversely impact the quality of vistas offered along local scenic drives and the major highways leading into the Valley.

In order to reduce these potential impacts resulting from development, several policies in the proposed Area Plan related to the preservation of topography, open space, woodlands, and other scenic resources would promote the protection of scenic vistas. **Policies CO 6.5.1** and **6.5.2** specifically promote the maintenance of designated routes, gateways, and vista points by considering scenic views at major entry points to the Valley, and establishing scenic routes and adopting guidelines to maintain their character. Additionally, vistas would be maintained by minimizing smog, restricting the establishment of billboards and removing those that currently obstruct scenic views, restricting building heights and requiring undergrounding all new utility lines (**Policies CO 6.6.2–6.6.5**).

While the above policies are aimed specifically at preserving scenic vistas, most applicable policies from the proposed Area Plan are designed to enhance and protect scenic resources that contribute to the County's valued views. In order to minimize adverse impacts to the natural environment, which provides scenic resources in the County's Planning Area, the proposed Area Plan would promote infill development such that urban uses are concentrated within the Valley center (**Policy CO 1.5.5**). Similarly, it would allow density transfers and clustering to encourage the retention of open space (**Policy CO 10.2.5**). By concentrating growth near or within the developed portions of the Valley floor, open space would continue to provide a scenic landscape and backdrop to the County's Planning Area.

For development that does occur on open space, Area Plan policies would conserve the hillsides, canyons, and ridgelines by limiting hillside development. Grading techniques that mimic the natural

topography, revegetation of graded slopes, setbacks from ridgelines, designating additional open space, erosion control measures, and minimal use of large retaining walls are all ways in which the County would preserve scenic slopes (**Policies CO 2.2.1 –2.2.6**).

Another focus of the Area Plan is to conserve biological resources and ecosystems, which provide scenic relief from the built environment. The proposed Area Plan would promote tree planting, habitat restoration, revegetation, increased open space, and the concentration of development into previously developed, urban areas that avoid impacts to wetlands, woodlands, heritage trees, floodplains, water bodies and threatened habitat (**Policies CO 3.1.1–3.1.4**, **3.1.6**, **3.1.8, 3.1.10**, **3.2.1** and **3.2.2**, **3.2.4**, **3.3.2**, **3.3.4**, **3.3.5**, **3.5.3**, and **3.6.5**).

The Area Plan also seeks to protect historical and culturally significant resources, which contribute to more localized, focal scenic vistas in the County's Planning Area. The proposed Area Plan would enforce preliminary review of alternations to these resources (**Policies CO 5.1.1** and **5.1.2**).

The Area Plan supports the use of designated parkland or open space to preserve scenic landforms such as the canyons, significant ridgelines and unique geologic formations like Vasquez Rocks (**Policies CO 6.1.1–6.1.3**), scenic water bodies such as Castaic Lake and the Santa Clara River (**Policies CO 6.3.1** and **6.3.2**), and scenic habitat including oak woodlands and coastal sage (**Policies CO 6.4.1** and **6.4.2**).

Other proposed policies are designed to enhance parkland and open space, which, due to their lack of development, form natural components of scenic vistas. These goals would be met through the addition of trails to scenic viewpoints (**Policy CO 9.2.6**), providing a natural greenbelt buffer surrounding the Valley (**Policy CO 10.1.1**), preserving the Santa Clara River corridor as open space (**Policy CO 10.1.2**), maintaining existing open space, and obtaining additional open space (**Policies CO 10.1.3–10.1.5**, **10.1.9** and **10.1.14**). Additionally, the proposed policies would require open space within new development projects to equal 20 percent of the site area, connect to adjacent open space when feasible, and incorporate existing significant trees, vegetation, terrain or water features (**Policies CO 10.2.1**, **10.2.2**, and **10.2.4**).

Proposed Area Plan Policies

Policy CO 1.5.5: Promote concentration of urban uses within the center of the Santa Clarita Valley through incentives for infill development and rebuilding, in order to limit impacts to open space, habitats, watersheds, hillsides, and other components of the Valley's natural ecosystems.

Policy CO 2.2.1: Locate development and designate land uses to minimize the impact on the Santa Clarita Valley's topography, minimizing grading and emphasizing the use of development pads that mimic the natural topography in lieu of repetitive flat pads, to the extent feasible. (Guiding Principle #8)

Policy CO 2.2.2: Ensure that graded slopes in hillside areas are revegetated with native drought tolerant plants or other approved vegetation to blend manufactured slopes with adjacent natural hillsides, in consideration of fire safety and slope stability requirements.

Policy CO 2.2.3: Preserve designated natural ridgelines from development by ensuring a minimum distance for grading and development from these ridgelines of 50 feet, or more if determined appropriate by the reviewing authority based on site conditions, to maintain the Santa Clarita Valley's distinctive community character and preserve the scenic setting.

Policy CO 2.2.4: Identify and preserve significant geological and topographic features through designating these areas as open space or by other means as appropriate.

Policy CO 2.2.5: Promote the use of adequate erosion control measures for all development in hillside areas, including single family homes and infrastructure improvements, both during and after construction.

Policy CO 2.2.6: Encourage building and grading designs that conform to the natural grade, avoiding the use of large retaining walls and build-up walls that are visible from offsite, to the extent feasible and practicable.

Policy CO 3.1.1: On the Land Use Map and through the development review process, concentrate development into previously developed or urban areas to promote infill development and prevent sprawl and habitat loss, to the extent feasible.

Policy CO 3.1.2: Avoid designating or approving new development that will adversely impact wetlands, floodplains, threatened or endangered species and habitat, and water bodies supporting fish or recreational uses, and establish an adequate buffer area as deemed appropriate through site specific review.

Policy CO 3.1.3: On previously undeveloped sites ("greenfields"), identify biological resources and incorporate habitat preservation measures into the site plan, where appropriate. (This policy will generally not apply to urban infill sites, except as otherwise determined by the reviewing agency).

Policy CO 3.1.4: For new development on sites with degraded habitat, include habitat restoration measures as part of the project development plan, where appropriate.

Policy CO 3.1.6: On development sites, preserve and enhance natural site elements including existing water bodies, soil conditions, ecosystems, trees, vegetation and habitat, to the extent feasible.

Policy CO 3.1.8: On development sites, require tree planting to provide habitat and shade to reduce the heat island effect caused by pavement and buildings.

Policy CO 3.1.10: To the extent feasible, encourage the use of open space to promote biodiversity.

Policy CO 3.2.1: Protect wetlands from development impacts, with the goal of achieving no net loss (or functional reduction) of jurisdictional wetlands within the planning area.

Policy CO 3.2.2: Ensure that development is located and designed to protect oak and other significant indigenous woodlands. (Guiding Principle #9)

Policy CO 3.2.4: Protect biological resources in the designated Significant Ecological Areas (SEAs) through the siting and design of development which is highly compatible with the SEA resources. Specific development standards shall be identified to control the types of land use, density, building location and size, roadways and other infrastructure, landscape, drainage, and other elements to assure the protection of the critical and important plant and animal habitats of each SEA. In general, the principle shall be to minimize the intrusion and impacts of development in these areas with sufficient controls to adequately protect the resources. (Guiding Principle #10)

Policy CO 3.3.2: Cooperate with other responsible agencies to protect, enhance, and extend the Rim of the Valley trail system through Elsmere and Whitney Canyons, and other areas as appropriate, to provide both recreational trails and wildlife corridors linking the Santa Susana and San Gabriel Mountains.

Policy CO 3.3.4: Support the maintenance of Santa Clarita Woodlands Park, a critical component of a cross-mountain range wildlife habitat corridor linking the Santa Monica Mountains to the Angeles and Los Padres National Forests.

Policy CO 3.3.5: Encourage connection of natural open space areas in site design, to allow for wildlife movement.

Policy CO 3.5.3: Pursuant to the requirements of the Zoning Ordinance, protect heritage oak trees that, due to their size and condition, are deemed to have exceptional value to the community.

Policy CO 3.6.5: Ensure revegetation of graded areas and slopes adjacent to natural open space areas with native plants (consistent with fire prevention requirements).

Policy CO 5.1.1: For sites identified on the Cultural and Historical Resources Map (Figure CO 6), review appropriate documentation prior to issuance of any permits for grading, demolition, alteration, or new development, to avoid significant adverse impacts. Such documentation may include cultural resource reports, Environmental Impact Reports, or other information as determined to be adequate by the reviewing authority.

Policy CO 5.1.2: Review any proposed alterations to cultural and historic sites identified in Table CO 1 or other sites which are so designated, based on the guidelines contained in the Secretary of the Interior's Standards for the Treatment of Properties (Title 36, Code of Federal Regulations, Chapter 1, Part 68, also known as 36 CFR 68), or other adopted County guidelines.

Policy CO 6.1.1: Protect scenic canyons, as described in Part I of this element, from overdevelopment and environmental degradation.

Policy CO 6.1.2: Preserve significant ridgelines, as shown on Figure CO 7, as a scenic backdrop throughout the community by maintaining natural grades and vegetation.

Policy CO 6.1.3: Protect the scenic quality of unique geologic features throughout the planning area, such as Vasquez Rocks, by including these features within park and open space land where possible.

Policy CO 6.3.1: Protect the shores of Castaic Lake to preserve its scenic quality from development.

Policy CO 6.3.2: Protect the banks of the Santa Clara River and its major tributaries through open space designations and property acquisitions, where feasible, to protect and enhance the scenic character of the river valley.

Policy CO 6.4.1: Preserve scenic habitat areas within designated open space or parkland, wherever possible.

Policy CO 6.4.2: Through the development review process, ensure that new development preserves scenic habitat areas to the extent feasible.

Policy CO 6.5.1: In approving new development projects, consider scenic views at major entry points to the Santa Clarita Valley, including gateways located at Newhall Pass and along Lake Hughes Road, Route 126, Bouquet Canyon Road, Sierra Highway, State Route 14, and other locations as deemed appropriate by the reviewing authority.

Policy CO 6.5.2: Establish scenic routes in appropriate locations as determined by the reviewing agency, and adopt guidelines for these routes to maintain their scenic character.

Policy CO 6.6.1: Enhance views of the night sky by reducing light pollution through use of light screens, downward directed lights, minimized reflective paving surfaces, and reduced lighting levels, as deemed appropriate by the reviewing authority.

Policy CO 6.6.2: Improve views of the Santa Clarita Valley through various policies to minimize air pollution and smog, as contained throughout the Area Plan.

Policy CO 6.6.3: Restrict establishment of billboards throughout the planning area, and continue abatement efforts to remove existing billboards that impact scenic views.

Policy CO 6.6.4: Where appropriate, require new development to be sensitive to scenic viewpoints or viewsheds through building design, site layout and building heights.

Policy CO 6.4.5: Encourage undergrounding of all new utility lines, and promote undergrounding of existing lines where feasible and practicable.

Policy CO 9.2.6: Provide trails to scenic vistas and viewpoints.

Policy CO 10.1.1: Provide and protect a natural greenbelt buffer area surrounding the entire Santa Clarita Valley, which includes the Angeles National Forest, Santa Susana, San Gabriel, and Sierra Pelona Mountains, as a regional recreational, ecological, and aesthetic resource. (Guiding Principle #5)

Policy CO 10.1.2: The Santa Clara River corridor and its major tributaries shall be preserved as open space to accommodate storm water flows and protect critical plant and animal species, as follows: (Guiding Principle #6)

a. Uses and improvements within the corridor shall be limited to those that benefit the community's use of the river in its natural state.

b. Development on properties adjacent to, but outside of the defined primary river corridor shall be:

   i. Located and designed to protect the river's water quality, plants, and animal habitats by controlling the type and density of uses, drainage runoff (water treatment) and other relevant elements; and

   ii. Designed to maximize the full range of river amenities, including views and recreational access, while minimizing adverse impacts to the river.

Policy CO 10.1.3: Through dedications and acquisitions, obtain open space needed to preserve and protect wildlife corridors and habitat, which may include land within SEA's, wetlands, woodlands, water bodies, and areas with threatened or endangered flora and fauna.

Policy CO 10.1.4: Maintain and acquire, where appropriate, open space to preserve cultural and historical resources.

Policy CO 10.1.5: Maintain open space corridors along canyons and ridgelines as a way of delineating and defining communities and neighborhoods, providing residents with access to natural areas, and preserving scenic beauty.

Policy CO 10.1.9: Preserve forested areas, agricultural lands, wildlife habitat and corridors, wetlands, watersheds, groundwater recharge areas, and other open space that provides nature carbon sequestration benefits.

Policy CO 10.1.14: Protect open space from human activity that may harm or degrade natural areas, including but not limited to off road motorized vehicles, vandalism, campfires, overuse, pets, noise, excessive lighting, dumping, or other similar activities.

Policy CO 10.2.1: Encourage provision of vegetated open space on a development project's site, which may include shallow wetlands and ponds, drought tolerant landscaping, and pedestrian hardscape that includes vegetated areas.

Policy CO 10.2.2: Encourage that open space provided within development projects be usable and accessible, rather than configured in unusable strips and left-over remnants, and that open space areas are designed to connect to each other and to adjacent open spaces, to the extent reasonable and practical.

Policy CO 10.2.4: Seek opportunities to incorporate site features into the open space of a project design, which may include significant trees, vegetation, terrain, or water features, to provide thermal, acoustic, and aesthetic benefits.

Policy CO 10.2.5: Where appropriate, allow density transfers and density-controlled development (clustering) in accordance with the provisions of the Zoning Ordinance to encourage retention of open space, provided that all residential lots meet the minimum lot size requirements of Community Standards District, where applicable.

Effectiveness of Proposed Area Plan Policies

The proposed policies are designed to guide growth near or within the developed portion of the Valley floor in order to preserve the existing rural and open space character of the County's Planning Area; provide for the permanent preservation or restoration of important natural and built scenic resources; incorporate open space within developed areas; conserve view corridors, skylines, and scenic vistas; and impose restrictions on development activities that may adversely affect scenic resources. Since the above policies restrict impacts on those features comprising scenic vistas (ridgelines, biological resources, open space, and historic resources) and scenic vistas in general, potential impacts on scenic vistas from implementation of the proposed Area Plan would be less than significant.

Plan to Plan Analysis

The proposed Area Plan proposes a reduction in density in hillside and environmentally sensitive areas of the unincorporated areas of the County and would provide for the permanent preservation or restoration of important natural and built scenic resources and conservation of scenic vistas; buildout under the County's Area General Plan would have fewer aesthetic impacts compared with buildout under the existing Plan.

Scenic Highways

Impact 3.6-2 **Implementation of the proposed Area Plan could result in a potentially significant impact to scenic resources within a locally designated scenic highway such as State Route 126.**

There are no designated state scenic highways in the City of Santa Clarita or elsewhere in the Santa Clarita Valley, including the unincorporated areas. State Route 126 is designated as an eligible State scenic highway, but is not officially designated. Los Angeles County designates State Route 126 as a "First Priority Scenic Route" which is proposed for further study, but presently has no regulatory restrictions placed on it.

As there are no state scenic highways in the County's Planning Area, no proposed Area Plan policies address scenic resources specifically within a state scenic highway. However, several policies address the impact on scenic resources within the County Planning Area's locally scenic corridors, which are discussed under **Impact 3.6-1** above. For example, several policies are intended to maintain the scenic character of designated routes, gateways, and vista points along roadways. **Policy CO 6.5.1** states that scenic views at major entry points to Santa Clarita Valley should be considered in the approval of new development projects. **Policy CO 6.5.2** states that scenic routes in appropriate locations and guidelines for the maintenance of their scenic character should be established. Implementation of these policies would protect existing scenic corridors and better enable the future designation of a state scenic highway within the County's Planning Area.

Proposed Area Plan Policies

See **Impact 3.6-1** for policies related to the protection of scenic resources including historical sites, ecosystems, landforms, water bodies, and geological formations.

Effectiveness of Proposed Area Plan Policies

See **Impact 3.6-1** for a discussion of the effectiveness of policies designed to protect scenic resources. However, since no state scenic highways are located within the County's Planning Area, implementation of the proposed Area Plan would not affect scenic resources within a state scenic highway. No impact would occur.

Plan to Plan Analysis

Both the proposed Area Plan and the existing Area Plan contain policies that address scenic highways,. Although no state scenic highways are located within the County's Planning Area, impacts would be similar between both Plans.

Visual Quality and Character

Impact 3.6-3 **Implementation of the Area Plan could result in a potentially significant impact to the existing visual character or quality of the County's Planning Area.**

Buildout of the proposed Area Plan would introduce new uses to the County's Planning Area. If unregulated, new development could be inconsistent with the desirable visual character and quality for the County's Planning Area. Visual character refers to architectural design standards, the distribution of open space, streetscape design, and other visual features or amenities that define the community. In order to reduce potential inconsistencies, the proposed Area Plan includes several policies in the Conservation and Open Space and Land Use Elements designed to maintain the County Planning Area's rural character and ensure visual consistency and continuity with the existing natural and built environment.

The proposed Area Plan would establish certain design standards and concepts to uphold the aesthetic valued by the community. Proposed policies would encourage the creation of healthy, high quality neighborhoods, which includes requiring architectural design treatment and articulation along all sides of new housing to promote continuity of architectural scale and rhythm and avoid the appearance of blank walls, especially long facades adjacent to major arterial streets (**Policies LU 3.4.8**, **6.5.3,** and **6.5.4**). The proposed Area Plan also encourages the use of high quality, durable, and natural-appearing materials, and designs and architectural styles that incorporate classic and timeless architectural features (**Policies LU 6.5.1** and **6.5.2**).

The visual quality of streetscapes and public spaces is also addressed. The inclusion of plazas, courtyards, seating areas, public art, and water features within commercial centers, business parks, and civic facilities would enhance public space (**Policy LU 6.2.1**). Trailheads would be enhanced with landscaping, seating, and information kiosks (**Policy LU 6.2.2**). The Area Plan also promotes the beautification of streetscapes and gateways to the community, planting of street trees, development of unified landscape plans for major arterials traversing the Valley, undergrounding of utility lines for new development, and prohibition of new billboards (**Policies LU 6.3.1–6.3.5**). Additionally, planting trees and providing more natural vegetation in lieu of impervious surfaces within parking lots would enhance the County Planning Area's built environment (**Policies CO 3.5.1** and **3.6.2**).

Parkland and open space, which provide visual relief within the urban setting, are also valued visual characteristics of the County's Planning Area. Proposed policies include ensuring that new parkland is developed throughout the County's Planning Area based on a standard of 5 acres of parkland per 1,000 residents (**Policy CO 9.1.1**). Furthermore, new residential development projects would need to provide adequate park facilities to meet the needs of future residents (**Policy CO 9.1.9**). Local and community parks should be within reasonable distance of residential neighborhoods so that they are well integrated, and the Santa Clara River should continue to be a recreational focal point providing natural ecosystems and a buffer for sensitive habitat (**Policy CO 9.1.2**, **9.1.3**, **9.1.7**, and **9.1.13**). Additionally, the Area Plan promotes converting vacant lots to community gardens where appropriate (**Policy CO 10.1.8**). All these measures would enhance and increase the total acreage of interspersed open space within the County's Planning Area.

Furthermore, the proposed Area Plan promotes the protection of scenic resources that form the County Planning Area's natural setting. **Policies CO 6.1.1 and 6.1.2** protect scenic canyons from overdevelopment and environmental degradation and preserve significant ridgelines as a scenic backdrop by maintaining natural grades and vegetation. This includes distancing new development from ridgelines, the Santa Clara River corridor, and stream banks, and maintaining the scenic backdrop of foothills and canyons through specialized construction techniques (**Policy CO 6.1.3**). (Other policies direct the conservation of biological resources and forest land, which would be accomplished by discouraging off-road vehicle use, maintaining fuel modification zones, and protecting the urban-forest interface area from overdevelopment (**Policies CO 3.4.2** and **3.4.5**). Additionally, adherence to the policies identified under **Impact 3.6-1** would reduce impacts on the scenic resources that contribute to the visual quality and character of the County's Planning Area.

Proposed Area Plan Policies

Policy CO 3.4.2: Consider principles of forest management in land use decisions for projects adjacent to the National Forest, including limiting the use of invasive species, discouraging off-road vehicle use, maintaining fuel modification zones and fire access roads, and other measures as appropriate, in accordance with the goals set forth in the Angeles National Forest Land Management Plan.

Policy CO 3.5.1: Continue to plant and maintain trees on public lands and within the public right-of-way to provide shade and walkable streets, incorporating measures to ensure that roots have access to oxygen at tree maturity, such as use of porous concrete.

Policy CO 3.6.2: Reduce impervious surfaces and provide more natural vegetation to enhance microclimates and provide habitat. In implementing this policy, consider the following design concepts:

- Consideration of reduced parking requirements, where supported by a parking study and/or through shared use of parking areas;
- Increased use of vegetated areas around parking lot perimeters; such areas should be designed as bioswales or as otherwise determined appropriate to allow surface water infiltration;
- Use of connected open space areas as drainage infiltration areas in lieu of curbed landscape islands, minimizing the separation of natural and landscaped areas into isolated "islands";
- Breaking up large expanses of paving with natural landscaped areas planted with shade trees to reduce the heat island effect, along with shrubs and groundcover to provide diverse vegetation for habitat.

Policy CO 9.1.1: Common park standards shall be developed and applied throughout the Santa Clarita Valley, consistent with community character objectives, with a goal of five acres of parkland per 1,000 population. (Guiding Principle #36.a.)

Policy CO 9.1.2: A range of parkland types, sizes, and uses shall be provided to accommodate recreational and leisure activities. (Guiding Principle #36.b)

Policy CO 9.1.3: Provide local and community parks within a reasonable distance of residential neighborhoods.

Policy CO 9.1.7: Establish appropriate segments of the Santa Clara River as a recreational focal point, encouraging a beneficial mix of passive and active recreational uses with natural ecosystems by providing buffers for sensitive habitat.

Policy CO 9.1.9: Ensure that new development projects provide a fair share towards park and recreational facilities, phased to meet needs of residents as dwelling units become occupied, pursuant to the Quimby Act (California Government Code Section 66477) and local ordinances as applicable.

Policy CO 9.1.13: Provide passive areas for natural habitat, meditation, bird-watching, and similar activities in parks, where feasible and appropriate, including meditation gardens, wildflower and butterfly gardens, botanic gardens, and similar features.

Policy CO 10.1.8: Encourage the use of vacant lots as community gardens, where appropriate.

Policy LU 3.4.8: Require architectural design treatment along all sides of new housing to promote continuity of architectural scale and rhythm and avoid the appearance of blank walls (360 degree enhancement).

Policy LU 6.1.1: Designate ridgelines throughout the planning area, and preserve these ridgelines from development by encouraging a minimum distance for grading and development from these ridgelines of 50 feet, or more if determined preferable by the reviewing authority based on site conditions.

Policy LU 6.1.2: On the Land Use Map, designate publicly owned portions of the Santa Clara River corridor and its major tributaries as Open Space.

Policy LU 6.1.3: Ensure that new development in hillside areas is designed to protect the scenic backdrop of foothills and canyons enjoyed by Santa Clarita Valley communities, through requiring compatible hillside management techniques that may include but are not limited to density-controlled development (clustering) subject to the limitations in Policy LU 1.3.5; contouring and landform grading; revegetation with native plants; limited site disturbance; avoidance of tall retaining and build-up walls; use of stepped pads; and other techniques as deemed appropriate.

Policy LU 6.2.1: Promote the inclusion of plazas, courtyards, seating areas, public art, and similar features within commercial centers, business parks, and civic facilities visited by the general public.

Policy LU 6.2.2: Provide and enhance trail heads where appropriate with landscaping, seating, trash receptacles and information kiosks.

Policy LU 6.3.1: Promote planting of street trees throughout urban areas in the Santa Clarita Valley.

Policy LU 6.3.2: Develop compatible landscape plans for major arterials traversing the Santa Clarita Valley, including landscaped medians and parkways, and implement these plans in both County and City of Santa Clarita areas, where feasible and appropriate based on right of way and other conditions.

Policy LU 6.3.3: Enhance major entrance points to the community, including on and off ramps from Interstate 5 and State Route 14; entrances along State Route 126; and at the northern and southern entrance points on Sierra Highway, where feasible and appropriate.

Policy LU 6.3.4: Require undergrounding of utility lines for new development where feasible, and plan for undergrounding of existing utility lines in conjunction with street improvement projects where economically feasible.

Policy LU 6.3.5: Restrict the establishment of billboards within the planning area.

Policy LU 6.5.1: Require use of high quality, durable, and natural-appearing building materials, pursuant to the ordinances developed through the County's Green Building Program.

Policy LU 6.5.2: Encourage the use of designs and architectural styles that incorporate classic and timeless architectural features.

Policy LU 6.5.3: Require architectural enhancement and articulation on all sides of buildings (360 degree architecture), with special consideration at building entrances and corners, and along facades adjacent to major arterial streets.

Policy LU 6.5.4: Evaluate new development in consideration of its context, to ensure that buildings create a coherent living environment, a cohesive urban fabric, and contribute to a sense of place consistent with the surrounding neighborhoods.

Effectiveness of Proposed Area Plan Policies

The above policies address the preservation of the rural character of the County's Planning Area by regulating the placement of incompatible land uses (i.e., development adjacent to Angeles National Forest), streetscapes, urban landscaping, incorporation of additional parkland and public open space (i.e., plazas and courtyards), architectural standards and signage. Coordination between the County and City on urban form, beautification, and community design, will help develop the regional character of the OVOV Planning Area. Based on implementation of the proposed policies and the existing regulatory framework, impacts on the County Planning Area's visual character and quality would be less than significant.

Plan to Plan Analysis

Both the proposed Area Plan and the existing Area Plan contain policies that address the visual character and quality of the County's Planning Area. The proposed Area Plan proposes a reduction in density in hillside and environmentally sensitive areas of the unincorporated areas of the County and would provide for the permanent preservation or restoration of important natural and built scenic resources and conservation of scenic vistas. Therefore, buildout under the County's proposed Area Plan would have fewer aesthetic impacts compared with buildout under the existing Plan.

Light and Glare

Impact 3.6-4 **Implementation of the Area Plan would not create a new source of substantial light or glare that would potentially affect day or nighttime views in the area.**

Implementation of the Area Plan would introduce new sources of light and glare to the County's Planning Area through additional street lighting, parking lot lighting, commercial signage, residential lighting, and other sources of illumination typically found within urban settings. Excessive levels of nighttime illumination can interfere with views of the night sky and be a nuisance to neighborhoods and other sensitive receptor locations. In order to reduce the potential for these adverse impacts, the proposed Area Plan includes several policies to reduce the generation of light and glare.

Policies in the Area Plan are designed to minimize light trespass, sky-glow and glare to a level needed for security and comfort by eliminating unnecessary lighting for landscaping and architecture and requiring the reduction of light levels during non-business nighttime hours (**Policies CO 3.6.1** and **8.3.9**). In order to protect views of the night sky and reduce glare, the proposed Area Plan also promotes the use of light screens, downward directed lights, and minimized reflective paving surfaces (**Policies CO 6.6.1** and **8.2.4**). Furthermore, policies designed to protect open space from new development would also limit the creation of new light and glare sources (**Policy CO 10.1.14**; refer to **Impact 3.6-1**).

Proposed Area Plan Policies

Policy CO 3.6.1: Minimize light trespass, sky-glow, glare, and other adverse impacts on the nocturnal ecosystem by limiting exterior lighting to the level needed for safety and comfort; reduce unnecessary lighting for landscaping and architectural purposes, and encourage reduction of lighting levels during non-business nighttime hours.

Policy CO 6.6.1: Enhance views of the night sky by reducing light pollution through use of light screens, downward directed lights, minimized reflective paving surfaces, and reduced lighting levels, as deemed appropriate by the reviewing authority.

Policy CO 8.2.4: Establish maximum lighting levels for public facilities, and encourage reduction of lighting levels to the level needed for security purposes after business hours, in addition to use of downward-directed lighting and use of low-reflective paving surfaces.

Policy CO 8.3.9: Limit excessive lighting levels, and encourage a reduction of lighting when businesses are closed to a level required for security.

Effectiveness of Proposed Area Plan Policies

The above policies would limit light and glare generation by establishing techniques for light screening and shielding, restricting the use of unnecessary light during non-business nighttime hours, restricting the use of decorative lighting, and protecting open space. With incorporation of these policies, impacts from new sources of light and glare would be less than significant.

Plan to Plan Analysis

Both the proposed Area Plan and the existing Area Plan contain policies that address light and glare impacts. The policies between both plans are similar and consequently light and glare impacts would be similar.

MITIGATION FRAMEWORK

No mitigation measures are required.

SIGNIFICANCE OF IMPACT WITH MITIGATION FRAMEWORK

Potential impacts on aesthetics resources from implementation of the proposed Area Plan would be less than significant; no mitigation measures are required.

3.7 BIOLOGICAL RESOURCES

EXECUTIVE SUMMARY

This section identifies major plant and animal resources within the County's Planning Area, and assesses the potential impacts of the proposed Santa Clarita Valley Area Plan on biological resources with the understanding that certain resources, especially wildlife, are transitory and may potentially be present in a wide variety of areas regardless of previous records of observation. The County's Planning Area consists of unincorporated land outside the City's boundaries and adopted Sphere of Influence (SOI) but within the One Valley One Vision (OVOV) Planning Area boundaries. The City's Planning Area consists of its incorporated boundaries and adopted SOI. Both the County and the City Planning Areas comprise the OVOV Planning Area. The County Planning Area encompasses a portion of the Santa Clara River Valley, the eastern extension of the Santa Susana Mountains, the westernmost reaches of the San Gabriel Mountains, the eastern Sierra Madre Mountains, and the majority of the Liebre/Sierra Pelona Range.

The major natural features of the County Planning Area are the Santa Clara River, Santa Susanna Mountains, Liebre Mountains, western San Gabriel Mountains, Castaic Valley, San Francisquito Canyon, Bouquet Canyon, Placerita Canyon, Mint Canyon, Sand Canyon, and Hasley Canyon. Although a substantial portion of the area, primarily adjacent to the City of Santa Clarita and within its Sphere of Influence, has been developed, portions of the Planning Area are undeveloped or open space, and still support a relatively large number of native plant and animal habitats and communities. Species within the remaining natural areas are adapted to the Mediterranean climate of the region, in that they thrive in the cool, wet winters, and dry, hot summers typical of the area.

Predominately undeveloped portions of the County's Planning Area encompass portions of the northeastern Santa Susanna Mountains, including the Newhall Ranch High Country and Lyon and Towsley Canyons; the eastern reaches of the Santa Clara River, including Kentucky Springs and adjacent uplands west of the community of Ravenna; the southwestern Sierra Madre Mountains; Castaic Lake and nearby upland habitats in Tapia and Charlie Canyons; and portions of the northwestern San Gabriel, southern Liebre, and western Sierra Madre Mountains, including Vasquez Rocks and Cruzan Mesa, Tick Canyon, Mint Canyon, Bouquet Canyon, San Francisquito Canyon, Sand Canyon, Soledad Canyon, and portions of the two units of the Angeles National Forest.

Additional natural areas are present within the City's Planning Area, which abut and link surrounding natural areas in the County Planning Area. These generally support a similar suite of species and communities as are found in the County's Planning Area, and include:

- the Santa Clara River and adjacent uplands between Lang Station, which is located approximately at the confluence of Bee and Soledad Canyon, and the Interstate 5 (I-5) Freeway;
- areas east of the I-5 Freeway near Castaic Junction; and
- portions of San Francisquito Canyon, Sand Canyon, Whitney Canyon, Elsmere Canyon, and Placerita Canyon.

Potentially significant impacts associated with the proposed Area Plan are those relating to special-status species, sensitive communities, federally protected wetlands, wildlife movement, and nursery sites. The proposed Area Plan policies address avoidance and minimization of impacts on habitats, provisions for the acquisition of habitats in cooperation with conservation groups, provisions for no net loss of jurisdictional wetlands within the Planning Area, and provisions for the identification and protection of at least one designated wildlife corridor linking the two units of the Angeles National Forest through the Valley.

The proposed policies do not provide a mechanism for the compensation of lost habitats when avoidance of impacts, or minimization of impacts to a level that is less than significant, is considered to be infeasible; the policies also do not mitigate for the direct mortality of individuals of listed, proposed, or candidate species. In conjunction with the proposed Area Plan policies, mitigation measures **MM 3.7-1** through **3.7-3** would reduce these potential impacts. **MM 3.7-1** requires preparation of biological site survey reports prepared by a qualified biological consultant for proposed projects. **MM 3.7-2** addresses direct mortality of special-status species through construction activities. **MM 3.7-3** addresses impacts on sensitive habitats from implementation of the proposed Area Plan through land acquisition.

Although the loss of sensitive habitats may be compensated for through land acquisition, the loss of special-status species and wildlife movement opportunities would remain significant. Special-status species are dependant on a variety of habitat types, not all of which are necessarily sensitive, such as annual grassland and various common scrub and chaparral types. Consequently, the conversion of all types of currently undeveloped wildlife habitat to Residential, Commercial and Industrial uses permitted under the proposed Area Plan would result in impacts on special-status species that would remain significant at the plan level.

Impacts on wildlife movement opportunities would also be significant and unmitigable because of the loss of connectivity for wildlife movement through the Planning Area; this connectivity would not be recoverable once the area has been developed.

EXISTING CONDITIONS

Vegetation

Major plant and terrestrial communities identified within the County's Planning Area include coastal and desert scrub, and chaparral vegetation types. Other vegetation types in the Planning Area include bigcone spruce-canyon oak forest, coast live oak woodland, coast live oak riparian forest, juniper woodland, pinyon-juniper woodland, southern sycamore-alder woodland, southern cottonwood-willow riparian woodland and forest, southern willow scrub, freshwater marsh, vernal pools, alluvial fan sage scrub, and native and annual grassland.[1]

Wildlife

Wildlife within the County's Planning Area is extremely diverse with particular abundance in undeveloped high quality habitats, such as riparian, wetland, and woodland areas. Some wildlife species are entirely dependent upon a single vegetative community for all aspects of their life histories; however, most reptiles, birds and medium to large-sized mammals may utilize a number of community types through their lives, and the majority of the natural areas within the County's Planning Area support the multifaceted needs of these species by comprising a mosaic of vegetation constituting a continuum of functional ecosystems.[2] The river channels, canyon bottoms, and open upland areas of the County's Planning Area provide movement and foraging opportunities for a large suite of resident and migratory species and they form part of a network of open-space within the greater OVOV Planning Area connecting the two units of the nearby Angeles National Forest, which in turn provide larger blocks of uninterrupted habitat for many of the same species.

Amphibian populations are generally restricted in semi-arid and arid habitats but may be particularly abundant and relatively diverse within moister woodland areas, along montane canyon bottoms, in riparian areas, and within surface water features. The overall riparian systems of the Santa Clara Valley support abundant populations of Pacific chorus frog (*Pseudacris regilla*), California chorus frog (*P. cadaverina*), California toad (*Bufo boreas halophilus*), western spadefoot (*Spea hammondii*), bullfrog (*Rana catesbeiana*), and African clawed frog (*Xenopus laevis*) (the latter two species are non-native). In San Francisquito Canyon, California red-legged frog (*Rana draytonii*) and arroyo toad (*Bufo californicus*). Arboreal salamander (*Aneides lugubris*), painted ensatina (*Ensatina eschscholtzii picta*), and garden slender salamander (*Batrachoseps major*) also are present.

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1 PCR Services Corp. 2000.

2 Ibid.

Open scrub, chaparral and alluvial fan habitats support diverse reptile populations, and the overall reptile fauna of the Valley encompasses numerous lizard and snake species, along with southwestern pond turtle (*Actinemys marmorata pallida*) in Agua Dulce and Bear Canyons. The lizard and snake species include Yucca night lizard (*Xantusia vigilis vigilis*), side-blotched lizard (*Uta stansburiana*), western fence lizard (*Sceloporus occidentalis*), western skink (*Eumeces skiltonianus*), San Diego alligator lizard (*Elgaria multicarinata webbii*), coastal whiptail (*Cnemidophorus tigris stejnegeri*), coast horned lizard (*Phrynosoma coronatum*), silvery legless lizard (*Anniella pulchra pulchra*), and San Diego banded gecko (*Coleonyx variegatus abbotti*) are all present. A robust snake fauna is also present, including western blind snake (*Leptotyphlops humilis*), red coachwhip (*Masticophis flagellum piceus*), California striped racer (*M. lateralis lateralis*), coast patchnose snake (*Salvadora hexalepis virgultea*), rosy boa (*Charina trivirgata*), San Diego gopher snake (*Pituophis catenifer annectens*), western glossy snake (*Arizona occidentalis*), California kingsnake (*Lampropeltis getula californiae*), California mountain kingsnake (*L. zonata*), longnose snake (*Rhinocheilus lecontei*), California night snake (*Hypsiglena torquata nuchalata*), lyre snake (*Trimorphodon biscutatus*), western blackhead snake (*Tantilla planiceps*), two-striped garter snake (*Thamnophis hammondii*), San Bernardino ringneck snake (*Diadophis punctatus modestus*), and southern Pacific rattlesnake (*Crotalus oreganus helleri*). Although not reported within the Planning Area, south coast garter snake (*Thamnophis sirtalis* ssp.) is known nearby in Ventura County and may be present in the western portion of the County's Planning Area.

The scrubland, woodland, riparian, and grassland habitats in the Valley provide excellent foraging and cover habitat for year-round resident, seasonal resident, and migrating song birds. In addition, habitats in the County's Planning Area provide many year-round water sources, abundant raptor foraging, perching, and nesting habitat. The combination of these resources as well as the mosaic of many community types provides for an unusually high diversity of bird species. Coastal scrub and chaparral host a suite of birds typical of such sites at lower elevations over most of the coastal slopes of Southern California. The most productive sites for resident coastal scrub and chaparral birds are around riparian and freshwater systems, which also attract large numbers of migrants during spring and fall. Vernal pools attract moderate numbers of migrating waders and waterfowl, and provide important winter foraging areas for resident and migratory birds of prey.

Coastal sage and chaparral birds resident or breeding within the County Planning Area include southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), Bell's sage sparrow (*Amphispiza belli belli*), black-chinned sparrow (*Spizella atrogularis*), lark sparrow (*Chondestes grammacus*), lazuli bunting (*Passerina amoena*), coastal California gnatcatcher (*Polioptila californica californica*), California quail (*Callipepla californica*), greater roadrunner (*Geococcyx californianus*), spotted towhee (*Pipilo maculatus*),

California towhee (*P. crissalis*), California thrasher (*Toxostoma redivivum*), phainopepla (*Phainopepla nitens*), northern mockingbird (*Mimus polyglottos*), and Anna's (*Calypte anna*), Costa's (*C. costae*), and black-chinned hummingbirds (*Archilochus alexandri*). Oak woodlands and riparian areas support many more species; notable species include summer tanager (*Piranga rubra*), Bullock's oriole (*Icterus bullockii*), black-headed grosbeak (*Pheucticus melanocephalus*), western scrub jay (*Aphelocoma coerulescens*) band-tailed pigeon (*Patagioenas fasciata*), western wood-pewee (*Contopus sordidulus*), several swallow species, willow flycatcher (*Empidonax traillii*), and least Bell's vireo (*Vireo bellii pusillus*). Species associated with ruderal sites and grasslands include western meadowlark (*Sternula neglecta*), California horned lark (*Eremophila alpestris actia*), and savannah (*Passerculus sandwichensis*) and grasshopper sparrows (*Ammodramus savannarum*). Birds of prey (including common migrants) observed within the valley include red-shouldered hawk (*Buteo lineatus*), red-tailed hawk (*B. jamaicensis*), Cooper's hawk (*Accipiter cooperii*), sharp-shinned hawk (*A. striatus*), Swainson's hawk (*Buteo swainsoni*), merlin (*Falco columbarius*), American kestrel (*F. sparverius*), northern harrier (*Circus cyaneus*), white-tailed kite (*Elanus leucurus*), prairie falcon (*Falco mexicanus*), and golden eagle (*Aquila chrysaetos*). Many of these, as well as common raven (*Corvus corax*), nest in cliffs within the valley. Resident owl species include barn owl (*Tyto alba*), great horned owl (*Bubo virginianus*), long-eared owl (*Asio otus*), and California spotted owl (*Strix occidentalis occidentalis*).

Native mammal diversity within the Valley is considerable. This includes bats (at least seven species), rodents (at least four species of deer mice (*Peromyscus* spp.), two species of woodrat (*Neotoma* spp.), California ground squirrel (*Spermophilus beecheyi*), and western gray squirrel (*Sciurus griseus*)), two types of rabbits (desert cottontail and brush rabbit (*Sylvilagus audobonii* and *S. bachmani*)) and one hare (black-tailed jackrabbit (*Lepus californicus bennettii*)), broad-footed mole (*Scapanus latimanus*), long-tailed weasel (*Mustela frenata*), American badger (*Taxidea taxus*), western spotted skunk (*Spilogale gracilis*), striped skunk (*Mephitis mephitis*), northern raccoon (*Procyon lotor*), common gray fox (*Urocyon cinereoargenteus*), bobcat (*Lynx rufus*), coyote (*Canis latrans*), cougar (*Puma concolor*), mule deer (*Odocoileus hemionus*), and American black bear (*Ursus americanus*).

Sensitive Biological Resources

Sensitive biological resources are those habitats or species that have been recognized by federal, state, and/or local agencies as being Endangered, Threatened, Rare, or in decline throughout all or part of their historical distribution.

Sensitive terrestrial communities reported to the California Natural Diversity Database (CNDDB) in the County Planning Area include southern California threespine stickleback stream, Riversidian alluvial fan sage scrub, valley needlegrass grassland, canyon live oak ravine forest, southern coast live oak riparian

forest, southern cottonwood willow riparian forest, southern mixed riparian forest, southern riparian forest, southern riparian scrub, southern sycamore alder riparian woodland, southern willow scrub, California walnut woodland, valley oak woodland, and mainland cherry forest. Although not included in the CNDDB, vernal pools have been identified on Cruzan Mesa, and within Vasquez Canyon, Plum Canyon, and on Fair Oaks Ranch. These are highly significant sensitive resources within the County Planning Area (**Figure 3.7-1, Sensitive Biological Resources**).

Query results of the CNDDB and California Native Plant Society (CNPS) Inventory for the U.S. Geological Society (USGS) 7.5-minute quadrangles within which the County Planning Area is located,[3] as well as biological reports prepared for projects within the County's Planning Area indicate at least 92 sensitive plant and animal taxa occur within the region. These are identified in **Tables 3.7-1, Special-Status Wildlife Species Known to Occur in the County's Planning Area,** and **3.7-2, Special-Status Plant Species Known to Occur in the Region**. Among these are 20 federal and state-listed Candidate, Threatened, Rare, and Endangered species. These include Braunton's milk-vetch (*Astragalus brauntonii*), Nevin's barberry (*Berberis nevinii*), Mt. Gleason Indian paintbrush (*Castilleja gleasonii*), San Fernando Valley spineflower (*Chorizanthe parryi* var. *fernandina*), slender-horned spineflower (*Dodecahema leptoceras*), Moran's navarretia (*Navarretia fossalis*), California Orcutt grass (*Orcuttia californica*), Riverside fairy shrimp (*Streptocephalus woottoni*), vernal pool fairy shrimp (*Branchinecta lynchi*), San Diego fairy shrimp (*B. sandiegoensis*), Santa Ana sucker (*Catostomus santaanae*), unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*), arroyo toad, California red-legged frog, Sierra Madre yellow-legged frog (*Rana muscosa*), Swainson's hawk (*Buteo swainsoni*), southwestern willow flycatcher (*Empidonax traillii extimus*), California condor (*Gymnogyps californianus*), coastal California gnatcatcher (*Polioptila californica californica*), and least Bell's vireo (*Vireo bellii pusillus*).

Other sensitive species known to occur within the County's Planning Area include 24 plant, 1 mollusk, 2 insect, 1 fish, 2 amphibian, 9 reptile, 20 bird, and 13 mammal species. The California Department of Fish and Game (CDFG) identifies all listed sensitive species and their habitats on its website (www.dfg.ca.gov).

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3 The Planning Area lies within or is immediately adjacent to portions of the following USGS quads: Acton, Agua Dulce, Mint Canyon, San Fernando, Newhall, Val Verde, Santa Susana, Oat Mountain, Ritter Ridge, Lake Hughes, Green Valley, Sleepy Valley, Liebre Mountain, Burnt Peak, Whitaker Peak, Warm Springs Mountain, Black Mountain, Cobblestone Mountain, La Liebre Ranch, Neenach School, Frazier Mountain, Lebec.

Legend:

- OVOV Planning Area
- SOI Boundary
- Incorporated Areas
- Angeles National Forest
- County Boundary
- Waterbody and Perennial Stream

Sensitive Species Occurrences (CNDDB)

- Animals
- Plants

Critical Habitat

- California Gnatcatcher
- Red Legged Frog
- Arroyo Toad
- Least Bell's Vireo

GIS Projection - CA State Plane, Zone 5, NAD83, Feet.

Source: City of Santa Clarita - Planning, City Boundary, 2008; Thomas Bros. - Streets, Hydrology, 2007; OVOV Boundary - LA County and City of Santa Clarita, 2008. Species occurences from CNDDB, 2008. Critical biological habitat from US FWS, 1994-2007.

2 1 0 2

APPROXIMATE SCALE IN MILES

Santa Clarita

VENTURA COUNTY

LOS ANGELES COUNTY

SANTA CLARA RIVER

SOURCE: City of Santa Clarita, County of Los Angeles, Valleywide General Plan - March 2009

FIGURE **3.7-1**

Sensitive Biological Resources

Important habitats and biological resource areas within the County's Planning Area include the following:

- Land within the Angeles and Los Padres National Forests, including Elsmere Canyon and wildlife corridors between the Santa Susana Mountains and the San Gabriel Mountains;
- Canyon areas, including Whitney, Elsmere, Wiley, East, Towsley, Rice, San Francisquito, and all other canyons which provide important habitat (water, food, shelter, and movement corridors), biological resources, and add to the viewshed of the Santa Clarita Valley;
- Land between SR-14 and Sand Canyon Road providing critical habitat for the arroyo toad;
- State-listed endangered and threatened plant and wildlife species associated with riparian woodlands in the Santa Clara River;
- Open water habitats provided by Castaic Lake, Castaic Lagoon, and isolated locations along the Santa Clara River;
- Habitat for State and federally Endangered and Threatened plant and wildlife species found in chaparral and coastal scrub habitat;
- Habitat and associated biological resources in the Significant Ecological Areas designated by the County of Los Angeles. Currently these include (a) Santa Susana Mountains; (b) Lyon Canyon; (c) Valley Oak Savannah; (d) the Santa Clara River (as described below); (e) San Francisquito Canyon; and (f) Kentucky Springs (see **Figure 3.7-2, Current and Proposed Significant Ecological Areas**);
- Habitat for federally listed Endangered, Threatened, or Rare plant, animal species associated with the riparian woodlands in the Santa Clara River; and
- Oak, sycamore, cottonwood, and willow trees located along the Santa Clara River.

Table 3.7-1
Special-Status Wildlife Species Known to Occur in the County's Planning Area

Common Name	Species	Federal	State
Mollusks			
Undescribed species of pyrg snail	*Pyrgulopsis* sp. *nova*	–	–
Crustaceans			
Riverside fairy shrimp	*Streptocephalus woottoni*	FE	–
Vernal pool fairy shrimp	*Branchinecta lynchi*	FT	–
San Diego fairy shrimp	*Branchinecta sandiegoensis*	FT	–
Insects			
Cuckoo wasp (no common name)	*Ceratochrysis longimala*	–	CDFG Special Animals List
Monarch butterfly	*Danaus plexippus*	–	CDFG Special Animals List

Common Name	Species	Federal	State
Fish			
Santa Ana sucker	*Catostomus santaanae*	FT, FSS	SSC
Unarmored threespine stickleback	*Gasterosteus aculeatus williamsoni*	FE, FSS	SE, SFP
Arroyo chub	*Gila orcuttii*	FSS	SSC
Amphibians			
Arroyo toad	*Bufo californicus*	FE	SSC
Yellow-blotched salamander	*Ensatina eschscholtzii croceator*	BLMS, FSS	SSC
California red-legged frog	*Rana draytonii*	FT	SSC
Sierra Madre yellow-legged frog	*Rana muscosa*	FE, FSS	SSC
Western spadefoot	*Spea hammondii*	BLMS	SSC
Reptiles			
Southwestern pond turtle	*Actinemys marmorata pallida*	FSS, BLMS	SSC
Silvery legless lizard	*Anniella pulchra pulchra*	FSS	SSC
Coastal western whiptail	*Cnemidophorus tigris stejnegeri*	–	CDFG Special Animals List
San Bernardino ring-neck snake	*Diadophis punctatus modestus*	FSS	–
California mountain kingsnake	*Lampropeltis zonata pulchra*	FSS	SSC
Coast horned lizard	*Phrynosoma coronatum*	BLMS, FSS	SSC
Coast patch-nosed snake	*Salvadora hexalepis virgultea*	–	SSC
Two-striped garter snake	*Thamnophis hammondii*	FSS, BLMS	SSC
South coast garter snake	*Thamnophis sirtalis* ssp.	–	SSC
Birds			
Cooper's hawk	*Accipiter cooperi*	–	CDFG Watch List
Sharp-shinned hawk	*Accipiter striatus*	–	SSC
Tricolored blackbird	*Agelaius tricolor*	BCC, BLMS	SSC
Southern California rufous-crowned sparrow	*Aimophila ruficeps canescens*	–	SSC
Grasshopper sparrow	*Ammodramus savannarum*	–	CDFG Special Animals List
Bell's sage sparrow	*Amphispiza belli belli*	BCC	SSC
Long-eared owl	*Asio otus*	–	SSC
Burrowing owl	*Athene cunicularia*	BCC, BLMS	SSC
Golden eagle	*Aquila chrysaetos*	BCC, BLMS	SSC, SFP, CDF
Ferruginous hawk	*Buteo regalis*	BCC, BLMS	CDFG Watch List
Birds (continued)			
Swainson's hawk	*Buteo swainsoni*	FSS, BCC	ST
Northern harrier	*Circus cyaneus*	–	SSC
Yellow warbler	*Dendroica petechia brewsteri*	–	SSC

Common Name	Species	Federal	State
White-tailed kite	*Elanus leucurus*	–	SFP
Southwestern willow flycatcher	*Empidonax traillii extimus*	FE, FSS	SE
California horned lark	*Eremophila alpestris actia*	–	SSC
Prairie falcon	*Falco mexicanus*	BCC	SSC
California condor	*Gymnogyps californianus*	FE	SE, SFP, CDF
Yellow-breasted chat	*Icteria virens*	–	SSC
Loggerhead shrike	*Lanius ludovicianus*	BCC	SSC
Coastal California gnatcatcher	*Polioptila californica californica*	FT	SSC
California spotted owl	*Strix occidentalis occidentalis*	FSS, BCC, BLMS	SSC
Le Conte's thrasher	*Toxostoma lecontei*	BCC, BLMS	SSC
Least Bell's vireo	*Vireo bellii pusillus*	FE, BCC	SE
Gray vireo	*Vireo vicinior*	–	CDFG Special Animals List
Mammals			
Pallid bat	*Antrozous pallidus*	FSS, BLMS	SSC
Ringtail cat	*Bassariscus astutus*	–	SFP
Spotted bat	*Euderma maculatum*	BLMS	SSC
Hoary bat	*Lasiurus cinerius*	–	CDFG Special Animals List
Western mastiff bat	*Eumops perotis californicus*	BLMS	SSC
San Diego black-tailed jackrabbit	*Lepus californicus bennettii*	–	SSC
Fringed myotis	*Myotis thysanodes*	BLMS	–
Yuma myotis	*Myotis yumaensis*	BLMS	–
Lodgepole chipmunk	*Neotamias speciosus speciosus*	–	CDFG Special Animals List
San Diego desert woodrat	*Neotoma lepida intermedia*	–	SSC
Southern grasshopper mouse	*Onychomys torridus ramona*	–	SSC
Tehachapi pocket mouse	*Perognathus alticolus inexpectatus*	FSS	SSC
American badger	*Taxidea taxus*	–	SSC

Status abbreviations

Federal
FE: Federally listed as Endangered
FT: Federally listed as Threatened
FC: Federal candidate species (former category 1 candidates)
BLMS: Bureau of Land Management Sensitive Species
FSS: USDA Forest Service Sensitive
BCC: Fish and Wildlife Service Birds of Conservation Concern

State
SE: State-listed as Endangered
ST: State-listed as Threatened
CDF: California Department of Forestry and Fire Protection Sensitive
SFP: CDFG Fully Protected
SSC: CDFG Species of Special Concern

Source: PCR Services Corp., Significant Ecological Area Update Study, November 2000; California Department of Fish and Game Natural Diversity Database, October 2008.

Table 3.7-2
Special-Status Plant Species Known to Occur in the Region

Common Name	Species	Federal	State	CNPS
Dicots				
Kusche's sandworth	*Arenaria macradenia* var. *kuschei*	–	–	1B.1
Braunton's milk-vetch	*Astragalus brauntonii*	FE	–	1B.1
Horn's milk-vetch	*Astragalus hornii* var. *hornii*	–	–	1B.1
Nevin's barberry	*Berberis nevinii*	FE	SE	1B.1
Round-leaved filaree	*California macrophylla*	–	–	1B.1
Mt. Gleason Indian paintbrush	*Castilleja gleasonii*	–	SR	1B.2
San Fernando Valley spineflower	*Chorizanthe parryi* var. *fernandina*	FC	SE	1B.1
Slender-horned spineflower	*Dodecahema leptoceras*	FE	SE	1B.1
Fort Tejon wooly sunflower	*Eriophyllum lanatum* var. *hallii*	–	–	1B.1
San Gabriel bedstraw	*Galium grande*	–	–	1B.2
Undescribed species of everlasting	*Gnaphalium* sp. *Nova*	–	–	–
Los Angeles sunflower	*Helianthus nuttallii* ssp. *parishii*	–	–	1A
Undescribed species of sunflower	*Helianthus* sp. *Nova*	–	–	–
Ross' pitcher sage	*Lepechinia rossii*	–	–	1B.2
Davidson's bush mallow	*Malacothamnus davidsonii*	–	–	1B.2
Tehachapi monardella	*Monardella linoides* ssp. *oblonga*	–	–	1B.3
Moran's navarretia	*Navarretia fossalis*	FT	–	1B.1
Ojai navarretia	*Navarretia ojaiensis*	–	–	1B.1
Baja navarretia	*Navarretia peninsularis*	–	–	1B.2
Short-joint beavertail	*Opuntia basilaris* var. *brachyclada*	–	–	1B.2
White rabbit-tobacco	*Pseudognaphalium leucocephalum*	–	–	2.2
Chaparral ragwort	*Senecio aphanactis*	–	–	2.2
Mason's neststraw	*Stylocline masonii*	–	–	1B.1
San Bernardino aster	*Symphyotrichum defoliatum*	–	–	1B.2
Greata's aster	*Symphyotrichum greatae*	–	–	1B.3

Monocots				
Mt. Pinos onion	*Allium howellii* var. *clokeyi*	–	–	1B.3
Slender mariposa lily	*Calochortus clavatus* var. *gracilis*	–	–	1B.2
Palmer's mariposa lily	*Calochortus palmeri* var. *palmeri*	–	–	1B.2
Plummer's mariposa lily	*Calochortus plummerae*	–	–	1B.2
Late-flowered mariposa lily	*Calochortus weedii* var. *vestus*	–	–	1B.2
California Orcutt grass	*Orcuttia californica*	FE	SE	1B.1

Status abbreviations

Federal
FE: Federally listed as Endangered
FT: Federally listed as Threatened
FC: Federal candidate species

State
SE: State-listed as Endangered
SR: State-listed as Rare

CNPS lists
1A: Plants presumed extinct in California
1B: Plants rare, threatened, or endangered in California and elsewhere
2: Plants rare, threatened, or endangered in California, but more common elsewhere

CNPS threat rank extensions:
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)

Source: PCR Services Corp., Significant Ecological Area Update Study, November 2000; CDFG, California Natural Diversity Database, November 2002; CDFG, Special Vascular Plants, Bryophytes, and Lichens List, February 2008 ; California Department of Fish and Game Natural Diversity Database, August, 2007

Significant Ecological Areas

Significant Ecological Areas (SEAs) are biologically important areas that are designated by the County of Los Angeles as having valuable plant or animal communities. SEAs can be either upland or aquatic habitat, and are offered certain protections by this designation. The County of Los Angeles is currently in the process of updating the SEA designations and policies in the County and expanding these designations in the OVOV Planning Area. The SEAs discussed below are partially located within the City's Planning Area and include a description of the existing and proposed SEAs. **Figure 3.7-2, Current and Proposed Significant Ecological Areas**, depicts the location of the current and proposed SEAs.

SEA designation was originally based on eight criteria set forth in the Los Angeles County Significant Ecological Area Study[4]. These criteria are as follows:

1. The habitat of state and federally listed endangered, rare, or threatened plants and animals;

4 England and Nelson Environmental Consultants. 1976. Los Angeles County Significant Ecological Area Study. Prepared for Los Angeles County Department of Regional Planning.

2. Biotic communities, vegetative associations, and habitats of plant and animal species that are either one of a kind, or are restricted in distribution on a regional basis;

3. Biotic communities, vegetative associations, and habitats of plant and animal species that are either one of kind, or are restricted in distribution in Los Angeles County;

4. Habitat that serves, at some point in the life cycle of a species or group of species, as a concentrated breeding, feeding, resting, or migrating grounds, and is limited in availability;

5. Biotic resources that are of scientific interest because they either are at an extreme in the physical or geographic range of a population or community, or they represent an unusual variation in a population or community;

6. Areas important as game habitat or fisheries resources;

7. Areas that would preserve relatively undisturbed examples of natural biotic communities in Los Angeles County; and

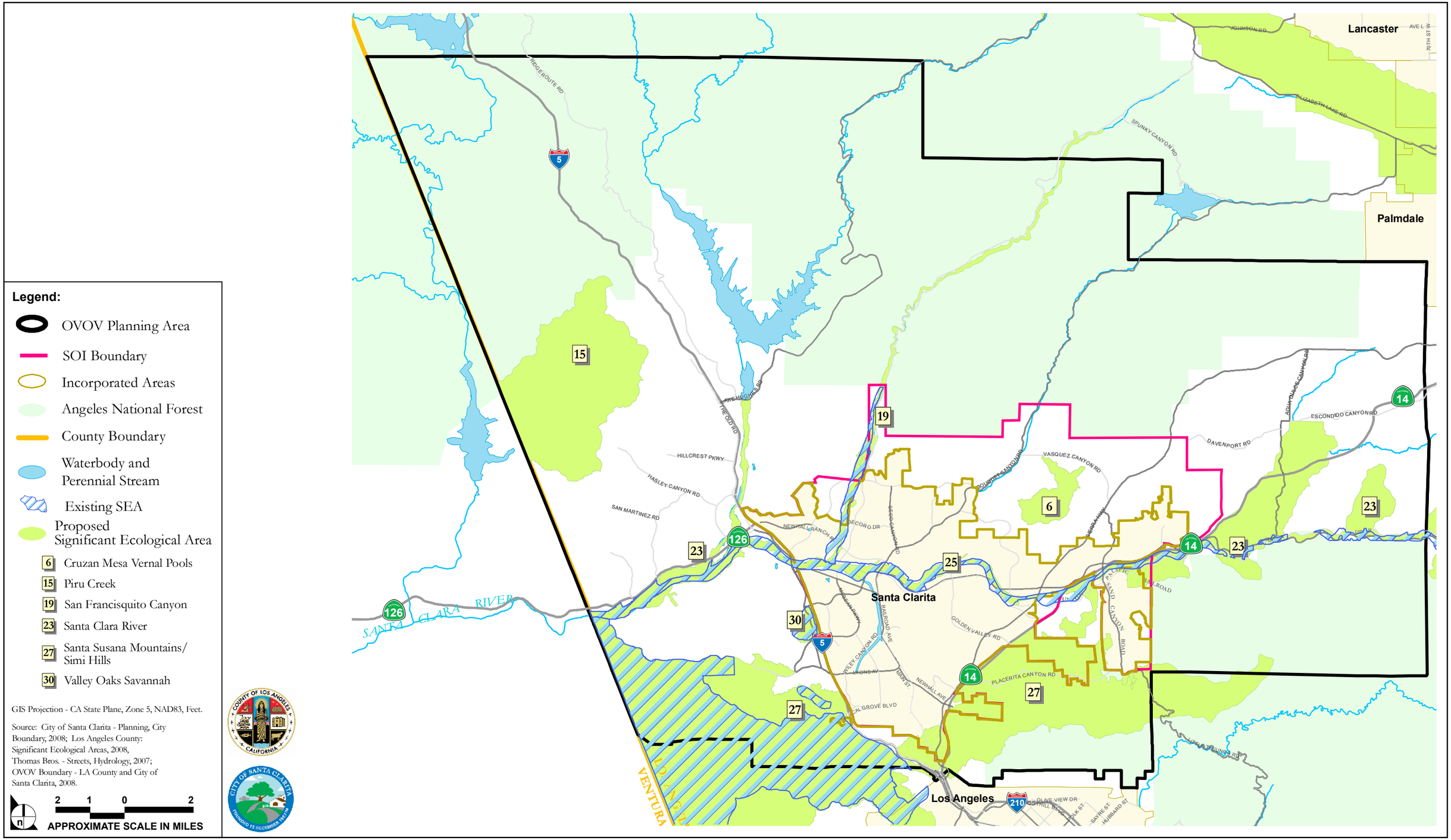
8. Special areas, not meeting the above criteria, but that have some notable biological feature (such as a wildlife corridor) can also be designated as SEAs.

Existing SEAs

San Francisquito Canyon (SEA 19)

Criteria 1, 2, 3, 4, 5, 6, and 7

San Francisquito Canyon drains a portion of the southern Leibre Mountains north of the City, between Haskell and Charlie Canyons. San Francisquito Canyon possesses two populations of unarmored threespine stickleback. This species was formerly found in the Los Angeles, San Gabriel, and Santa Ana Rivers, but is now restricted to the Santa Clara River and San Francisquito Canyon. For this reason, the stickleback has been placed on both the state and federal Endangered Species lists. In San Francisquito Canyon, it is confined to permanent streams and pools below Drinkwater Reservoir, and above Baird Canyon. The lower population is dependent on legally mandated water release from Drinkwater Reservoir.



SOURCE: City of Santa Clarita, County of Los Angeles, Valleywide General Plan - March 2008

FIGURE **3.7-2**

Current and Proposed Significant Ecological Areas

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The watershed that supplies San Francisquito Canyon is relatively undisturbed. The hillsides support a dense cover of coastal sage scrub and chaparral. The San Francisquito streamcourse is mostly natural and it maintains a good riparian woodland community. The health of this drainage is evident by the fact that, in addition to supporting the unarmored threespine stickleback, the creek has been classified as an active trout fishing stream by the National Forest Service and the CDFG. The primary concern for the survival of the unarmored threespine stickleback is the maintenance of its habitat. The fish requires clean, free-flowing perennial streams and ponds surrounded by natural vegetation. Intermittent areas where surface water connects perennial streams are also important during the wet season. The natural vegetation along the intermittent portion of the stream slows heavy run-off during the rainy season, decreases destruction and siltation of habitat in downstream areas, and provides habitat for migration between populations.

Santa Susana Mountains (SEA 20)

Criteria 2, 3, 5, and 7

The Santa Susana Mountains are one of several relatively small ridge systems that form the Western Transverse Ranges and blend eastward into the larger San Gabriel and San Bernardino Mountains. The Santa Monica Mountains are also part of this system and form a coastal barrier shielding the interior ridges from the direct influences of moist marine air, making these interior ridges drier than the coastal ones. The vegetation of the Santa Susana Mountains consists of coastal sage scrub on south-facing slopes, dense chaparral on north-facing slopes, and oak, walnut and riparian woodlands in valleys. The oak woodland communities are extremely diverse, supporting six species of oaks. These include coast live oak (*Quercus agrifolia*), valley oak (*Q. lobata*), canyon live oak (*Q. chrysolepis*), scrub oak (Q. *berberidifolia*), interior live oak (*Q. wislizenii*), and a single known location of Palmer's oak (*Q. palmeri*). The latter species is known in Los Angeles County only from this area. Walnut woodlands are frequently found in canyons of intermittent streams and consist primarily of California black walnut (*Juglans californica*), flowering ash (*Fraxinus dipetala*), Mexican elderberry (*Sambucus nigra* ssp. *caerulea)*, and coast live oak. Fires appear to promote the expansion of walnut woodlands in this range. Unusual California walnut-flowering ash woodlands occur at mid-elevations within canyons of the north slopes. This community appears to be unique to the Santa Susana Mountains. The bigcone spruce (*Pseudotsuga macrocarpa*)-canyon live oak forest at higher elevations represents one of the southwestern-most examples of this community.

The Santa Susana Mountains are the main representative of these low, dry interior mountain ranges in Los Angeles County. The core of this range is in good condition and has not been heavily disturbed by human use. These mountains are becoming isolated from surrounding natural areas by continued urban expansion in the San Fernando, Simi, and Santa Clarita Valleys. The Santa Susana Mountains have

become an important wildlife corridor for gene flow and species movement between the San Gabriel and Santa Monica Mountains via the Simi Hills.

Santa Clara River (SEA 23)

Criteria 1, 2, 3, 4, 5, and 7

Soledad Canyon and the Santa Clara River span the east-west extent of the County Planning Area. This area possesses several populations of unarmored threespine stickleback. In the Santa Clara River, the unarmored threespine stickleback is limited to permanent streams and pools from the mouth of San Francisquito Canyon west to the Ventura-Los Angeles County line, and from near Lang Station east to Arrastre Canyon.

The reason the unarmored threespine stickleback has been able to survive in the Santa Clara River is that its remaining habitat has been relatively undisturbed. The Santa Clara River is unique in being the only major river draining the San Gabriel Mountains that has not been channelized. The vegetation consists of freshwater marsh, coastal sage scrub, oak woodland, and riparian woodland communities. The broad wash association is unlike that found in steeper mountain canyons, and is exceedingly scarce in the Los Angeles basin. The trees serve as habitat for many raptorial bird species. The red-shouldered hawk is restricted to woodland communities, and the species is becoming increasingly uncommon in southern California due to habitat destruction.

The primary concern for the survival of the unarmored threespine stickleback is the loss of suitable habitat. The species requires clean, free-flowing, perennial streams and ponds surrounded by native vegetation. Intermittent areas connecting perennial streams are also important during the wet season when surface water is present. The natural vegetation and stream course slow heavy runoff during the rainy season, decrease destruction and siltation of habitat in downstream areas, and provide habitat for stickleback migration between populations.

Kentucky Springs (SEA 61)

Criteria 2, 3, 5, and 7

This area contains the largest stand of Great Basin sage (*Artemisia tridentata*) remaining in Los Angeles County, and is one of the most intact in southern California. In addition, this stand and others in the County support Parish's Great Basin sagebrush (*A. t.* ssp. *parishii*), a distinct subspecies, and are of scientific interest for the study of geographic variation.

Although Great Basin sage is widespread in the western states, it is very limited in southern California. It is infrequently found from San Diego County north along the western edges of the deserts to the Sierra Nevada. In Los Angeles County it is known only from a few isolated locations in the Santa Clara River Valley and the Antelope Valley. These are probably relics from an earlier time when the community covered much of southern California.

Lyon Canyon (SEA 63)

Criterion 7

The site consists of a relatively narrow canyon supporting oak woodland with an extensive chamise chaparral community. The oak woodland is found in the southerly portion of the area and contains both coast live oak and valley oak. Higher in the canyon is a chaparral community consisting of sugarbush (*Rhus ovata*), California lilac (*Ceanothus* spp.), black sage (*Salvia mellifera*), mulefat (*Baccharis salicifolia*), and chamise (*Adenostoma fasciculatum*), which is the dominant shrub.

Valley Oak Savannah (SEA 64)

Criteria 3 and 7

This area contains one of the last remaining stands of valley oak in the Santa Clarita Valley. The site consists of specimens of this species scattered over the southerly 75 percent of the site. While trees generally appear to be healthy, there is little evidence of new trees on the property, which raises questions about their sustainability.

The northerly 25 percent of the site consists of a mixture of plants of coastal scrub and chaparral affinities typical of those found in the Santa Clarita Valley. The entire area is habitat for coyote, deer, and other animal life. A large portion of the SEA is now dedicated as open space with the buildout of the Westridge project. A smaller portion of the SEA is developed with a golf course.

Proposed SEAs

Cruzan Mesa Vernal Pools

General

The Cruzan Mesa Vernal Pools Significant Ecological Area (SEA) lies in the southeastern end of the Liebre Mountains, north of the Santa Clara River, and southeast of Bouquet Canyon. The SEA boundaries

encompass the watershed and drainages of the Cruzan Mesa and Plum Canyon vernal pools, considered as a single ecosystem within the SEA. The SEA is located within an unincorporated portion of Los Angeles County and lies entirely within the United States Geological Survey (USGS) California Mint Canyon Quadrangle.

Description

The Cruzan Mesa Vernal Pools SEA includes mesas, canyons and interior slopes, with Plum Canyon creek running east-west through the southern portion of the overall SEA. The extent of the SEA encompasses the watershed supporting both of these regionally unique vernal pools, including the immediate watershed surrounding both systems and the corridor in between. Plum Canyon forms the major drainage running east-west through the southern portion of the SEA, draining west toward Bouquet Canyon. Uplands within the SEA are comprised of slopes and canyons supporting coastal sage scrub or scrub-chaparral vegetation. The Cruzan Mesa vernal pool complex lies within an elevated, topographically enclosed basin atop an eroded foothill between Mint and Bouquet canyons. The Plum Canyon vernal pool, situated in a landslide depression on a hillside terrace, is smaller than the Cruzan Mesa pools, but possesses the same essential vernal pool characteristics as the larger system, and the two areas together form an ecologically functional unit.

The seasonally wet vernal pools and surrounding open coastal sage scrub and chaparral slopes support a wide variety of migrant and resident birds and other native sage scrub vertebrate species. The steep cliffs which surround Cruzan Mesa, especially along the southeast and north margins, provide protected sites for perching, roosting and nesting by a variety of birds of prey.

The SEA supports several regional biological values. These values include: sensitive plant species unique to seasonal pools on heavy clay soils, several of which are at the northernmost point in their overall ranges; seasonal surface water, providing breeding sites for sensitive amphibians, including western spadefoot and Riverside fairy shrimp; vernal pools, found nowhere else in Los Angeles County, and their coastal sage scrub watershed serving as a hydrological filter; seasonal ponds and surrounding mesic vegetation providing essential foraging and wintering sites for migrating birds otherwise uncommon in the southern Liebre Mountains; steep cliffs surrounding the mesa tops and their crevices and cavities providing roosting and nesting sites in the otherwise brush-covered hillsides. These pools are also the only three or four such pools in this portion of Southern California. The sensitive resources they support are unique locally and regionally, and biologists consider these to be among most sensitive habitat types in Southern California.

Vegetation

The SEA encompasses formations of coastal sage scrub, vernal pool and non-native grassland. The vernal pool margins support limited densities of native grasses, but these do not form separate communities and are included within the vernal pool floral matrix. Sensitive plant species occurring or potentially occurring within the SEA are discussed below in the Sensitive Biological Resources section.

Plant communities within the SEA were classified using standard methodology and terminology. The communities discussed correspond directly with those listed in Holland's Preliminary Descriptions of the Terrestrial Natural Communities of California (1986 and 1992 update). Descriptions and general locations of the each plant community present within the SEA are given below.

Vernal pool sites occur in the SEA within the southern end of the Cruzan Mesa basin and on a landslide terrace on the northern slope of upper Plum Canyon, about 1.5 aerial miles southwest of the Cruzan Mesa pool system. True vernal pools, which are rare in Southern California and extremely rare in Los Angeles County, form seasonally in shallow, closed basins, usually where a lens of heavy clay soil holds surface water following rainfall events. Agency-listed sensitive plant species occurring within both of the SEA pool systems include California Orcutt grass and spreading navarretia, along with other vernal pool endemics such as hairgrass, woolly-marbles, waterwort, *Mimulus latidens* and water-starwort.

Coastal sage scrub occurs throughout the slopes and ridges of most of the SEA, in places intermixed with chaparral elements. To some extent, the mosaic of coastal sage and chaparral reflects the fire history of any given portion of the site, with scrub formations generally occurring on sites which have more recently burned. However, some slopes within upper Plum and Mint canyons, where no fires have occurred for over 30 years, still support "pure" coastal sage scrub, suggesting that the formation is a climax community on those sites.

Dominant species on most slopes within the SEA are California sagebrush, woolly blue-curls, chaparral yucca, black sage, Acton encelia, white sage, and chamise. A variety of less dominant associated species are also present, including lance-leaved live-forever, common tarplant, California buckwheat, beavertail cactus, turkish rugging, and Peirson's morning-glory. Disced or cleared areas have regrown with a dense cover of oats and bromes, California poppy, fiddleneck, several species of lupines, popcorn flower, comb-bur and other disturbance-favored native annuals. Less-frequently disturbed portions of the upper watershed basin support dense stands of chamise – California scrub oak chaparral, with yerba santa abundant along dirt roads and other disturbed areas. In the lower portions of canyons and along Plum

Canyon creek, where ground-water levels permit, giant rye grass, Mexican elderberry, acourtia, redberry, toyon, holly-leaved cherry, Fremont cottonwood, western sycamore, and arroyo willow occur.

Non-native grassland generally consists of invasive annual grasses which are primarily of Mediterranean origin, and which have become the dominant ground cover formation on disturbed sites throughout the western states. Common species within this "community," which is a ruderal formation and not a true habitat or community, include oats, bromes, foxtail chess, and other grasses, along with wild mustards, yellow star thistle, wire lettuce, sow thistle, milk thistle, and other disturbance-favored "weedy" taxa. Non-native ruderal formations occur over most of the Mesa around the vernal pools, where coastal sage scrub has been disturbed or removed, in small strips and patches throughout the SEA primarily along disturbed dirt road edges and where grading or other substrate disturbances have not regrown to native species.

Mainland cherry forest is not well described but is typically composed of tall stands of hollyleaf cherry on rocky, dry slopes. Within the SEA, this community is not well developed and inter-mingles with chaparral. It can be found in a single narrow patch on a slope in the southwest portion of the SEA.

Wildlife

Wildlife diversity and abundance within the SEA are moderate, commensurate with the relative homogeneity of the natural open space habitat types. A number of local wildlife species are more-or-less dependent upon coastal sage scrub or scrub-chaparral formations, while other species are strictly limited to seasonal pool habitats. The two vernal pool systems in the SEA, along with the coastal sage scrub-chaparral uplands surrounding and connecting them constitutes a single, integrated functional ecosystem for wildlife species, both within the SEA boundaries and as a part of the larger regional scrub-chaparral ecosystem.

Analysis of invertebrates on any particular site usually is limited by a lack of specific data, but the fact that the SEA contains only two primary natural habitat types insures that there is sufficient acreage to support healthy populations of whatever invertebrate species are present, probably several hundred terrestrial species. The vernal pools, when ponded, form aquatic habitats for a moderately diverse fauna of freshwater arthropods and other invertebrates, including native fairy shrimp, aquatic flies, diving beetles, water scavengers, ostracods, and snails. The only insect order presently known to have a vernal pool endemic within the SEA is Coleoptera, with one vernal pool ground beetle species thus far having been found.

Amphibians generally are relatively common in coastal sage scrub habitats with persistent surface hydrology during the breeding season, and the SEA supports abundant populations of Pacific chorus frog, western toad, and western spadefoot toad. At least two species of salamander also may be present within more mesic portions of the surrounding canyons and chaparral.

Reptile populations in the SEA would include numerous lizard species, including San Diego banded gecko, yucca night lizard, side-blotched lizard, western fence lizard, western skink, San Diego alligator lizard, coastal western whiptail, San Diego horned lizard, and silvery legless lizard. A robust snake fauna also would be expected within the SEA, including western blind snake, coachwhip ("red racer"), chaparral whipsnake, coastal patch-nosed snake, California rosy boa, San Diego gopher snake, California kingsnake, California mountain kingsnake, night snake, and southern Pacific rattlesnake.

Bird diversity within the SEA is related to habitat opportunities for year-round residents, seasonal residents, migrating raptors and song birds. Open coastal sage scrub hosts a suite of birds typical of such sites at lower elevations over most of the coastal slopes of Southern California. The most productive sites for resident coastal sage scrub and chaparral birds are around riparian and freshwater systems, which also attract large numbers of migrants during spring and fall. The vernal pools attract moderate numbers of migrating waders and waterfowl, and provide important winter foraging areas for resident and migratory birds of prey. Coastal sage and chaparral birds resident or breeding within the SEA include ashy rufous-crowned sparrow, Bell's sparrow, black-chinned sparrow, lark sparrow, California thrasher, spotted towhee, California towhee, phainopepla, northern mockingbird, lazuli bunting, and several species of hummingbird, with additional species (western meadowlark, California horned lark, and perhaps also savannah and grasshopper sparrows) nesting and foraging in the grassland and ruderal habitats surrounding the vernal pools. Birds of prey observed around the vernal pools include red-tailed hawk, northern harrier, white-tailed kite, prairie falcon, and golden eagle. Barn owl, great horned owl, and common raven all nest in the cliffs surrounding Cruzan Mesa.

Wildlife Movement

The vernal pools situated within this SEA serve as isolated, high resource quality habitat linkage sites for migratory waterfowl. The vernal pools teem with arthropod and amphibian activity, and so provide essential feeding grounds for long-distance migrants, as well as for resident species of reptiles, birds and mammals. The ponds do not lie within any identified terrestrial movement routes for wildlife, but may serve as important seasonal watering sites for species moving through and across the Plum Canyon divide between Mint and Bouquet canyons. The Plum Canyon stream channel undoubtedly serves as a

movement pathway for more mobile species of terrestrial mammals, but it no longer links any larger habitat areas directly, due to land conversion in Mint and Bouquet Canyon.

Sensitive Biological Resources

Sensitive biological resources are habitats or individual species which have been accorded special recognition by federal, state, or local conservation agencies and organizations as endangered, threatened, rare, or otherwise of concern, principally due to the species' declining or limited distribution or population sizes, usually resulting from habitat loss. Watch lists of such resources are maintained by the California Department of Fish and Game (CDFG), the United States Fish and Wildlife Service (USFWS), and special groups such as the California Native Plant Society (CNPS). The following indicates the habitats as well as plant and animal species present, or potentially present within the SEA, that have been afforded special recognition.

Sensitive Plant Communities/Habitats

This description supports several habitat types considered sensitive by resource agencies, namely the CDFG [California Natural Diversity Data Base (CNDDB)], because of their scarcity and support of a number of state and federally listed endangered, threatened, and rare vascular plants, as well as sensitive bird and reptile species. These communities include coastal sage scrub, mainland cherry forest, and vernal pool. These communities or closely related designations are considered highest-inventory priority communities by the CDFG, indicating that they are declining in acreage throughout their range due to land use changes.

Sensitive Species

Sensitive species include those listed, or candidates for listing by the USFWS, CDFG, and CNPS. These sensitive species include, but are not limited to, spreading navarretia, California Orcutt grass, Vernal pool fairy shrimp, San Diego fairy shrimp, Riverside fairy shrimp, golden eagle, California gnatcatcher, San Diego black-tailed jackrabbit, San Diego desert woodrat, and southern grasshopper mouse. In addition, the SEA identifies species observed, recorded in the CNDDB, or reported in previous documentation as observed within or in the immediate vicinity of the SEA.

Santa Felicia

General

The Santa Felicia Significant Ecological Area (SEA) encompasses the almost the entire Los Angeles County portion of the Santa Felecia watershed draining into Lake Piru. This watershed is largely undeveloped and contains vast stands of intact coast sage scrub and chaparral communities on south and north facing slopes, respectively. In addition to the undisturbed upland habitats, the watershed is dissected by excellent examples of mixed riparian (sycamore-willow), oak riparian and coast live oak forests and alluvial scrub in the bottomlands. Non-native grasslands occur in areas where grazing has taken place; however, there is little invasion of these ruderal taxa into the native communities. A brief summary of the plant communities present, or likely to occur, within the SEA is provided in the vegetation section below.

Description

The Santa Felicia SEA includes a wide variety of topographic features and habitat types. The orientation and extent of the SEA encompasses the surface and subsurface hydrology of the Santa Felicia watershed, from its headwater, tributaries, and basin to the point at which it exits Los Angeles County jurisdiction. The northern portion of the SEA is within the Angeles National Forest. Capturing the watershed tributaries, the eastern boundary follows a predominate ridgeline, the western boundary is the county border and the southern boundary captures two other small tributaries that feed the Santa Felicia, to encompass almost the entire watershed that ultimately drains into Lake Piru in Ventura County.

Vegetation

Plant communities within the SEA include: coast live oak woodland, coast live oak riparian forest, chaparral, coastal sage scrub, coastal sage scrub, chaparral, non-native and native grasslands, alluvial fan sage scrub, and sycamore-willow riparian woodland. Sensitive plant species occurring or potentially occurring within the SEA are discussed in the Sensitive Biological Resources section of this document.

Plant communities within the SEA were classified using standard methodology and terminology. Most of the communities discussed correspond directly with those listed in Holland's Preliminary Descriptions of the Terrestrial Natural Communities of California (1986 and 1992 update); some communities are named based upon the dominant species within them and/or other commonly used terminology. Descriptions of several plant communities present within the SEA are given below.

Coast live oak woodland consists of moderate-density overstory formations of coast live oak trees, usually on erosional plains along the margins of canyon bottoms and on lower slopes in chaparral and coastal sage scrub understory habitats.

Coast live oak riparian forest is a variation of coast live oak woodland wherein the canopy is more closely grown, and the trees occur in narrower formations along watercourses. Willow, California bay, mulefat, and other riparian species often occur in the understory.

Sycamore-willow riparian woodland may include the following: western sycamore, black willow, arroyo willow, skunkbush, and California blackberry.

Alluvial fan scrub generally consists of a mixture of shrubs, including scalebroom, California buckwheat, and white sage, which colonize and persist within infrequently scoured and flooded terrain such as floodplains, alluvial plains, or along seasonal streams.

Chaparral consists of broad-leafed or needle-leafed, sclerophyllous (hard-leafed), medium height to tall shrubs that form a dense cover on steep slopes, usually below 5,000 feet in Southern California. Dominant species found within this community include scrub oak, toyon, manzanita, and white sage.

Coastal sage scrub dominant species typically are California sagebrush, purple sage, giant wildrye, coyotebush, and California buckwheat.

Non-native grassland consists of invasive annual grasses that are primarily of Mediterranean origin, including short-pod mustard, tocalote, and ripgut brome.

Native grassland communities consist of low, herbaceous vegetation dominated by grasses, with native formations generally mixed with native bulbs and other herbaceous species, often intermixed with naturalized annual taxa.

Wildlife

Wildlife within the SEA is extremely diverse and abundant, commensurate with extensive acreages of natural open space and great diversity of habitat types, within the stream channels and on the surrounding uplands. While a few wildlife species may be entirely dependent upon or obligate within a single vegetative community, the mosaic of vegetation communities within the area and adjoining uplands constitutes a continuum of functional ecosystems. These ecosystems support a wide variety of wildlife species, within the SEA boundaries and as a part of the regional ecosystem.

Analysis of invertebrates on any given site generally is limited by a lack of specific data, but the size of the SEA and diversity of habitats present are considered sufficient to support healthy populations of a very large number of invertebrate species. The riparian formations and aquatic habitats within the SEA support diverse faunas of arthropods, which may include native fairy shrimp, craneflies, blackflies and other aquatic dipterans, stoneflies, caddisflies, and dobsonflies, water boatmen, giant water bugs, ground beetles, diving beetles, and tiger beetles. Terrestrial insects abound around riparian corridors and in scrub habitats, and are particularly abundant in oak-dominated habitats.

Amphibians are abundant and relatively diverse within moister woodland areas, along montane canyon bottoms, in riparian areas, and within surface water features of the SEA. The overall riparian systems of the SEA provide habitat for a number of frog and toad populations, which may include populations of Pacific and California chorus frogs, western toad, and western spadefoot toad as well as the California red-legged frog and southwestern Arroyo toad. Open scrub, chaparral and alluvial fan habitats support diverse reptile populations, and the overall herpetofauna of the SEA would encompass numerous lizard species as well as a robust snake fauna.

Bird diversity within the SEA is related to habitat opportunities for year-round residents, seasonal residents, migrating raptors, and song birds. Coastal sage scrub and chaparral host a suite of birds typical of such sites at lower elevations over most of the coastal slopes of Southern California. The most productive sites for resident coastal sage scrub and chaparral birds are around riparian and freshwater systems, which also attract large numbers of migrants during Spring and Fall. Oak woodlands and riparian areas generally support many more species; notable species consist of the summer tanager, Bullock's oriole, black-headed grosbeak, band-tailed pigeon, western wood pewee, several swallow species, western yellow-billed cuckoo, willow flycatcher, and least Bell's vireo.

Native mammal diversity within the SEA is considerable. These likely include bats, rodents, squirrel, rabbits, mole, weasel, badger, skunks, raccoon, gray fox, bobcat, coyote, and mule deer. Black bear may also occur within the SEA boundaries, at least occasionally, but the San Gabriel Mountains population was introduced for game use, and this species is not native within the SEA.

Wildlife Movement

Historically riparian corridors have served as linkages between the Pacific coastline, coast ranges, interior ranges, the high desert and southern Sierras (via the Tehachapi range). Animals move through the Santa Felicia watershed along and within the riparian systems between Piru Lake in Ventura County and the

San Gabriel Mountain range and beyond. The tributary drainages in this SEA appear fully intact and open.

Sensitive Biological Resources

Sensitive biological resources are habitats or individual species which have been afforded special recognition by federal, state, or local conservation agencies and organizations as endangered, threatened, rare, or otherwise of concern; this is principally due to the species' declining or limited population sizes, usually resulting from habitat loss. Watch lists of such resources are maintained by the California Department of Fish and Game (CDFG), the United States Fish and Wildlife Service (USFWS), and special groups such as the California Native Plant Society (CNPS). The following sections indicate the habitats as well as plant and animal species present, or potentially present within the SEA, that have been afforded special recognition.

Sensitive Plant Communities/Habitats

The Santa Felicia SEA supports several habitat types considered sensitive by resource agencies, namely the CDFG [California Natural Diversity Database (CNDDB)] because of their scarcity and support of a number of state and federally listed endangered, threatened, and rare vascular plants, as well as sensitive bird and reptile species. These communities include: coast live oak, coast live oak riparian forest, alluvial fan sage scrub, and native grassland. These communities or closely related designations are considered highest-inventory priority communities by the CDFG, indicating that they are declining in acreage throughout their range due to land use changes.

Sensitive Species

Sensitive species include those listed, or candidates for listing by the USFWS, CDFG, and CNPS. These species include, but are not limited to, the California condor, red-legged frog and Arroyo toad. The SEA identifies other species observed, recorded in the CNDDB, or reported in previous documentation as observed within or in the immediate vicinity of the SEA.

Santa Clara River

General

The Santa Clara River Significant Ecological Area (SEA) encompasses the entire Los Angeles County reach of the Santa Clara River, primarily within unincorporated areas of Los Angeles County. The Santa Clara River SEA covers the length of the river and with the watershed extensions encompasses a wide

variety of topographic features and habitat types. The orientation and extent of the SEA also consists of the surface and subsurface hydrology of the Santa Clara River, from its headwater tributaries and watershed basin to the point at which it exits Los Angeles County jurisdiction.

Description

The eastern portion of the SEA surrounds the Kentucky Springs and Aliso Canyon watersheds, portions of which are within the Angeles National Forest. It follows the river channel downstream through the Acton basin, taking in Arrastre Creek, Mill Canyon and other side drainages and significant rock outcroppings, then stays within the channel to Agua Dulce Canyon, at which point the northern boundary loops around that watershed and includes Vasquez Rocks County Natural Area, and continues northwest to the forest, while the southern boundary encompasses the lower portion of Bear Canyon and undeveloped portions of Oak Spring Canyon adjacent to the river channel. The southern boundary leaves the river channel at the confluence with Sand Canyon and extends broadly to the south, to include all of the remaining natural areas of the Sand Canyon watershed, along with the major ridgeline, earthquake escarpment, grassland, and canyon habitat features and watersheds of Elsmere, Whitney, Placerita and Bear canyons.

From Sand Canyon west the SEA boundary remains close to the margins of the floodplain to the confluence with San Francisquito Canyon, wherein the northern boundary extends northward upstream on that drainage to the headwaters of San Francisquito Creek on the Angeles National Forest, then returns to the river channel and proceeds west to the confluence with Castaic Creek. From here, it extends north around the lower portion of Castaic Creek, embracing the riparian habitat areas around and above the confluence, with the boundaries of the SEA following the Santa Clara River channel to the Ventura County line. The biological and ecological functionality of the SEA is integrally linked to the river basin for its entire length, of course, so the biogeographic limits of the SEA would extend downstream through Los Angeles/Ventura County to its mouth at the Pacific Ocean, and encompass the significant tributary drainages (Piru Creek, Sespe Creek, Santa Paula Creek, Wheeler Creek, etc.).

The Kentucky Springs and Aliso Canyon watershed zones originate on National Forest land, in semi-arid chaparral and desert scrub habitat, but the drainages themselves support different formations of desert and interior riparian habitat, ranging from seasonal Great Basin sagebrush wash in Kentucky Springs to dense, mature, willow-cottonwood-sycamore woodlands over permanent streams in Aliso Canyon. The surrounding uplands in the basins support pinyon-juniper woodlands, chamise, mountain mahogany, and manzanita dominated chaparral formations, buckwheat scrub, and ruderal lands. Alluvial terraces within both drainages have been rather extensively cultivated for orchard crops or dryland agriculture,

and in more recent years, rural and urban-type residential developments have encroached on the watersheds. Portions of the Aliso Canyon riparian woodlands have been encroached upon by rural development, but the upper portion of the drainage possesses excellent xeric cottonwood-sycamore riparian woodland. The alluvial plain formed along the southern margin of the river basin below these canyons supports intact, high diversity xeric alluvial fan sage scrub.

Downstream of the Acton basin the SEA encompasses the Arrastre Creek drainage, which is the type locality for the federally and state endangered unarmored three-spined stickleback fish, and also loops around the high, rounded rocky butte-like outcroppings on the north side of the river. These features, while only a minor part of the watershed of the river, provide important nesting, roosting, and sheltering habitat values for bats, birds of prey, and other sensitive species foraging along the river corridor. Agua Dulce Canyon has a permanent stream and supports high quality riparian habitat formations from the confluence with the river to the intersection with the Antelope Valley Freeway; from that point north the riparian areas are fragmented, improving and maturing significantly where the creeks pass through Vasquez Rocks County Natural Area.

The alluvial terraces along the river channel as it enters the eastern portion of the Santa Clarita Valley support alluvial fan sage scrub, Great Basin sagebrush scrub, coast live oak woodland, and coastal sage scrub habitats. The alluvial fans of Oak Springs Canyon and Sand Canyon are important recharge grounds for the river aquifer; surface flows from both canyons presently entering the Santa Clara River basin through natural, unconfined channels. Recognizing the importance of this drainage, the SEA boundaries have been drawn to encompass the entire Sand Canyon-Bear Canyon watershed, most of which is within the National Forest. The major habitat linkage zones and watersheds between the river basin and the National Forest, and the protected areas of the county (Placerita Canyon Natural Area) have also been included within the SEA boundary. These canyons form a natural movement zone for wildlife moving across and through the western end of the San Gabriel range to the Santa Susana range and the Santa Clara River basin, and together encompass a spectrum of significant and unique habitat, vegetation and wildlife resources.

The segment of the Santa Clara River passing through the City of Santa Clarita is a dry channel except during seasonal runoff flows. Regardless of this condition, it supports relatively intact stands of alluvial sage scrub formations, riparian woodland, and southern riparian scrub. The dry zones are essential to the continued genetic isolation of the unarmored three-spined stickleback population in the upper reaches of the river.

San Francisquito Creek supports dense and mature southern riparian scrub and riparian woodland formations, along with small areas of freshwater marsh, providing essential wintering areas and resident habitat for waterfowl, wading birds, marshland birds, and a variety of other vertebrate species. After San Francisquito Creek passes from County land into the National Forest, the channel flows become less seasonal, and riparian resources expand and diversify.

Relatively vast areas of willow-cottonwood forest and southern riparian scrub occur west of San Francisquito Creek and within the junction zone of Castaic Creek and the Santa Clara River, supporting numerous sensitive species and providing multi-layered riparian habitat for a wide diversity of wildlife species, particularly birds of prey and riparian-obligate songbirds.

The Santa Clara River channel and its alluvial terraces and tributary creeks together form the single most important and natural value wildlife movement zone through Los Angeles County. Mobile species can enter the river basin anywhere along its length (outside of developed areas) and proceed in either direction without having to pass through narrow culverts or blind channels, with continuous vegetative cover and only short stretches of dry substrates. The overall drainage course provides a continuum of aquatic and terrestrial movement opportunities, shelter, forage, and resident habitat from the mouth of the river at Ventura to the Antelope Valley. The drainage course connects to both districts of the Angeles National Forest, and links together two large public resource preserves (Vasquez Rocks and Placerita Canyon Nature Preserve).

Vegetation

Plant communities within the SEA include: bigcone spruce-canyon oak forest, coast live oak woodland, coast live oak riparian forest, chaparral, coastal sage scrub, coastal sage scrub-chaparral mixed scrub, non-native and native grasslands, alluvial fan sage scrub, southern cottonwood-willow riparian woodland and forest, southern sycamore-alder woodland, southern willow scrub, vernal pool, pinyon-juniper woodland, juniper woodland, and freshwater marsh. Transitional zones (ecotones) between these communities often contain unusual species compositions. Sensitive plant species occurring or potentially occurring within the SEA are discussed below in the Sensitive Biological Resources section.

Plant communities within the SEA were classified using standard methodology and terminology. Most of the communities discussed correspond directly with those listed in Holland's Preliminary Descriptions of the Terrestrial Natural Communities of California (1986 and 1992 update); some communities are named based upon the dominant species within them and/or other commonly used terminology. Descriptions and general locations of each plant community present within the SEA are given below.

Bigcone spruce-canyon oak forest formations typically occur in higher elevation draws on north-facing slopes, and may have incense cedar, big-leaf maple, California bay, and other shade-loving species intermixed, depending upon slope orientation, substrates, and fire history. Understory vegetation usually is dominated by chaparral species such as scrub oak, poison oak, wild grape, and manzanita. This community occurs on watershed slopes in the eastern portion of the SEA, and in a few of the narrower, more mesic canyons along the southern side of Soledad Canyon.

Coast live oak woodland consists of moderate-density overstory formations of coast live oak trees, usually on erosional plains along the margins of canyon bottoms and on lower slopes in chaparral and coastal sage scrub understory habitats. Mexican elderberry, chaparral currant, squawbush, and California peony are frequent in the understory. Extensive stands of this formation occur in Sand, Placerita, Bear, Whitney, Elsmere, and Soledad Canyons, and in unnamed tributary canyons to these drainages.

Coast live oak riparian forest is a variation of coast live oak woodland wherein the canopy is more closely grown, and the trees occur in narrower formations along watercourses. Willow, California bay, mulefat, and other riparian species often occur in the understory.

Juniper woodland is an open formation dominated by California juniper, often with an understory of foothill yucca, buckwheat, and other scrub species. This community is found on lower slopes within the eastern portion of the SEA and is mixed with a few joshua trees and chaparral species in several places.

Pinyon-juniper woodland in the SEA typically consists of a mixture of single-needle leaf pinyon pine and California juniper, with mountain mahogany, buckwheat, squawbush, foothill yucca, penstemons, and native grasses. This formation occurs on middle elevation north-facing slopes in the Kentucky Springs watershed, and sporadically along the same orientations south of Acton.

Southern cottonwood-willow riparian woodland and forest is a broad-leafed winter- deciduous habitat dominated by Fremont cottonwood, in places mixed with black cottonwood, various species of willow, rarely an alder, and on drier sites, western sycamore. Southern cottonwood-willow riparian woodland (or forest) occurs in numerous reaches of the SEA, forming mature overstory habitat on the Santa Clara River, its main tributaries, oxbow ponds, and alluvial plains. Some of the most extensive formations occur just west of Acton, in upper Aliso Canyon, in lower San Francisquito Canyon, and from Santa Clarita to the Ventura County border. Large tracts of cottonwood-willow habitat occur in Ventura County as well.

Southern sycamore-alder woodland is a formation which most often occurs on broad plains with heavy alluvial substrates, often along narrow creeks and streams with high-energy, permanent flows within the SEA. Alders typically occur along the watercourse, while sycamores usually grow a bit further from the

active flowing channel. This community is uncommon within the SEA, occurring only in the upper reaches of the watershed and in portions of Bear, Sand, and Placerita Canyons and to a lesser extent in Aliso Canyon.

Southern willow scrub is a riparian community consisting of dense, broad-leafed, winter- deciduous riparian thickets occurring within and adjacent to seasonal or permanent water courses The "scrub" formation generally is sub-mature, a state which often is maintained by frequent heavy over-flooding, and may attain woodland or forest stature if undisturbed for several decades. Dominant species of this community within the SEA are mulefat, sandbar willow, and arroyo willow. Within the SEA this community occurs throughout the tributary and primary drainages, wherever the habitat structure is maintained or repeatedly altered by frequent high water flows.

Freshwater marsh develops in areas of still or slow-moving permanent freshwater. This community is dominated by the perennial, emergent cattail or bulrush, which may reach heights of 7 feet and grow dense enough to form a closed canopy. This formation occurs in scattered ponds and slow-flow portions of the river and tributaries within the SEA.

Vernal pool systems are extremely rare in Los Angeles County and there are only two verified vernal pools currently recognized within the area; Cruzan Mesa and Plum Canyon. However, there is at least one small seasonal pond with typical vernal pool characteristics within the upper Placerita-Sand Canyon watershed break. This small pool is surrounded by coastal sage scrub, with a band of native needlegrass and melic grass on its fringes, and supports Riverside fairy shrimp and western spadefoot toad. It is considered a vernal pool by virtue of its habitat values and species unique to this type of seasonal formation.

Chaparral consists of broad-leafed or needle-leafed, sclerophyllous (hard-leafed), medium height to tall shrubs that form a dense cover on steep slopes, usually below 5,000 feet in Southern California. Dominant species found within this community include scrub oaks (several species), chamise, manzanita, wild lilac, toyon, and western mountain-mahogany on north-facing exposures; buckwheat, foothill yucca, chamise, hoary-leaf lilac, black sage, and goldenbush on south-facing slopes. This plant community occupies most of the basin slopes along the Santa Clara River and on interior ridges and slopes within the watersheds and drainages west of Acton. Chaparral also occurs on some of the higher elevations of the eastern watershed portions of the SEA, where the shrubs frequently are interspersed as understory formations within oak and conifer woodlands.

Coastal sage scrub and coastal sage scrub-chaparral mixed scrub are formations which typically occur on south or west-facing slopes within the western portion of the SEA. Some sites may be artifacts of fire frequency or occurrence, while other areas appear to be stable scrub communities. Dominant species typically are California sagebrush, purple sage, black sage, white sage, goldenbush, buckwheat, foothill yucca, California encelia, brittlebush, golden yarrow, chamise, hoary-leaf lilac, and a variety of annuals and bulbs. Excellent examples of coastal sage scrub occur in upper Placerita Canyon watershed and on the ridgeline to the north, along the Santa Clara River just east of Sand Canyon, and in San Francisquito Canyon.

Alluvial fan sage scrub**,** sometimes also known as floodplain sage scrub, generally consists of a mixture of shrubs which colonize and persist within infrequently scoured and flooded terrain such as floodplains, alluvial plains, or along seasonal streams. The dominant shrub in most washes is scalebroom, but Great Basin sage brush, rabbitbrush, and foothill yucca also usually occur in the habitat type, and may be dominant depending upon substrates and subsurface hydrology. This vegetation type is common throughout the alluvial plains and washes in the SEA, forming particularly high diversity stands along the southern margin of the river at Acton, on uplands east of the Sand Canyon confluence, along the dry reaches of the river in Santa Clarita, and in lower San Francisquito Canyon. Extensive stands of Great Basin sagebrush-dominated alluvial scrub occur around Acton and in the Kentucky Springs portion of the SEA.

Native grassland communities consist of low, herbaceous vegetation dominated by grasses, with native formations generally mixed with native bulbs and other herbaceous species, often intermixed with naturalized annual taxa. There are representatives of native grasslands scattered within the SEA, most notably patches of different needlegrass species and melic grasses on clay soils in Placerita Canyon, on slope wetlands and around oaks on the ridge north of Placerita, and on less-disturbed xeric slopes in the eastern portion of the SEA. Seeps in chaparral often support homogeneous stands of giant rye; other native grasses occur sporadically within most natural habitats along the Santa Clara River basin.

Non-native grassland consists of invasive annual grasses that are primarily of Mediterranean origin. Dominant species within this "community," which is a ruderal formation and not a true habitat or community, include oats, bromes, foxtail chess, and other grasses, along with wild mustards and other disturbance-favored "weedy" taxa. Non-native grasslands and other ruderal formations are the dominant understory on most disturbed substrates, particular grazed areas.

Disturbed or barren areas either completely lack vegetation or are dominated by ruderal species. Ruderal vegetation typically found within the SEA includes non-native and native grasses and "weedy"

herbaceous species, including doveweed, mustards, wire lettuce, sow thistle, telegraph weed, Russian thistle, dock, yellow star thistle, Australian saltbush, and cocklebur. Disturbed areas occur throughout the SEA on fallow agricultural sites, disked fields, abandoned pastures, residential development, paved road margins, fire breaks, dirt access roads, trails, and other similarly disturbed areas.

Wildlife

Wildlife within the SEA is extremely diverse and abundant, commensurate with extensive acreages of natural open space and great diversity of habitat types, within the river channels and on the surrounding uplands. While a few wildlife species may be entirely dependent upon or obligate within a single vegetative community, the mosaic of vegetation communities within the area and adjoining uplands constitutes a continuum of functional ecosystems. These ecosystems support a wide variety of wildlife species, within the SEA boundaries and as a part of the regional ecosystem.

Analysis of invertebrates on any given site generally is limited by a lack of specific data, but the size of the SEA and diversity of habitats present are considered sufficient to support healthy populations of a very large number of invertebrate species, probably in excess of 2,500 species. The riparian formations, wetlands, and aquatic habitats within the SEA support diverse faunas of arthropods, including native fairy shrimp, craneflies, blackflies and other aquatic dipterans, stoneflies, caddisflies, and dobsonflies, water boatmen, giant water bugs, ground beetles, diving beetles, and tiger beetles. Terrestrial insects abound around riparian corridors and in scrub habitats, and are particularly abundant in oak-dominated habitats. Insect orders very well-represented taxonomically, and with some habitat specialization within the Santa Clara River SEA include Orthoptera, Neuroptera, Coleoptera, Diptera, Hymenoptera, and Lepidoptera.

Amphibians are abundant and relatively diverse within moister woodland areas, along montane canyon bottoms, in riparian areas, and within surface water features of the SEA. The overall riparian systems of the Santa Clara River basin support abundant populations of Pacific and California chorus frogs, western toad, western spadefoot toad, bullfrog, and African clawed frog (the latter two species are non-native), and in San Francisquito Canyon, California red-legged frog and southwestern arroyo toad. Arboreal, painted, and garden slender salamanders also are present within mesic habitats in the SEA.

Open scrub, chaparral and alluvial fan habitats support diverse reptile populations, and the overall herpetofauna of the SEA would encompass numerous lizard species, along with southwestern pond turtle in Agua Dulce and Bear canyons. Yucca night lizard, side-blotched lizard, western fence lizard, western skink, San Diego alligator lizard, coastal western whiptail, San Diego horned lizard, desert

horned lizard, silvery legless lizard and San Diego desert banded gecko all would be expected within the SEA.

The SEA also supports a robust snake fauna, including western blind snake, coachwhip ("red racer"), chaparral whipsnake, coastal patch-nosed snake, California rosy boa, San Diego gopher snake, glossy snake, California kingsnake, mountain kingsnake, long-nosed snake, night snake, California lyre snake, California black-headed snake, two-striped garter snake, San Bernardino ring-necked snake, southern Pacific rattlesnake.

Bird diversity within the SEA is related to habitat opportunities for year-round residents, seasonal residents, migrating raptors, and song birds. Coastal sage scrub and chaparral host a suite of birds typical of such sites at lower elevations over most of the coastal slopes of Southern California. The most productive sites for resident coastal sage scrub and chaparral birds are around riparian and freshwater systems, which also attract large numbers of migrants during Spring and Fall. Coastal sage and chaparral birds resident or breeding within the SEA includes Southern California (ashy) rufous-crowned sparrow, Bell's sparrow, black-chinned sparrow, lark sparrow, lazuli bunting, California gnatcatcher, California quail, greater roadrunner, spotted towhee, California towhee, California thrasher, phainopepla, northern mockingbird, and Anna's, Costa's, and black-chinned hummingbirds. Oak woodlands and riparian areas support many more species; notable species consist of the summer tanager, Bullock's oriole, black-headed grosbeak, band-tailed pigeon, western wood pewee, several swallow species, western yellow-billed cuckoo, willow flycatcher, and least Bell's vireo. Species associated with ruderal sites and grasslands include western meadowlark, California horned lark, and savannah and grasshopper sparrows. Birds of prey (including common migrants) observed within the SEA include red-shouldered hawk, red-tailed hawk, Cooper's hawk, sharp-shinned hawk, Swainson's hawk, merlin, American kestrel, northern harrier, white-tailed kite, prairie falcon, and golden eagle. Resident owl species within the SEA boundaries include barn owl, great horned owl, long eared owl, and California spotted owl.

Native mammal diversity within the SEA is considerable. These include bats (at least seven species), rodents (at least four species of deer mice, two species of woodrat, Beechey ground squirrel, western gray squirrel, and more), two types of rabbits and one hare, broad-handed mole, long-tailed weasel, American badger, spotted and striped skunks, raccoon, gray fox, bobcat, coyote, mountain lion, and mule deer. Black bear also occur within the SEA boundaries, at least occasionally, but the San Gabriel Mountains population was introduced for game use, and this species is not native within the SEA.

Wildlife Movement

Historically (and prehistorically) the riparian corridor along the Santa Clara River has served as the primary east-west linkage between the Pacific coastline, coast ranges, interior ranges, high desert and southern Sierra (via the Tehachapi range). Animals moving through the Santa Clara drainage had unobstructed passage along the river and within the riparian systems between the coastal lowlands of Ventura and the Mojave Desert, with tributary routes extending south into the San Gabriel range, northward via Castaic, Bouquet and San Francisquito tributaries over the Transverse range and into the San Joaquin Valley, west into the central coast ranges, or east through the Tehachapi mountains and into the southern Sierra Nevada. The present configuration of the tributary drainages has impinged upon connectivity from the Santa Clarita Valley to the north, but the Santa Clara River remains relatively intact and open. The SEA embraces the river corridor and the linkage zones considered essential to insuring connectivity and resource values within the historic movement zones for all of the wildlife species present within the Los Angeles County portion of the Santa Clara River.

Sensitive Biological Resources

Sensitive biological resources are habitats or individual species which have been afforded special recognition by federal, state, or local conservation agencies and organizations as endangered, threatened, rare, or otherwise of concern; this is principally due to the species' declining or limited distribution or population sizes, usually resulting from habitat loss. Watch lists of such resources are maintained by the California Department of Fish and Game (CDFG), the United States Fish and Wildlife Service (USFWS), and special groups such as the California Native Plant Society (CNPS). The following sections indicate the habitats as well as plant and animal species present, or potentially present within the SEA, that have been afforded special recognition.

Sensitive Plant Communities/Habitats

This report/description supports several habitat types considered sensitive by resource agencies, namely the CDFG [California Natural Diversity Database (CNDDB)] because of their scarcity and support of a number of state and federally listed endangered, threatened, and rare vascular plants, as well as sensitive bird and reptile species. These communities include: bigcone spruce-canyon oak forest, coast live oak riparian forest, southern willow scrub, southern cottonwood-willow riparian woodland, sycamore-alder woodland, freshwater marsh, alluvial fan sage scrub, native grassland, and vernal pool. These communities or closely related designations are considered highest-inventory priority communities by the CDFG, indicating that they are declining in acreage throughout their range due to land use changes.

Sensitive Species

Sensitive species include those listed, or candidates for listing by the USFWS, CDFG, and CNPS. These species include, but are not limited to, Nevin's barberry, spreading navarretia, slender-horned spineflower, California Orcutt grass, Riverside fairy shrimp, unarmored threespine stickleback, Santa Ana sucker, arroyo southwestern toad, California red-legged frog, southwestern pond turtle, California horned lizard, San Diego mountain king snake, two-striped garter snake, California condor, Swainson's hawk, White-tailed kite, California gnatcatcher, least Bell's vireo, and ringtail cat. In addition, the SEA identifies other species observed, recorded in the CNDDB, or reported in previous documentation as observed within or in the immediate vicinity of the SEA.

Santa Susana Mountains/Simi Hills

General

The Santa Susana Mountains/Simi Hills Significant Ecological Area (SEA) is located northwest of the San Fernando Valley within unincorporated areas of Los Angeles County and an incorporated area of the City of Los Angeles west of Chatsworth. The area is south of State Route 126 (SR-126) and the Santa Clara River, west of the Golden State Freeway (Interstate 5), and includes much of the Santa Susana Mountains in the north, the Santa Susana Pass, Chatsworth Reservoir, and the eastern portion of the Simi Hills in the south.

Description

The Santa Susana Mountains/Simi Hills SEA includes a variety of topographic features; the northern portion of the SEA encompasses Oat Mountain and much of the Santa Susana Mountains from the Los Angeles County line east to Interstate 5. Portions of many of the canyons associated with the Santa Susana Mountains and Oat Mountain are also included such as Salt Canyon, Potrero Canyon, Pico Canyon, Towsley Canyon, El Toro Canyon, Sulphur Canyon, Devil Canyon, Ybarra Canyon, Browns Canyon, Bee Canyon, and Mormon Canyon. Several blue-line streams occur within these canyons and support many natural springs. The north slopes of the Santa Susana Mountains are within the Santa Clara River watershed which drains the Los Padres National Forest to the north, the Angeles National Forest to the northeast and east, and the Santa Susana Mountains to the south and southeast. The remainder of the SEA is within the Los Angeles River watershed. The majority of the land in the SEA is natural open space with very sparse disturbances in the form of ranches, oil wells, and unimproved access roads. The SEA consists of east-west and northwest trending primary ridges and north-south trending secondary ridges. The peak of Oat Mountain represents the highest point in the SEA at 3,747 feet above mean sea level

(MSL). The open space within the SEA supports a variety of communities but is dominated by chaparral, oak woodlands, coastal sage scrub, bigcone spruce-canyon oak woodland, and grasslands. The creeks and canyons support riparian scrub and woodland communities. At its southern end, the SEA includes the eastern portion of the Simi Hills including the east-facing slopes descending from Chatsworth Peak. Chatsworth Reservoir forms a portion of the south boundary and is currently dry except for a small detention basin north of the reservoir.

Vegetation

The plant communities within the Santa Susana Mountains/Simi Hills SEA are composed of numerous plant species. These plant species are adapted to a Mediterranean climate with a cool, wet season followed by a hot, dry season. Due to the topographic complexity and combination of coastal and desert influences, the SEA supports a wide diversity of plant species.

Plant communities within the SEA were classified using standard methodology and terminology. Most of the communities discussed in this study correspond directly with those listed in Holland's Preliminary Descriptions of the Terrestrial Natural Communities of California (1986 and 1992 update). Other communities are named based on dominant species within them and/or commonly used terminology. Descriptions and general locations of each plant community present within the SEA are given below. These include chaparral, coastal sage scrub, alluvial scrub, coast live oak woodlands, valley oak woodland, mainland cherry forest, non-native grassland, native grassland, southern willow scrub, southern cottonwood-willow riparian forest, and disturbed communities.

Chaparral consists of a broad mix of evergreen species and generally occurs below 5,000 feet in Southern California. Dominant species consist of broad-leaved or needle-leafed sclerophyllous (hard-leafed) shrubs, forming a dense, impenetrable cover with little or no understory growth. The understory typically consists of a considerable accumulation of leaf litter. In areas of less dense shrub cover, the understory consists of non-native grasses and other annual forbs. Dominant species include chamise, laurel sumac, hoary-leaved ceanothus, woolly-leaved ceanothus, and toyon. Chaparral is the dominant plant community within the SEA and covers many of the steep slopes and hillsides in the upper elevations.

Coastal sage scrub communities consist of drought-deciduous, low, soft-leaved shrubs and herbs on gentle to steep slopes under 3,000 feet in elevation. Several dominant species may occur within scrub communities, with some areas overwhelmingly dominated by one or two species. Dominant species include California sagebrush, California buckwheat, California bush sunflower, purple sage, and

deerweed. Coastal sage scrub is found at the lower elevations within the SEA on drier south-facing slopes, but can also be found on the north-facing slopes and canyon of the Santa Susana Mountains.

Alluvial scrub consists of a mixture of shrubs that colonize sandy-gravelly flood deposited soils within intermittent creeks, arroyos, and drier terraces in large washes. This community intergrades with sage scrub communities and riparian communities and, therefore, occurs adjacent to these communities. Dominant species include Great Basin sagebrush, scalebroom, big saltbush, and squaw bush. Alluvial scrub is predominately found at the northern end of the SEA in Salt Canyon.

Coast live oak woodlands commonly occur along drainages that experience at least a seasonal flow or in other areas under mesic conditions. Soil structure and soil moisture are the most important limiting factors for the survival of oak woodlands; soils must be deep, uncompacted, fertile, well-aerated, and well-drained. This community is dominated by coast live oak. If sufficient groundwater is present, western sycamores, usually associated with riparian habitats, may also occur in the oak woodland. Oak woodlands occupy areas within the canyons and drainages of the SEA.

Valley oak woodland is an open-canopy woodland found on deep, well-drained alluvial soils below 2,000 feet. This community is almost exclusively dominated by valley oak with a grassy understory to form a savannah-like community. This community is located in small pockets in the eastern portion of the SEA.

Mainland cherry forest is not well described but is typically composed of tall stands of hollyleaf cherry on rocky, dry, north-facing slopes. Within the SEA, coast live oak is co-dominant within this community and can be found in canyons in the northern portion of the study area. This community can also be found in association with alluvial scrub in the northwestern portion of the study area as it approaches the Santa Clara River.

Grassland communities consist of low, herbaceous vegetation that are dominated by grasses but generally also harbor native forbs and bulbs as well as naturalized annual forbs. Topographic factors that contribute to grassland presence include gradual slopes or flat areas with deep, well-developed soils in areas below 3,000 above MSL. The species richness of grassland communities is dependent upon a number of land use factors, including intensity and duration of natural or anthropogenic disturbances such as grazing. Heavily grazed grasslands have a lower species richness. **Non-native grassland** consists of dominant invasive annual grasses that are primarily of Mediterranean origin. Dominant species found within this community include slender wild oat, wild oat, ripgut brome, and foxtail chess.

Native grassland is often associated with coastal sage scrub and is found in pockets in close proximity to coastal sage scrub and non-native grassland. This community consists of at least ten percent cover of

native purple needlegrass. The remaining vegetative cover is made up of non-native grasses found in annual grassland and a variety of annual, wild flowers such as golden stars and blue-eyed grass. Small patches of native grassland can be found scattered throughout the SEA mostly in openings in coastal sage scrub and mixed with non-native grasslands.

Southern willow scrub is a riparian community occurring within and adjacent to water courses. The vegetation within this community is adapted to seasonal flooding. Southern willow scrub is characterized by dense, broad leafed, winter-deciduous riparian thickets dominated by one or more willow species. Most stands are too dense to allow understory development. The dominant species of this community within the SEA is arroyo willow, red willow, and black willow, with less common associates including mule fat. This community occurs in segments along portions of the intermittent drainages within the SEA.

Southern cottonwood-willow riparian forest consists of an open, broad-leaved, winter-deciduous riparian forest dominated by Fremont cottonwood, black cottonwood, and several willow species including arroyo willow and red willow. This community occupies much of the Santa Clara River adjacent to the northern boundary of the SEA and also occurs within the larger, intermittent and perennial drainages within the SEA.

Disturbed or barren areas either completely lack vegetation or are dominated by ruderal species. Ruderal vegetation typically found on site include non-native grasses and a high proportion of weedy species, including tocalote, telegraph weed, tree tobacco, doveweed, black mustard, and thistle species. Several disturbed areas occur scattered throughout the SEA and take the form of residential developments, highways, fire breaks, dirt access roads, trails, transmission poles, and other similarly disturbed areas.

Wildlife

Wildlife within the SEA is generally diverse and abundant due to the large acreage of natural open space and the diversity of habitat types. While a few wildlife species are entirely dependent on a single vegetative community, the entire mosaic of all the vegetation communities within the area and adjoining areas constitutes a functional ecosystem for a variety of wildlife species. This applies to the SEA and the regional ecosystem.

The analysis of invertebrates in this study is difficult due to the lack of data, although limited studies have been conducted. The SEA is believed to support healthy populations of a diverse assortment of countless invertebrate species. Amphibian populations are generally restricted in semi-arid and arid habitats but may be particularly abundant where riparian areas occur. The SEA is likely to support a

variety of amphibians in abundance within wetland areas along the major canyon bottoms and the moister oak woodland areas. Many essential reptilian habitat characteristics such as open habitats that allow free movement and high visibility and small mammal burrows for cover and escape from predators and extreme weather are present within the SEA. These characteristics as well as the variety of habitat types present are likely to support a wide variety of reptilian species.

The scrubland, woodland, riparian, and grassland habitats in the SEA provide foraging and cover habitat for year-round residents, seasonal residents, and migrating song birds. In addition, the SEA encompasses many year-round water sources, abundant raptor foraging, perching, and nesting habitat. The combination of these resources as well as the mosaic of many community types provides for an unusually high diversity of bird species. Several of these species may use this SEA as their only consistent occurrence in the southeastern portion of the county.

Not unlike other taxonomic groups, mammal populations within the SEA are diverse and reflective of the diversity of habitat types. Unlike many other inland hills within the Los Angeles Basin, this SEA is large enough to support relatively stable large mammal populations despite the urban surroundings.

Wildlife Movement

The Santa Susana Mountains/Simi Hills SEA includes several important linkages for wildlife movement. The Simi Hills and Santa Susana Mountains provide a vast open space corridor to foster wildlife movement between the Santa Monica Mountains to the south, San Gabriel Mountains to the east, and Los Padres National Forest to the north. Dense, natural habitat associated with the majority of the study area provides excellent opportunities for concealment and water sources while the grasslands provide an abundance of prey.

Sensitive Biological Resources

Sensitive biological resources are habitats or individual species that have special recognition by federal, state, or local conservation agencies and organizations as endangered, threatened, rare, or otherwise sensitive; this is due to the species' declining or limited distribution or population sizes, usually resulting from habitat loss. Watch lists of such resources are maintained by the California Department of Fish and Game (CDFG), the United States Fish and Wildlife Service (USFWS), and special groups such as the California Native Plant Society (CNPS). The following sections indicate the habitats as well as plant and animal species present, or potentially present within the SEA, that have been afforded special recognition.

Sensitive Plant Communities/Habitats

This report/description supports several habitat types considered sensitive by resource agencies, namely the CDFG [California Natural Diversity Data Base (CNDDB)], because of their scarcity and support of a number of state and federally listed endangered, threatened, and rare vascular plants, as well as several sensitive bird and reptile species. These communities include coastal sage scrub, alluvial scrub, valley oak woodland, mainland cherry woodland, native grassland, southern willow scrub, and cottonwood-willow riparian forest which occur throughout the area. These communities or closely related designations are considered highest-inventory priority communities by the CDFG, indicating that they are experiencing a decline throughout their range.

Sensitive Species

Sensitive species include those listed, or candidates for listing by the USFWS, CDFG, and CNPS. Species which have been recorded within the SEA as well as those reasonably expected to occur include, but are not limited to, Lyon's pentachaeta, Nevin's barberry, Braunton's milk vetch, slender-horned spineflower, arroyo southwestern toad, California red-legged frog, California condor, Swainson's hawk, white-tailed kite, and southwestern willow flycatcher. The table includes locations of sensitive species observed, recorded in the CNDDB, or reported in previous documentation as observed within or in the immediate vicinity of the SEA.

Valley Oaks Savannah

General

The Valley Oaks Savannah SEA is located northeast of the Santa Susana Mountains and west of the Angeles National Forest, approximately 1 mile south of the Santa Clara River and one mile north of Pico Canyon. The SEA is bordered on the east by Interstate 5 and is situated between Valencia Boulevard and McBean Parkway. To the west, the SEA is bordered by the foothills of the Santa Susana Mountains which are dominated by chaparral.

Description

The Valley Oaks Savannah SEA is almost completely undisturbed except for a few dirt roads. The majority of the vegetation on the site consists of a valley oaks savannah containing over 1,000 trees. Other vegetation on the site includes coastal sage scrub and non-native grasses.

Vegetation

Due to its small size, vegetation within the Valley Oaks Savannah SEA is limited to a few community types. All plant species observed or recorded in previous documentation within the study area are indicated in the Comprehensive Floral & Faunal Compendium of the SEA User Guide. Sensitive plant species occurring or potentially occurring within the SEA are discussed in the Sensitive Biological Resources section of this document.

Plant communities within the SEA were classified using standard methodology and terminology. Most of the communities discussed in this study correspond directly with those listed in Holland's Preliminary Descriptions of the Terrestrial Natural Communities of California (1986 and 1992 update). Other communities are named based on dominant species within them and/or commonly used terminology. Descriptions and general locations of the each plant community present within the SEA including coastal sage scrub, valley oak woodland, non-native grassland, and disturbed are given below.

Coastal sage scrub communities consist of drought-deciduous, low, soft-leaved shrubs and herbs on gentle to steep slopes under 3,000 feet in elevation. Several dominant species may occur within scrub communities and some areas may be overwhelmingly dominated by one or two species. Dominant species include California sagebrush, California buckwheat, chaparral mallow, purple sage, coast goldenbush, and California-astor.

Valley oak savannah is an open woodland community dominated by the broad-leaved, winter-deciduous valley oak with scattered coast live oaks in some areas. The oak trees form an open savannah with an understory that is dominated by California buckwheat and non-native grasses. This community occupies a majority of the site.

Grassland communities consist of low, herbaceous vegetation that are dominated by grasses but generally also harbor native forbs and bulbs as well as naturalized annual forbs. Topographic factors that contribute to grassland presence include gradual slopes or flat areas with deep, well developed soils in areas below the 3,000-foot elevation. Non-native grassland consists of dominant invasive annual grasses that are primarily of Mediterranean origin. Dominant species found within this community include slender wild oat, wild oat, ripgut brome, and foxtail chess along with scattered coastal sage scrub species. This community type occurs along the western portion of the north boundary of the SEA.

Disturbed or barren areas either completely lack vegetation or are dominated by ruderal species. Ruderal vegetation typically found on site include non-native grasses and a high proportion of weedy species,

including tocalote, telegraph weed, tree tobacco, doveweed, black mustard, and thistle species. The primary disturbed area within this SEA is dirt roadways.

Wildlife

The relatively small size of the SEA and the limited variety of vegetation types is unlikely to support a large diversity of wildlife. However, acorns within the valley oak savannah provide a valuable food source for a variety of wildlife. Furthermore, the mature trees are an important source of nesting and roosting habitat for birds and other arboreal vertebrates. While some wildlife species are entirely dependent on a single vegetative community, the mosaic of vegetation communities within adjoining areas constitutes a functional ecosystem for a variety of wildlife species, both within the SEA and as part of the regional ecosystem.

The analysis of invertebrates in this study is severely limited due to the lack of data. However, due to the undisturbed nature of the SEA, it is likely to support healthy populations of many invertebrate species. Amphibians may not be abundant due to the lack of water in the SEA, however, shaded areas within the woodland may be moist enough to allow for a few species to occupy the site. Reptilian diversity within the SEA is highest within patches of coastal sage scrub and may be abundant due the presence of alluvial wash habitat on adjacent property.

The scrubland, woodland, and grassland habitats in and adjacent to the SEA provide foraging and cover habitat for year-round residents, seasonal residents, and migrating song birds. In addition, the SEA contains abundant raptor foraging, perching, and nesting habitat. Mammal populations within the SEA respond favorably to these habitats. Not unlike other taxonomic groups, mammal populations within the SEA are limited by acreage but are likely to utilize the area frequently.

All wildlife species previously recorded, as well as those expected to occur, within the study area are indicated in the Comprehensive Floral & Faunal Compendium of the SEA User Guide. Sensitive wildlife species occurring or potentially occurring within the SEA are discussed below in the Sensitive Biological Resources section.

Wildlife Movement

Wildlife movement within the Valley Oaks Savannah SEA is limited to local movement of foraging animals. Although the SEA does not support regional corridors itself, adjacent lands to the west and northwest may be important linkages for wildlife movement to and from the Santa Susana Mountains

and the Santa Clara River. The location of the SEA, therefore, may be important secondarily as a corridor buffer and/or adjacent foraging grounds.

Sensitive Biological Resources

Sensitive biological resources are habitats or individual species that have special recognition by federal, state, or local conservation agencies and organizations as endangered, threatened, rare, or otherwise principally due to the species' declining or limited population sizes, usually resulting from habitat loss. Watch lists of such resources are maintained by the California Department of Fish and Game (CDFG), the United States Fish and Wildlife Service (USFWS), and special groups such as the California Native Plant Society (CNPS). The following sections indicate the habitats as well as plant and animal species present, or potentially present within the SEA, that have been afforded special recognition.

Sensitive Plant Communities/Habitats

The Valley Oaks Savannah SEA supports two habitat types considered sensitive by resource agencies, namely California Department of Fish and Game (CDFG), because of either their scarcity or support of a number of state and federally listed endangered, threatened, and rare vascular plants, as well as several sensitive bird and reptile species. These communities are valley oak woodland and coastal sage scrub. These communities or closely related designations are considered highest-inventory priority communities by the CDFG, indicating that they are experiencing a decline throughout their range.

Sensitive Species

Sensitive species include those listed, or candidates for listing by USFWS, CDFG, and CNPS (particularly List 1A, 1B, and 2). These sensitive species include, but are not limited to, San Diego coast horned lizard, sharp-shinned hawk, and Cooper's hawk.

Habitat Connectivity

Habitat connectivity is an umbrella term referring to all of the factors relating to integration of habitats within an ecosystem. Wildlife corridors and habitat linkages are features that promote habitat connectivity. Wildlife corridors are typically discrete linear features within a landscape that are constrained by development or other non-habitat areas. Habitat linkages are networks of corridors and larger natural open space areas that encompass an adequate diversity and acreage of useable habitats to provide long-term resilience of ecosystems against the detrimental effects of habitat fragmentation. The fragmentation of open-space areas by urbanization creates isolated "islands" of wildlife habitat. In the

absence of habitat linkages that allow movement to adjoining open-space areas, various studies have concluded that many wildlife and plant species would not likely persist over time in fragmented or isolated habitat areas because they prohibit the movement of new individuals and genetic information among areas where they may be periodically displaced by natural or human-caused disturbances such as disease, fire, flood, etc.[5]

Habitat linkages mitigate the effects of this fragmentation by (1) allowing plant and animal species to disperse between remaining habitat areas, thereby permitting at-risk populations to maintain sustainable levels of genetic variability; (2) providing escape routes from fire, predators, and human disturbances, thus reducing the risk of catastrophic events (such as fire or disease) causing population or local species extinction; and (3) serving as travel routes for individual animals as they move within their home ranges in search of food, water, mates, and other needs.

South Coast Missing Linkages is an inter-agency effort to identify and conserve the highest priority linkages in the South Coast Ecoregion[6]. Partners in the effort include South Coast Wildlands, National Park Service, U.S. Forest Service, California State Parks, The Wildlands Conservancy, The Resources Agency, California State Parks Foundation, The Nature Conservancy, Santa Monica Mountains Conservancy, Resources Legacy Foundation, Conservation Biology Institute, San Diego State University Field Stations Program, Environment Now, Mountain Lion Foundation, and the Zoological Society of San Diego's Conservation and Research for Endangered Species, among others. The South Coast Missing Linkages project has developed a comprehensive plan for a regional network that would maintain and restore critical habitat linkages between existing open space reserves.[7] The County's Planning Area contains portions of three linkages identified in the Missing Linkages project: the Santa Monica-Sierra Madre Connection, the Sierra Madre-Castaic Connection, and the San Gabriel-Castaic Connection.

The Santa Clara River Enhancement and Management Plan Study (SCREMP) identified several key movement corridors within the County Planning Area. These corridors are generally located in undisturbed canyon and riverine stream habitat areas. The preservation of these areas is essential for maintaining the wildlife diversity within the County Planning Area.

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5 Robert H. MacArthur & Edward O. Wilson. 1967. *The Theory of Island Biogeography*. Princeton University Press. Michael E. Soule, ed. 1987. *Viable populations for conservation*. Cambridge University Press.

6 The "South Coast Ecoregion" extends approximately from Point Conception, California, to El Rosario, Baja California Norte, and includes the intervening portions of the Coast, Transverse, and Peninsular Mountain Ranges and all land seaward of those ranges.

7 South Coast Wildlands. 2008. South Coast Missing Linkages: A Wildland Network for the South Coast Ecoregion. Produced in cooperation with partners in the South Coast Missing Linkages Initiative. Available online at http://www.scwildlands.org.http://www.scwildlands.org.

The Santa Monica Mountains Conservancy (SMMC) and the Mountain Recreation and Conservation Authority have also identified wildlife corridors in the Santa Clarita Valley. These corridors include Elsmere Canyon, Towsley Canyon, Weldon/Bee Canyon, crossings along SR-14 near Whitney Canyon and crossings between Canyon Country and Sulphur Springs.

Elsmere Canyon is an integral part of the Rim of the Valley Trail Corridor and Wildlife Corridor, linking the Santa Clarita Woodlands, Whitney, and Placerita Canyons. The Rim of the Valley Trail Corridor traverses the Santa Monica, Santa Susana, and San Gabriel Mountains. The Rim of the Valley Trail System is described in **Section 3.16, Parks and Recreation**.

As mitigation for impacts related to high occupancy vehicle lanes proposed along SR-14 between Newhall Avenue and Sand Canyon Road, the San Gabriel/Santa Susana Wildlife Corridor and Open Space Acquisition Project identified key wildlife linkage corridors within this area. The corridors include the Whitney Canyon Movement Route and the highway underpass known as the Los Pinetos undercrossing. These corridors link significant coastal scrub, oak woodland, and riparian woodland and scrub habitats.

REGULATORY FRAMEWORK

Federal Statutes

Migratory Bird Treaty Act of 1918

The Migratory Bird Treaty Act (16 U.S. Code 703-712) makes it unlawful to "take" (kill, harm, harass, etc.) any migratory bird listed in Title 50, Code of Federal Regulations, including their nests, eggs, or products. Migratory birds include geese, ducks, shorebirds, raptors, songbirds, and many other species.

Federal Endangered Species Act of 1973

Section 3 of the federal Endangered Species Act (ESA) defines an Endangered species as any species or subspecies "in danger of extinction throughout all or a significant portion of its range." A Threatened species is defined as any species or subspecies of fish, wildlife, or plants "likely to become an Endangered species within the foreseeable future throughout all or a significant portion of its range." Threatened or Endangered species and their critical habitat are designated through publication of a final rule in the Federal Register. Designated Endangered and Threatened animal species are fully protected from "take" unless an applicant has an incidental take permit issued by the U.S. Fish and Wildlife Service (USFWS) under Section 10 or incidental take statement issued under Section 7 of the ESA. A take is defined as the killing, capturing, or harassing of a species. Proposed Endangered or Threatened species or their critical

habitat are those for which a proposed regulation, but no final rule, has been published in the Federal Register.

Clean Water Act Section 404, Jurisdictional Waters

The U.S. Army Corps of Engineers (USACE), pursuant to Section 404 of the Clean Water Act regulates discharges into "waters of the United States." While the streams on within the area meet the definition of waters of the U.S., they do not meet the criteria for federal jurisdiction set by the U.S. Supreme Court, in that they are not navigable and are not tributary to any navigable waters. In addition, these streams have no connection to interstate commerce outside of the specific uses precluded by the Supreme Court regarding the Migratory Bird amendment. While verification of the lack of jurisdiction should be ascertained with the USACE, there is not federal authority under the Clean Water Act.

State Regulations

California Endangered Species Act

The California Endangered Species Act (CESA) declares that deserving plant or animal species will be given protection by the state because they are of ecological, educational, historical, recreational, aesthetic, economic, and scientific value to the people of the state. CESA establishes that it is state policy to conserve, protect, restore, and enhance endangered species and their habitats. Under state law, plant and animal species may be formally designated as Rare, Threatened, or Endangered through official listing by the California Fish and Game Commission. Listed species are given greater attention during the land use planning process by local governments, public agencies, and landowners than are species that have not been listed.

On private property, Endangered plants may also be protected by the Native Plant Protection Act (NPPA) of 1977. Threatened plants are protected by CESA, and Rare plants are protected by the NPPA. However, CESA authorizes that "Private entities may take plant species listed as Endangered or Threatened under the ESA and CESA through a federal incidental take permit issued pursuant to Section 10 of the ESA, if the CDFG certifies that the incidental take statement or incidental take permit is consistent with CESA."[8] In addition, the CEQA[9] requires disclosure of any potential impacts to listed species and alternatives or mitigation that would reduce those impacts.

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8 California Endangered Species Act, 14 CCR 670.5

9 Public Resources Code, sections 21000 et seq.

California Environmental Quality Act–Treatment of Listed Plant and Animal Species

ESA and CESA protect only those species formally listed as Threatened or Endangered (or Rare in the case of the state list). Section 15380 of the *State CEQA Guidelines* independently defines "Endangered" species of plants or animals as those whose survival and reproduction in the wild are in immediate jeopardy and "Rare" species as those who are in such low numbers that they could become Endangered if their environment worsens. Therefore, a project normally will have a significant effect on the environment if it will substantially affect a Rare or Endangered species of animal or plant or the habitat of the species. The significance of impacts to a species under CEQA must be based on analyzing actual rarity and threat of extinction despite legal status or lack thereof.

State of California – Section 1602 of the California Fish and Game Code.

Streambeds and other drainages that occur within the County Planning Area are subject to regulation by the CDFG. The CDFG considers most drainages to be "streambeds" unless it can be demonstrated otherwise. A stream is defined as a body of water that flows at least periodically or intermittently through a bed or channel with banks and supports fish or other aquatic life. This includes watercourses having a surface or sub-surface flow that supports, or has supported, riparian vegetation. CDFG jurisdiction typically extends to the edge of the riparian canopy, and therefore, usually encompasses a larger area than USACE jurisdiction.

State of California – Porter Cologne Water Quality Control Act

The State Water Quality Control Board has ruled after the U.S. Supreme Court decisions to reduce the federal jurisdiction over Waters of the U.S., that the state would require that a Waste Discharge Report be required for any discharge of waste, including fill, into "waters of the state," other than those projects requiring a federal Section 404 permit and the state's Section 401 Certification of the federal permit, under the authority of the Porter Cologne Act. This essentially extends the state's assumption of the NPDES program, by modifying the definition of waste. The Regional Water Quality Control Board is responsible for issuing Waste Discharge Permits.

State of California – Sections 3503, 3503.5, and 3800 of the California Fish and Game Code

These sections of the Fish and Game Code prohibit the destruction bird nests and eggs (Section 3503), and the take of birds of prey (Section 3503.5) and nongame birds (Section 3800). Disturbance that causes nest abandonment and/or loss of reproductive effort (killing or abandonment of eggs or young) is considered "take." Such a take would also violate Federal law protecting migratory birds.

Incidental Take Permits (i.e., Management Agreements) are required from the CDFG for projects that may result in the incidental take of species listed by the State of California as Endangered, Threatened, or candidate species. The permits require that impacts to protected species be minimized to the extent possible and mitigated to a level of insignificance.

Local

Tree Ordinances

Los Angeles County implements an Oak Tree Ordinance that applies to all unincorporated areas of Los Angeles County, and requires that a person shall not cut, destroy, remove, relocate, inflict damage, or encroach into the protected zone of any tree of the oak tree genus without first obtaining a permit. This applies generally to trees that are 25 inches or more in circumference (8 inches in diameter) on any lot or parcel of land within the unincorporated area of Los Angeles County, or (b) any tree that has been provided as a replacement tree unless an oak tree permit is first obtained. "Damage," includes any act causing or tending to cause injury to the root system or other parts of a tree, including, but not limited to, burning, application of toxic substances, operation of equipment or machinery, or by paving, changing the natural grade, trenching or excavating within the protected zone of an oak tree. Walnut, sycamore, and Joshua trees are also regulated by ordinance in Los Angeles County.

In addition to the County's ordinance, the City of Santa Clarita's Oak Tree Preservation ordinance (Section 17.17.090 C of the Uniform Development Code) requires the preservation of all healthy oak trees, including scrub oaks, within the City, unless compelling reasons justify the cutting, pruning, encroachment, and/or removal of such trees. Additionally, the Ordinance states that no person shall cut, prune, remove, relocate, endanger, damage, or encroach into the protected zone of any oak on any public or private property within the City except in accordance with the conditions of a valid oak tree permit issued by the City. This generally applies to trees that are 6 inches or more in circumference (2 inches in diameter).

Open Space Acquisition Plan

The City of Santa Clarita 2002 Open Space Acquisition Plan (OSAP) represents the City's ongoing efforts to preserve and protect open space in the Santa Clarita Valley. Through the creation of a systematic and objective mechanism for evaluating open space, this plan will:

1. Assist in the creation of a "green belt" surrounding the City of Santa Clarita to improve and expand wildlife habitat and corridors.

2. Provide a framework for the City to evaluate, acquire, and maintain the most beneficial parcels within and surrounding the City of Santa Clarita for preservation as open space.

THRESHOLDS OF SIGNIFICANCE

Methodology

This biological resources impacts analysis is conducted at a programmatic level rather than a project level, and therefore is primarily qualitative. Subsequent discretionary permits issued under the proposed Area Plan will be required to comply with the policies of the plan and may require additional coordination with resource agencies (USFWS, CDFG, USACE, etc.) on a project-by-project basis to determine specific mitigation requirements for impacts on resources under their purview.

Direct impacts of a proposed project on biological resources can take several forms, but typically involve the loss, modification, or disturbance of natural habitat (i.e., plant communities or other naturally occurring areas) which in turn, directly affects plant and wildlife species dependent on that habitat.

State CEQA Guidelines

Significant impacts on biological resources posed by the proposed Area Plan were determined from criteria stated in *State CEQA Guidelines* (CELSOC 2008). Appendix G (Environmental Checklist) of the *State CEQA Guidelines* states that a project could have a significant impact on biological resources if it would:

- have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by the CDFG or USFWS;
- have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the CDFG or USFWS;
- have a substantial adverse effect on Federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or

- conflict with the provisions of an adopted Habitat Conservation plan, Natural Community Conservation plan, or other approved local, regional, or State Habitat Conservation plan.

An evaluation of whether an impact on biological resources would be "substantial," and, therefore, a significant impact, must consider both the resource itself and the significance threshold criteria being evaluated. For example, because most plant and animal species are dependent on native habitats to satisfy various life cycle requirements, a habitat-based approach that addresses the overall biological value of a particular vegetation community or habitat area is appropriate when determining whether or not alteration of that habitat will substantially affect special-status species, sensitive habitats, wetlands, or movement corridors. The relative biological value of a particular habitat area—its functions and values—can be determined by such factors as disturbance history, biological diversity, its importance to particular plant and wildlife species, its uniqueness or sensitivity status, the surrounding environment and the presence or absence of special-status resources.

However, direct impacts to specific plant and wildlife resources (e.g., active nests and individual plants and animals) are also evaluated and discussed when impacts to these resources, in and of themselves, could be considered significant or conflict with local, state, and federal statutes or regulations. The significance of direct impacts to individuals or populations of plant and animal species takes into consideration the number of individual plants or animals potentially affected, how common or uncommon the species is both on the project site and from a regional perspective and the species' sensitivity status according to resource agencies. These factors are evaluated based on the results of biological surveys and studies, results of literature and database reviews, discussions with biological experts, and established and recognized ecological and biodiversity theory and assumptions.

For the purposes of this impact analysis, "special-status species" refers to the following:

- Officially listed by California or the Federal Government as Endangered, Threatened, or Rare;
- A candidate for state or federal listing as Endangered, Threatened, or Rare;
- Taxa which meet the criteria for listing, even if not currently included on any list, as described in Section 15380 of the *State CEQA Guidelines*; these taxa may indicate "none" under listing status, but note that all CNPS List 1 and 2 and some List 3 plants may fall under Section 15380 of *State CEQA Guidelines*.
- A Bureau of Land Management, U.S. Fish and Wildlife Service, or U.S. Forest Service Sensitive Species;
- Taxa listed in the CNPS Inventory of Rare and Endangered plants of California;
- Taxa considered by the CDFG to be a Species of Special Concern (SSC);

- Taxa that are biologically rare, very restricted in distribution, declining throughout their range, or have a critical, vulnerable stage in their life cycle that warrants monitoring;
- Population(s) in California that may be peripheral to the major portion of a taxon's range but are threatened with extirpation in California;
- Taxa closely associated with a habitat that is declining in California at a significant rate (e.g., wetlands, riparian, vernal pools, old growth forests, desert aquatic systems, native grasslands, valley shrubland habitats, etc.); and
- Taxa designated as a special-status, sensitive, or declining species by other state or federal agencies, or non-governmental organization (NGO).

IMPACT ANALYSIS

This impact analysis section evaluates the potential effects of the proposed Area Plan policies on biological resources within the County's Planning Area using the *State CEQA Guidelines* threshold of significance.

Impact 3.7-1: **There will be a potentially significant impact either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by the CDFG or USFWS.**

The proposed Area Plan would limit development in designated SEAs by requiring that development is sited and designed to account for and be highly compatible with resources in the SEAs. Specific development standards shall be identified to limit the types of land use, density, building location and size, roadways and other infrastructure, landscape, drainage, and other elements to assure the protection of the critical and important plant and animal habitats of each SEA. In general, the principle shall be to minimize the intrusion and impacts of development in these areas with sufficient setbacks, or buffers, to adequately protect the resources (**Policy 3.2.4**).

At least 92 special-status species have been reported from the County's Planning Area, and all natural or semi-natural habitat types within the County's Planning Area may potentially support one or more of these species. Each habitat type within the County's Planning Area will be potentially impacted to some degree by implementation of the proposed Area Plan, and therefore, implementation of the proposed Area Plan may result in the potential direct mortality of individuals of candidate, sensitive, or special-status species or loss of habitat occupied by such species. Implementation of the Area Plan may therefore have a substantial adverse effect, either directly or through habitat modifications, on species identified as

candidate, sensitive, or special-status in local or regional plans, policies, or regulations or by the CDFG or USFWS. This impact is considered to be significant at the plan level. The proposed policies focus primarily on avoidance and minimization of impacts to habitats, and also provide for the acquisition of habitats in cooperation with conservation groups, as stated in the policies discussed below.

The concentration of development in previously disturbed areas, and the requirements that natural areas be adequately buffered from development, and that natural site elements be preserved (**Policies CO 3.1.1, 3.1.2,** and **3.1.6**) will act to discourage sprawling development patterns, thereby reducing human encroachment into special-status species habitats. Proper documentation of biological resources, disclosure of the potential impacts of development (**Policy CO 3.1.3**) and public education on the biological attributes of the Valley (**Policies CO 3.7.1** and **CO 3.7.2**) will encourage informed decision making and project planning. Protection of wetlands and woodlands, state and federal-listed species habitats, and habitats within SEAs and along the Santa Clara River and its tributaries (**Policies CO 3.2.1** through **3.2.4,** and **CO 3.3.1**) will also help to preserve habitats required by a large suite of special status species.

Coordination with the US Forest Service, adoption of its principles for forest management, maintenance of the rural character of areas adjacent to the National Forest, and cooperation with the Forest Service in future planning efforts (**Policies CO 3.4.1** through **3.4.4**); as well as maintenance of a circum-Valley greenbelt, preservation of the Santa Clara River and major tributaries, acquisition of natural open space for the preservation of habitat linkages, fostering of partnerships with conservation groups and regulatory agencies, and securing of funding for open-space management and protection (**Policies CO 10.1.1, 10.1.2, 10.1.3, 10.1.11, 10.1.12, 10.1.14**), will encourage the preservation of core habitats and populations within larger expanses of natural open space and riparian networks at the periphery of development.

Minimization of edge effects such as light trespass, urban runoff, and un-controlled off-road vehicle use (**Policies CO 3.6.1, 3.6.2,** and **3.6.3**) will encourage the viability of open space directly adjacent to the developed environment, which often may abut special-status species habitats such as the Santa Clara River. Likewise, maintenance and enhancement of the urban forest (**Policies CO 3.5.1, 3.5.2,** and **3.5.3**) may help provide additional habitat value for numerous bird species, including special-status species such as Lawrence's goldfinch and Cooper's hawk, dependant on oak-based resources for shelter and foraging opportunities.

Proposed Area Plan Policies

The full wording of the above-referenced policies is provided below. These proposed Area Plan policies directly or indirectly address the mortality of individuals of special-status species or loss of habitat occupied by such species.

Policy CO 3.1.1: On the Land Use Map and through the development review process, concentrate development into previously developed or urban areas to promote infill development and prevent sprawl and habitat loss, to the extent feasible.

Policy CO 3.1.2: Avoid designating or approving new development that will adversely impact wetlands, floodplains, threatened or endangered species and habitat, and water bodies supporting fish or recreational uses, and establish an adequate buffer area as deemed appropriate through site specific review.

Policy CO 3.1.3: On previously undeveloped sites ("greenfields"), identify biological resources and incorporate habitat preservation measures into the site plan, where appropriate. (This policy will generally not apply to urban infill sites, except as otherwise determined by the reviewing agency).

Policy CO 3.1.6: On development sites, preserve and enhance natural site elements including existing water bodies, soil conditions, ecosystems, trees, vegetation and habitat, to the extent feasible.

Policy CO 3.2.1: Protect wetlands from development impacts, with the goal of achieving no net loss (or functional reduction) of jurisdictional wetlands within the planning area.

Policy CO 3.2.2: Ensure that development is located and designed to protect oak, sycamore, and other significant indigenous woodlands. (Guiding Principle #9)

Policy CO 3.2.3: Ensure protection of any endangered or threatened species or habitat, in conformance with State and federal laws.

Policy CO 3.2.4: Protect biological resources in the designated Significant Ecological Areas (SEAs) through the siting and design of development which is highly compatible with the SEA resources. Specific development standards shall be identified to control the types of land use, density, building location and size, roadways and other infrastructure, landscape, drainage, and other elements to assure the protection

of the critical and important plant and animal habitats of each SEA. In general, the principle shall be to minimize the intrusion and impacts of development in these areas with sufficient controls to adequately protect the resources. (Guiding Principle #10)

Policy CO 3.3.1: Protect the banks and adjacent riparian habitat along the Santa Clara River and its tributaries, to provide wildlife corridors.

Policy CO 3.4.1: Coordinate with the United States Forest Service on discretionary development projects that may have impacts on the National Forest.

Policy CO 3.4.2: Consider principles of forest management in land use decisions for projects adjacent to the National Forest, including limiting the use of invasive species, discouraging off-road vehicle use, maintaining fuel modification zones and fire access roads, and other measures as appropriate, in accordance with the goals set forth in the Angeles National Forest Land Management Plan.

Policy CO 3.4.3: On the Land Use Map, maintain low density rural residential and open space uses adjacent to forest land, and protect the urban-forest interface area from overdevelopment.

Policy CO 3.4.4: Participate as a stakeholder in planning efforts by the United States Forest Service for land uses within the National Forest, providing input as appropriate.

Policy CO 3.5.1: Continue to plant and maintain trees on public lands and within the public right-of-way to provide shade and walkable streets, incorporating measures to ensure that roots have access to oxygen at tree maturity, such as use of porous concrete.

Policy CO 3.5.2: Where appropriate, promote planting of trees that are native or climactically appropriate to the surrounding environment, emphasizing oaks, sycamores, maple, walnut, and other native species in order to enhance habitat, and discouraging the use of introduced species such as eucalyptus, pepper trees, and palms except as ornamental landscape features.

Policy CO 3.5.3: Pursuant to the requirements of the Zoning Ordinance, protect heritage oak trees that, due to their size and condition, are deemed to have exceptional value to the community.

Policy CO 3.6.1: Minimize light trespass, sky-glow, glare, and other adverse impacts on the nocturnal ecosystem by limiting exterior lighting to the level needed for safety and comfort; reduce unnecessary lighting for landscaping and architectural purposes, and encourage reduction of lighting levels during non-business nighttime hours.

Policy CO 3.6.2: Reduce impervious surfaces and provide more natural vegetation to enhance microclimates and provide habitat. In implementing this policy, consider the following design concepts:

- Consideration of reduced parking requirements, where supported by a parking study and/or through shared use of parking areas;
- Increased use of vegetated areas around parking lot perimeters; such areas should be designed as bioswales or as otherwise determined appropriate to allow surface water infiltration;
- Use of connected open space areas as drainage infiltration areas in lieu of curbed landscape islands, minimizing the separation of natural and landscaped areas into isolated "islands";
- Breaking up large expanses of paving with natural landscaped areas planted with shade trees to reduce the heat island effect, along with shrubs and groundcover to provide diverse vegetation for habitat.

Policy CO 3.6.3: Restrict use of unauthorized off-road vehicles within sensitive habitat areas through signage, fencing, or other means as appropriate.

Policy CO 3.7.1: Support the public education programs offered at the Placerita Canyon Nature Center and Ed Davis Park (Sonia Thompson Nature Center).

Policy CO 3.7.2: Seek opportunities for partnerships with schools, non-profit organizations, and volunteers, to increase public access to and information about natural areas.

Policy CO 10.1.1: Provide and protect a natural greenbelt buffer area surrounding the entire Santa Clarita Valley, which includes the Angeles National Forest, Santa Susana, San Gabriel, and Sierra Pelona Mountains, as a regional recreational, ecological, and aesthetic resource. (Guiding Principle #5)

Policy CO 10.1.2: The Santa Clara River corridor and its major tributaries shall be preserved as open space to accommodate storm water flows and protect critical plant and animal species, as follows: (Guiding Principle #6)

a. Uses and improvements within the corridor shall be limited to those that benefit the community's use of the river in its natural state.

b. Development on properties adjacent to, but outside of the defined primary river corridor shall be:

   i. Located and designed to protect the river's water quality, plants, and animal habitats by controlling the type and density of uses, drainage runoff (water treatment) and other relevant elements; and

   ii. Designed to maximize the full range of river amenities, including views and recreational access, while minimizing adverse impacts to the river.

Policy CO 10.1.3: Through dedications and acquisitions, obtain open space needed to preserve and protect wildlife corridors and habitat, which may include land within SEA's, wetlands, woodlands, water bodies, and areas with threatened or endangered flora and fauna.

Policy CO 10.1.11: Partner with conservation agencies and other entities to acquire and maintain open space, combining funding and other resources for joint-use projects, where appropriate.

Policy CO 10.1.12: Identify, pursue, and ensure adequate funding sources to maintain open space areas.

Policy CO 10.1.14: Protect open space from human activity that may harm or degrade natural areas, including but not limited to off road motorized vehicles, vandalism, campfires, overuse, pets, noise, excessive lighting, dumping, or other similar activities.

Effectiveness of the Proposed Area Plan Policies

The proposed Area Plan Policies do not provide a mechanism for the compensation of lost habitats when avoidance or minimization of impacts is considered to be infeasible, nor do they mitigate for the direct mortality of individuals of listed, proposed, or candidate species. Implementation of the proposed Area Plan policies and mitigation measures **MM 3.7-1** through **3.7-3** are proposed to reduce these impacts. **MM 3.7-1** requires preparation of biological site survey reports prepared by a qualified biological

consultant for proposed projects. **MM 3.7-2** addresses direct mortality of special-status species loss through construction activities. **MM 3.7-3** addresses impacts on sensitive habitats from implementation of the proposed Area Plan through land acquisition.

Although the loss of sensitive habitats may be compensated for through land acquisition, the loss of special-status species would remain significant since special-status species are dependant on a variety of habitat types, not all of which are necessarily sensitive, such as annual grassland and various common scrub and chaparral types. Consequently, the conversion of all types of currently undeveloped wildlife habitat to Residential, Commercial and Industrial uses permitted under the Area Plan would result in impacts to special-status species that will remain significant at the plan level.

Plan to Plan Analysis

Both the proposed Area Plan and the existing Area Plan contain policies that address the loss of habitat. Development allowed in both the existing and proposed Area Plans would result in similar significant impacts to special status species at the plan level.

Impact 3.7-2: **There will be a potentially significant effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the CDFG or USFWS.**

Sensitive terrestrial communities reported to the CNDDB in the Planning Area include southern California threespine stickleback stream, Riversidian alluvial fan sage scrub, valley needlegrass grassland, canyon live oak ravine forest, southern coast live oak riparian forest, southern cottonwood willow riparian forest, southern mixed riparian forest, southern riparian forest, southern riparian scrub, southern sycamore alder riparian woodland, southern willow scrub, California walnut woodland, valley oak woodland, mainland cherry forest, and vernal pools.

The proposed Area Plan would preserve the Santa Clara River corridor and its major tributaries as open space to accommodate storm water flows and protect critical plant and animal species (riparian vegetation, fish, etc.). Uses and improvements within the river and its major tributaries would be sited and designed to protect the river's water quality, plants, and animal habitats, controlling the type and density of uses, drainage runoff (water treatment), and other relevant elements.

The proposed Area Plan would require that development is located and designed to protect oak and other significant indigenous woodlands, and that biological resources in the designated SEAs are protected through the siting and design of development to account for and be highly compatible with

these resources. Specific development standards shall be identified to control the types of land use, density, building location and size, roadways and other infrastructure, landscape, drainage, and other elements to assure the protection of the critical and important plant and animal habitats of each SEA. In general, the principle shall be to minimize the intrusion and impacts of development in these areas with sufficient setbacks, or buffers, to adequately protect the resources.

Nevertheless, recreational access and necessary infrastructural improvements (bridges, storm drains, etc.) within and immediately adjacent to riverine habitats will be allowed under the Area Plan, and Urban Residential, Commercial, and Industrial land uses adjacent to the Santa Clara River SEA may potentially impact riparian habitat and other sensitive natural communities. Implementation of the Area Plan may therefore have a substantial adverse effect on riparian habitat and other sensitive natural communities identified in local or regional plans, policies, or regulations or by the CDFG, USACE or USFWS. This impact would be considered significant at the plan level.

The proposed policies of the Area Plan focus primarily on avoidance and minimization of impacts to habitats. The concentration of development in previously disturbed areas, and the requirements that natural areas be adequately buffered from development, and that natural site elements be preserved (**Policies CO 3.1.1, 3.1.2,** and **3.1.6**) will act to discourage sprawling development patterns, thereby reducing human encroachment into sensitive habitats. Proper documentation of biological resources and disclosure of the potential impacts of development (**Policy CO 3.1.3**) and public education on the biological attributes of the Valley (**Policies CO 3.7.1** and **CO 3.7.2**) will encourage informed decision making and project planning. Protection of sensitive wetland and woodland habitats, state and federal-listed species habitats, and habitats within SEAs and along the Santa Clara River and its tributaries (**Policies CO 3.2.1, 3.2.2, 3.2.3,** and **3.2.4, 3.3.1**) will also help to preserve those habitats within the Planning Area. Restoration of habitats, use of native species in landscaping plans, proper implementation of protective measures during construction, limited use of turf grass on development sites, and integration of design features that promote tree health (**Policies CO 3.1.4, 3.1.7,** and **3.1.9**) will encourage relatively high ecological function of semi-natural habitats otherwise potentially degraded by development.

Coordination with the US Forest Service, adoption of its principles for forest management, maintenance of the rural character of areas adjacent to the National Forest, and cooperation with the Forest Service in future planning efforts (**Policies CO 3.4.1** through **3.4.4**); as well as maintenance of a circum-Valley greenbelt, preservation of the Santa Clara River and major tributaries, acquisition of natural open space for the preservation of habitat linkages, fostering of partnerships with conservation groups and regulatory agencies, securing funding for open-space management and protection (**Policies CO 10.1.1,**

10.1.2, 10.1.3, 10.1.11, 10.1.12, 10.1.14), will encourage the preservation of core habitats within larger expanses of natural open space and riparian networks at the periphery of development.

Management of a healthy urban forest and minimization of edge effects such as light trespass, urban runoff, un-controlled off-road vehicle use, invasive species (**Policies CO 3.5.1, CO 3.5.2, CO 3.5.3, CO 3.6.1** through **3.6.5**) will encourage the viability of open space directly adjacent to the developed environment, which often may abut special-status species habitats such as the Santa Clara River.

Proposed Area Plan Policies

The full wording of the above-referenced policies is provided below if not already given in a previous section. These proposed plan policies will directly or indirectly address the adverse effects of development on riparian habitat and other sensitive natural communities.

Policy CO 3.1.4: For new development on sites with degraded habitat, include habitat restoration measures as part of the project development plan, where appropriate.

Policy CO 3.1.7: Limit the use of turf-grass on development sites and promote the use of native or adapted plantings to promote biodiversity and natural habitat.

Policy CO 3.1.9: During construction, ensure preservation of habitat and trees designated to be protected through use of fencing and other means as appropriate, so as to prevent damage by grading, soil compaction, pollution, erosion or other adverse construction impacts.

Policy CO 3.6.4: Provide public information and support with demonstration sites at County facilities on gardening and landscaping techniques to reduce spread of invasive species and pollution from pesticides and fertilizers that threaten natural ecosystems.

Policy CO 3.6.5: Ensure revegetation of graded areas and slopes adjacent to natural open space areas with native plants (consistent with fire prevention requirements).

Effectiveness of the Proposed Area Plan Policies

The policies do not provide a mechanism for the compensation of lost habitats when avoidance or minimization of impacts is considered to be infeasible. In conjunction with the proposed Area Plan policies, mitigation measure **MM 3.7-1** is proposed to prioritize preservation of habitat types that are

particularly at risk in the region, in order to reduce impacts to riparian and other sensitive habitats to a level that is less than significant at the plan level.

Plan to Plan Analysis

Both the proposed Area Plan and the existing Area Plan do not contain policies that address the compensation for lost habitats when avoidance is considered infeasible. However, the proposed Area Plan proposes mitigation that would reduce impacts to less than significant. Therefore impacts would be less under the proposed Area Plan.

Impact 3.7-3: **There will be a potentially significant 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.**

The proposed plan would preserve as open space the Santa Clara River corridor and its major tributaries to accommodate storm water flows and protect critical plant and animal species (riparian vegetation, fish, etc.), and development on properties adjacent to, but outside of the defined primary river corridor, shall be located and designed to protect the river's water quality, plants, and animal habitats, controlling the type and density of uses, drainage runoff (water treatment), and other relevant elements. Nevertheless, because the identification of federally protected wetlands is a procedure that is conducted during the planning and analysis of specific development projects, it is not currently known where all of the federally protected wetlands within the County's Planning Area may be. Thus, federally protected wetlands outside of the primary river corridor may potentially be impacted by development, and implementation of the plan may therefore 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. This impact would be significant at the plan level.

The proposed policies focus primarily on avoidance and minimization of impacts to habitats. The concentration of development in previously disturbed areas, and the requirements that natural areas be adequately buffered from development, and that natural site elements be preserved (**Policies CO 3.1.1, 3.1.2,** and **3.1.6**) will act to discourage sprawling development patterns, thereby reducing human encroachment into undeveloped wetland areas. Proper documentation of biological resources and disclosure of the potential impacts of development (**Policy CO 3.1.3**) and public education on the biological attributes of the Valley (**Policies CO 3.7.1** and **CO 3.7.2**) will encourage recognition of wetland

values during project planning and review and informed decision making. Protection of sensitive wetland and woodland habitats, state and federal-listed species habitats, and habitats within SEAs and along the Santa Clara River and its tributaries (**Policies CO 3.2.1, 3.2.2, 3.2.3,** and **3.2.4, 3.3.1**) will also help to protect wetland habitats within the Planning Area. Use of native species in landscaping plans, proper implementation of protective measures during construction, and integration of design features that discourage excessive runoff from developed areas (**Policies CO 3.1.5, 3.1.7,** and **3.1.9**) will encourage relatively equivalent function of mitigation habitats.

Minimization of edge effects such as urban runoff, un-controlled off-road vehicle use, and invasive species (**Policies CO 3.6.2, 3.6.3, 3.6.4, 3.6.5**) will encourage the viability of natural and created wetland areas directly adjacent to the developed environment.

Proposed Area Plan Policies

The full wording of the above-referenced policies is provided below if not already given in a previous section. These proposed Area Plan policies will directly or indirectly address the adverse effect of development on federally protected wetlands.

Policy CO 3.1.5: Promote the use of site-appropriate native or adapted plant materials, and prohibit use of invasive or noxious plant species in landscape designs.

Effectiveness of the Proposed Area Plan Policies

In combination with requirements for Section 404 permitting, the proposed policies summarized above will reduce impacts resulting from implementation of the plan to a level that is less than significant at the plan level. Thus no significant impacts to jurisdictional wetlands are anticipated and no mitigation is proposed.

Plan to Plan Analysis

Both the proposed Area Plan and the existing Area Plan contain policies that address the loss of wetland habitat. Development allowed in both the existing and proposed Area Plans would be subject to the requirements for Section 404 permitting, reducing impacts to less than significant. Impacts would be similar between the two plans.

Impact 3.7-4: **There will be a potentially significant impact if the proposed Area Plan will interfere 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.

The County's proposed Area Plan would preserve as a regional recreational, ecological, and aesthetic resource, the natural buffer area surrounding the entire Valley, including areas within the Angeles National Forest and Santa Susanna, San Gabriel, and Sierra Pelona Mountains. The plan would also preserve as open space the Santa Clara River corridor and its major tributaries to protect critical plant and animal species. Development within designated SEAs would be sited and designed with sufficient setbacks, or buffers, to adequately protect the resources therein.

Despite these protections, portions of the Santa Monica-Sierra Madre Connection, the Sierra Madre-Castaic Connection, and the San Gabriel-Castaic Connection[10] would be potentially impacted by development allowed under the proposed Area Plan. This impact would be potentially significant, as these linkages are all that remain in terms of viable linkages providing for the exchange of individuals and genetic information among populations in the core habitat areas of the of the Santa Monica, Sierra Madre, Castaic, and the San Gabriel Mountains that may otherwise become isolated if the linkages are severed. Implementation of the plan may therefore interfere substantially with the movement of native resident or migratory fish and wildlife species and with established native resident or migratory wildlife corridors, and may impede the use of native wildlife nursery sites. This impact is significant at the plan level.

The proposed policies summarized in this section provide for the acquisition of habitats in cooperation with conservation groups, and provide for the identification and protection of at least one designated wildlife corridor linking the two units of the Angeles National Forest through the Valley. The concentration of development in previously disturbed areas, and the requirements that natural areas be adequately buffered from development, and that natural site elements be preserved (**Policies CO 3.1.1, 3.1.2,** and **3.1.6**) will act to discourage sprawling development patterns, thereby encouraging the continued value of the natural areas within and around the Valley to function as conduits for genetic exchange and individual movement. Proper documentation of biological resources, disclosure of the potential impacts of development (**Policy CO 3.1.3**) and public education on the biological attributes of the Valley (**Policies CO 3.7.1** and **CO 3.7.2**) will encourage project planning that accommodates species movement requirements as well as informed decision making.

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10 Penrod, K, C Cabañero, P Beir, C Luke, W Spencer, and E Rubin. 2004. South Coast Missing Linkages Project: A Linkage Design for the San Gabriel – Castaic Connection. South Coast Wildlands, Idyllwild, CA. Available online at http://www.scwildlands.org.

Protection of sensitive wetland and woodland habitats, state and federal-listed species habitats, and habitats within SEAs and along the Santa Clara River and its tributaries (**Policies CO 3.2.1, 3.2.2, 3.2.3,** and **3.2.4, 3.3.1**) will also help to preserve linkage functions within those communities for aquatic and riparian-obligate species. Restoration of habitats, use of native or adapted species in landscaping plans, and the promotion of a high ratio of open space to developed area (**Policies CO 3.1.4, 3.1.5, 3.1.7,** and **3.1.10**) will encourage the use of semi-natural habitats by human-tolerant native species adjacent to development.

Extension of the Rim of the Valley trail system, protection of one or more arms of the San Gabriel – Castaic Connection, maintenance of the Santa Clarita Woodlands Park, and encouragement of connectivity between open space area in site design (**Policy CO 3.3.2, 3.3.3, 3.3.4,** and **3.3.5**); as well as maintenance of a circum-Valley greenbelt, preservation of the Santa Clara River and major tributaries, acquisition of natural open space for the preservation of habitat linkages, maintenance of canyons and ridgelines as open space, fostering of partnerships with conservation groups and regulatory agencies, securing funding for open-space management and protection (**Policies CO 10.1.1, 10.1.2, 10.1.3, 10.1.5, 10.1.11, 10.1.12, 10.1.14**), will encourage the preservation of core habitats within larger expanses of natural open space and riparian networks at the periphery of development.

Minimization of edge effects such as light trespass, urban runoff, un-controlled off-road vehicle use, invasive species (**Policies CO 3.6.1, 3.6.2, 3.6.3, 3.6.5**) will encourage the viability of open space directly adjacent to the developed environment, which often may abut special-status species habitats such as the Santa Clara River.

Proposed Area Plan Policies

The full wording of the above-referenced policies is provided below if not already given in a previous section. These proposed Area Plan policies will directly or indirectly address the adverse effects of development on the movement of native resident or migratory fish and wildlife species, native resident or migratory wildlife corridors, and native wildlife nursery sites.

Policy CO 3.1.10: To the extent feasible, encourage the use of open space to promote biodiversity.

Policy CO 3.3.2: Cooperate with other responsible agencies to protect, enhance, and extend the Rim of the Valley trail system through Elsmere and Whitney Canyons, and other areas as appropriate, to provide both recreational trails and wildlife corridors linking the Santa Susana and San Gabriel Mountains.

Policy CO 3.3.3: Identify and protect one or more designated wildlife corridors linking the Los Padres and Angeles National Forests through the Santa Clarita Valley (the San Gabriel-Castaic connection).

Policy CO 3.3.4: Support the maintenance of Santa Clarita Woodlands Park, a critical component of a cross-mountain range wildlife habitat corridor linking the Santa Monica Mountains to the Angeles and Los Padres National Forests.

Policy CO 3.3.5: Encourage connection of natural open space areas in site design, to allow for wildlife movement.

Policy CO 10.1.5: Maintain open space corridors along canyons and ridgelines as a way of delineating and defining communities and neighborhoods, providing residents with access to natural areas, and preserving scenic beauty.

Effectiveness of the Proposed Area Plan Policies

The proposed policies do not provide for the compensation of lost wildlife movement opportunities or nursery sites when avoidance or minimization of impacts is considered to be infeasible. Loss of connectivity between the two units of the Angeles National Forest would not be compensated for since the intervening habitats would be the only ones which would provide the necessary avenues of exchange. Therefore, this potential loss would not be adequately mitigated, and the impact of development would remain significant in the event that avoidance of impacts to habitat linkages arising from said development is considered infeasible.

Plan to Plan Analysis

Both the proposed Area Plan and the existing Area Plan contain policies that address the movement of wildlife. Nonetheless, impacts to said open space corridors with development allowed by both Plans would result in significant impacts. Impacts to movement corridors under both plans would be similar.

Impact 3.7-5: **There will be a potentially significant conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.**

The County's proposed Area Plan would protect oak and other significant indigenous woodlands and would protect biological resources in the designated SEAs through the siting and design of development to account for and be highly compatible with these resources. Additionally, the proposed Area Plan does not incorporate any changes to the Los Angeles County Oak Tree Ordinance or to the City of Santa

Clarita's Oak Tree Preservation ordinance. These ordinances are applied on a project-specific basis regardless of underlying land-use regulations. Furthermore, the proposed Area Plan incorporates a new set of policies for the protection of biological resources to which new developments would be required to conform. Therefore, the County's proposed Area Plan would not conflict with the implementation of local protective policies and ordinances.

Plan to Plan Analysis

Both the proposed Area Plan and the existing Area Plan contain policies that address the preservation of oak trees. Impacts to oak trees under both plans would be similar.

Impact 3.7-6: **There will be a potentially significant conflict with the provisions of an adopted Habitat Conservation plan, Natural Community Conservation plan, or other approved local, regional, or State Habitat Conservation plan.**

The County's Planning Area contains areas designated or proposed as critical habitat for unarmored threespine stickleback, arroyo toad, California red-legged frog, coastal California gnatcatcher, California condor, and least Bell's vireo, and specific development projects would be subject to consultation with the U.S. Fish and Wildlife Service if impacts to any of these species were to result from project implementation involving a federal action. However, it does not contain any areas falling within the purview of an adopted Habitat Conservation Plan, Natural Community Conservation plan, or other approved local, regional, or State Habitat Conservation Plan. Implementation of the plan would therefore not conflict with the provisions of such a conservation plan.

Plan to Plan Analysis

The County's Planning Area does not contain any areas that contain an adopted Habitat Conservation Plan, Natural Community Conservation plan, or other approved local, regional, or State Habitat Conservation Plan. Consequently, there would be no impacts under the existing or proposed Plans.

MITIGATION FRAMEWORK

Implementation of the following mitigation measures would reduce biological impacts related to direct mortality of special-status species and on sensitive habitats to a less than significant level.

MM 3.7-1: Biological site survey reports shall include an analysis of the potential for a proposed project to result in direct mortality of individuals of listed, proposed, or candidate

species, losses of habitats occupied by such species, and losses of opportunity for habitat connectivity.

Reports must be prepared by qualified biological consultants. Reports must include specific information regarding site location, on-site and surrounding biological resources, observed and detected species, site photographs, vegetation map, literature sources, timing of surveys, project footprint, anticipated project impacts, proposed mitigation measures, and additional recommended surveys.

MM 3.7-2: If special-status species may potentially be subject to direct loss through implementation of construction activities, mitigation measures proposed as part of biological site survey reports shall include a requirement for preconstruction special-status species surveys, followed by measures to ensure avoidance, relocation or safe escape of special-status species from construction activity, whichever action is the most appropriate. If special-status species are found to be brooding, denning, nesting, etc. on site during the preconstruction survey, construction activity shall be halted until offspring are weaned, fledged, etc. and are able to escape the site or be safely relocated to appropriate off-site habitat areas. A qualified biologist shall be on site to conduct surveys, to perform or oversee implementation of protective measures, and to determine when construction activity may resume.

MM 3.7-3: Impacts on sensitive habitats resulting from implementation of the Area Plan shall be compensated for through the acquisition of lands described in **Policies CO 10.1.3, CO 10.1.11** and **CO 10.1.12**. Said acquisition shall prioritize habitat types that are particularly at risk in the region. At risk habitats include but are not limited to waterways, wetlands and vernal pools; alluvial scrub; native grasslands; savannas, woodlands and forests; holly-leaf cherry and Great basin sagebrush associations; and rocklands.

SIGNIFICANCE OF IMPACTS WITH MITIGATION FRAMEWORK

Potentially significant impacts associated with the County's proposed Area Plan are those relating to:

- special-status species,
- sensitive natural communities,
- federally protected wetlands, and

- wildlife movement and nursery sites.

The proposed Area Plan policies address:

- avoidance and minimization of impacts on habitats
- provisions for the acquisition of habitats in cooperation with conservation groups
- provisions for no net loss of jurisdictional wetlands within the Planning Area
- provisions for the identification and protection of at least one designated wildlife corridor linking the two units of the Angeles National Forest through the Valley

The proposed policies do not:

- provide a mechanism for the compensation of lost habitats when avoidance or minimization of impacts is considered to be infeasible;
- mitigate for the direct mortality of individuals of listed, proposed, or candidate species; or
- provide for the compensation of lost wildlife movement opportunities or nursery sites when avoidance or minimization of impacts is considered to be infeasible.

In combination with the requirements for Section 404 permitting, the proposed policies would reduce impacts on Federally protected wetlands resulting from implementation of the Area Plan to a level that is less than significant.

In conjunction with the proposed Area Plan policies, the proposed mitigation measures would reduce impacts related to direct mortality of special-status species and on sensitive habitats to a level that is less than significant at the plan level. Impacts on special-status species would remain significant due to the amount of wildlife habitat loss that would be allowed under the Area Plan, which would not necessarily be compensated for due to the non-sensitive nature of many of the habitats utilized by special-status species (i.e., annual grassland and various scrub and chaparral types).

Additionally, impacts on wildlife movement opportunities could not be compensated for, given the loss of connectivity among core habitat areas within the Santa Monica, Santa Susana, Sierra Madre, Castaic, and San Gabriel Mountains. Therefore this potential loss would remain significant in the event that avoidance of impacts to habitat linkages arising from said development is considered infeasible.

3.8 CULTURAL RESOURCES

EXECUTIVE SUMMARY

This section presents the environmental setting and impact assessment for cultural resources in the County's Planning Area. The County's Planning Area consists of unincorporated land outside of the City's boundaries and Sphere of Influence (SOI) but within the One Valley One Vision (OVOV) Planning Area boundaries. The City's Planning Area consists of its incorporated boundaries and adopted SOI. Both the County and the City Planning Areas comprise the OVOV Planning Area. Cultural resources are defined as prehistoric and historic sites, structures, and districts, or any other physical evidence associated with human activity considered important to a culture, a subculture, or a community for scientific, traditional, religious, or any other reason. For analysis purposes, cultural resources may be categorized into three groups: archaeological resources, historic resources, and contemporary Native American resources. Paleontological resources, while not generally considered a "cultural resource," are afforded protection under *California Environmental Quality Act (CEQA) Guidelines* and as such are evaluated in this section of the environmental impact report (EIR). All impacts related to cultural and paleontological resources with the implementation of mitigation measures were found to be less than significant.

EXISTING CONDITIONS

Prehistory—Paleontology

Resource information on paleontological history is not discussed specifically for the OVOV Planning Area, but for the Greater Los Angeles Area (Los Angeles County, Orange County, portions of Ventura County, Riverside County, etc.) as a whole. During the Miocene and Pliocene Periods (23.7 to 1.6 million years ago), most of the greater Los Angeles Basin and the surrounding hills, including the Santa Clarita Valley, was submerged. Los Angeles County is one of the richest areas in the world for both fossil marine vertebrates and land vertebrates from rock deposited over the last 25 million years. Although Rancho La Brea (in the City of Los Angeles) has been highly publicized, there are many other areas of Los Angeles County, including the Santa Clarita Valley, that contain equally important fossil occurrences.

The richness of fossils in the County is due to several major series of events in the geologic history of the area. During the Miocene and Pliocene time (between 1.6 and 23.7 million years ago), most of what is now the greater Los Angeles Basin and the surrounding hills, including the Santa Clarita Valley and surrounding mountains, was submerged beneath the Pacific Ocean. Thousands of feet of sand, mud, and

other materials were deposited on the ocean bottom. Marine animals and shore birds were buried in these deposits as they died and sank to the bottom. Through time, many of these specimens became fossilized.

During the Pleistocene age, movement of and collision between tectonic plates elevated much of this area above the ocean and formed hills and mountains where the ocean bottom and valleys once existed. Erosion cut through these older sediments, as they were uplifted from the terrain that now exists.

Over 1,100 vertebrate fossil localities within the County are known. Most of these localities are generally scattered within 700 square miles (about 17 percent of the County) of hilly terrain that is underlain by fossil-producing rock formations. A substantial portion of these 700 square miles have been developed, and much of the remaining area is threatened, particularly areas surrounding the Santa Clarita Valley, including the Santa Susana Mountains to the southwest and the Sierra Pelona Mountains on the north.[1]

As development encroaches into the foothills of these ranges, the paleontological resources that may be present within these areas are subject to a greater risk of damage or destruction. Additional risk factors include the lack of outward visibility of these resources (they are often buried, sometimes under substantial quantities of earth) and a lack of information regarding specific locations of these resources in some portions of the City's Planning Area.

Prehistory and Archaeology

Early man arrived in the Santa Clarita Valley 18,000 to 25,000 years ago during the migration across the Bering land bridge. The earliest physical evidence of human occupation in the Upper Santa Clara River Area dates from 7,000 to 4,000 years before present (BP), and was recovered from two sites near Vasquez Rocks. The identity of the area's first inhabitants is unknown. The Tataviam peoples, Uto-Aztecan speakers of Shoshonean descent, began to reach the OVOV Planning Area in approximately 450 A.D. They were described as a distinct linguistic group when they were first encountered in 1776 by Spanish explorer Pedro Fages.[2]

The Tataviam lived primarily on the upper reaches of the Santa Clara River, east of Piru Creek, extending north into the Antelope Valley, south to the San Gabriel Mountains, and possibly as far east as the Soledad Pass.[3] However, archaeological data indicate that subsistence patterns and ritual practice were

1 County of Los Angeles 1979.

2 King and Blackburn 1978.

3 King and Blackburn 1978; Impact Sciences, Inc. 1999.

very similar to neighboring Chumash and Gabrielino culture groups. Supporting data for this observation were recovered from archaeological sites in the OVOV Planning Area, between Newhall and Piru.[4] Tataviam village sites with known names are located at San Francisquito, Piru, Camulos, Castaic Reservoir, Piru Creek, Elizabeth Lake, and in the Newhall environs; additional archaeological sites have been recorded throughout the OVOV Planning Area, particularly along the Santa Clara River,[5] as well as in the Vasquez Rocks area.[6]

Sites of Native American cultural significance also exist within the County's Planning Area. Some are associated with archaeological sites; others are not otherwise recognizable. According to a recent study in the OVOV Planning Area, the Native American Heritage Commission (NAHC) identified three sites of Native American cultural significance in proximity to the Santa Clara River including CA-LAN-361, CA-LAN-366, and CA-LAN-367.[7] Many of the place names used today, such as Castaic, Piru, Camulos and Hasley (Islay), reflect a Tataviam linguistic origin,[8] and given the long history of Native American occupation of the OVOV Planning Area, other such sites are likely present. One site of extreme cultural significance, Bowers Cave near Val Verde, contributed one of the most significant assemblages of Native-American religious and ceremonial artifacts ever found in North America.[9] The Cave, named after the Ventura man who purchased the cave's contents from teenage discoverers, is located in the crest of the mountain at the entrance to the Chiquita Canyon Landfill.

The Historical Period

History of the Planning Area

The chronicles of the 1769 expedition from San Diego to Monterey by Spanish explorer Gaspar de Portola provided the first Euro-American documentation of the Santa Clarita Region. The expedition passed through the San Fernando Valley to Newhall, then to the Castaic Junction area, and then down the Santa Clara River to San Buenaventura and north to Monterey.[10] The trail blazed by Portola became known as

4 Impact Sciences, Inc. (1999).

5 CH2MHill (1996).

6 Impact Sciences, Inc. (1999).

7 CH2MHill (1996).

8 City of Santa Clarita (1999).

9 Jerry Reynolds, The Signal Newspaper, (1984).

10 Impact Sciences, Inc. (1999).

the El Camino Viejo (The Old Road).[11] Later, Pedro Fages, commander of the Presidio of San Diego, in 1772 traveled through Castaic Junction and Soledad Canyon in search of deserters from the army.

The Rancho San Francisco[12] which includes the western half of the Santa Clarita Valley) and the upper reaches of the Santa Clara River figured in three important episodes in Southern California, two of which are landmarks in the economic history of the state. The first is the documented discovery of gold in Placerita Canyon in 1842 by Francisco Lopez, Manuel Cota, and Domingo Bermudez. An existing oak tree near this location became known as the Oak of the Golden Dream.

The upper Santa Clarita Valley was also the first location of true oil drilling in Southern California, exploration for which began about 1865, when oil seeps were discovered in Pico Canyon. Subsequent exploration led to the discovery of oil in Rancho San Francisco and throughout the Valley. The crossing of the Southern Pacific Railroad through the region, along with the development of the Newhall oil field and the Pioneer Oil Refinery (the predecessor of Chevron Oil) in 1874 (it was moved to its present location in 1876), initiated an oil boom in the area. The third major local historical event was the failure of the St. Francis Dam and the resulting flood of the river valley on March 12 and 13, 1928. The flood caused at least 450 deaths and destroyed 990 homes and large areas of orchards.[13]

American explorer John C. Fremont, who would later challenge Abraham Lincoln for the Republican nomination of US president, arrived at Castaic Junction with his "Buckskin Battalion" in 1847, after following the future route of State Route (SR) 126 from Ventura. After camping for two days in the Santa Clarita Valley, he crossed into the San Fernando Valley near the present alignment of Sierra Highway. Near the current Universal Studios Hollywood, he accepted the surrender of California from Gen Andres Pico. The crossing through the mountains occurred at what is now known as Fremont Pass. In 1854, Phineas Banning made a 30-foot cut in the pass to allow the first stagecoach through the pass.

The Butterfield Overland Stage took the "Great Southern" or "Oxbow" route from St. Louis to San Francisco over Fremont Pass from 1858 until the outbreak of the Civil War in 1861. In 1863, under a construction contract awarded by the Los Angeles County Board of Supervisors, General Edward F. Beale's workers cut a 90-foot-deep passageway through the pass between the present alignments of SR-14 and Sierra Highway to improve the roadway. Beale had also constructed a toll house when the pass was

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11 City of Santa Clarita (1999).

12 California Office of Historic Preservation, "California Historical Resources," http://ohp.parks.ca.gov / listed_resources/default.asp?num=556, (2009).

13 Santa Clarita Valley Historical Society, "Welcome to the St. Francis Dam," http://seis.natsci.csulb.edu / VIRTUAL_FIELD/Francesquito_Dam/franmain.htm, (2002).

widened and collected toll for the right of passage for 22 years before the County halted the practice. Beale's Cut was a vital route that served the Southern California area until it was bypassed by the Newhall Tunnel in 1910. By 1915, the "Ridge Route" extended from downtown Los Angeles north through the Newhall Tunnel and into the San Joaquin Valley. The San Fernando Railroad Tunnel, the fourth longest tunnel in the world at the time of the tunnel's completion in 1876, is still used by the Union Pacific Railroad and Metrolink.

Because San Francisquito Canyon was the traditional route taken to the east, it was among the first canyons mined and settled. Gold mining continued in the canyon until the end of the 19th century, and one of the camps, Ratsburg, was mined until 1930.

By 1860, a copper boom had formed in Soledad, and a little town grew near the head of Williamson's Pass. Both copper- and gold-bearing quartz veins were mined into the 20th century, although the rush was over by 1875.[14]

In 1875, most of the Rancho San Francisco was purchased by Henry Mayo Newhall, a San Francisco entrepreneur. From that time to the present, the history of the Santa Clarita Valley has been linked to the activities of Newhall and, after his death, to the family company, The Newhall Land and Farming Company. When Newhall acquired the Rancho, he knew the Southern Pacific Railroad intended to lay tracks north out of Los Angeles to join with the Central Pacific and its connection to the Transcontinental Railroad. A rail route through his property would increase its value, so he sold an alignment to the Southern Pacific for one dollar and a square-mile townsite to the railroad's development company for another dollar.

Three months after Newhall's land purchase, the Southern Pacific began tunneling through the mountains and the San Fernando and Santa Clarita Valleys. Built with Chinese labor, at 6,940 feet the San Fernando (Railroad) Tunnel was the third-longest tunnel in the United States when it was completed on July 27, 1876. As the Southern Pacific extended track to the north, the Central Pacific was coming south to meet it. The two companies joined track near Lang Station in Canyon Country in a "golden spike" ceremony on September 5, 1876. The following month, on October 18, 1876, the Southern Pacific began subdividing the town of Newhall.

Initially the town was located at Bouquet Junction, in what would later become Saugus, named for Henry Newhall's home town in Massachusetts. Little more than a year later, in January and February 1878, the town moved 3 miles south to its present location at Old Town Newhall, probably because of better water

14 Rincon (2002).

availability from a natural artesian spring. The Pioneer Oil Refinery, which handled the oil piped from Pico Canyon and was initially set up along the wagon route in the Newhall Pass, moved to present-day Pine Street in Railroad Canyon next to the new train tracks. The earliest productive refinery on the West Coast, it operated until 1888. [15]

The community of Newhall contains many notable Hollywood movie sets and is the site of the Western Walk of Fame. Some of the Western relics in downtown Newhall include the "Tom Mix cottages" used as housing for the early motion picture industry, the American Theater (originally the Tumbleweed Theater) designed by Charles S. Lee and funded in large part by Actor William S. Hart in 1940; Melody Ranch (aka Placeritos Ranch and Monogram Ranch), built in the early 1920s and owned from 1952 to 1990 by actor Gene Autry and used as a location for hundreds of Western films, television series and commercials; and the Walt Disney Co.'s Golden Oak Ranch in nearby Placerita Canyon. Heritage Junction, located at 24107 San Fernando Road, has been set aside for the preservation of historic local structures.[16]

In 1908, the City of Los Angeles obtained rights to the watershed of the Owens Valley. Under direction of William Mulholland, chief engineer for the Los Angeles Department of Water and Power, the project was expanded in the 1920s into San Francisquito Canyon, where the St. Francis Dam was completed in 1926. From there, the aqueduct crossed the eastern end of the ranch and extended over the San Fernando Pass to the spillway above the San Fernando Reservoir. The Newhall directors also agreed to reservoir spillage of excess water into the Santa Clara River, for use by the ranch. In 1928 the concrete dam failed. The resulting flood of the river valley on March 12 and 13 caused at least 450 deaths and destroyed 990 homes and large areas of farmland. It was America's worst civil engineering failure of the 20th century. In 1932–34, the Los Angeles Department of Water and Power built a new earthen dam in Bouquet Canyon. [17]

Recognized Resources

The Santa Clarita Valley Historical Society and the California Register of Historic Resources (CRHR) list 9 historical properties, sites, and landmarks in the County's Planning Area. The approximate locations of these sites within the County's Planning Area are shown on **Figure 3.8-1, Cultural Resources Within the County's Planning Area**. The sites are listed in **Table 3.8-1, Locations of Cultural and Historical Resources in the County's Planning Area** and the descriptions of those sites are listed in **Table 3.8-2, Cultural and Historical Resources in the County's Planning Area.** Of these sites, one is a California Register of Historic Resources, five are State Historic Landmarks, and three are national Register of Historic Places.

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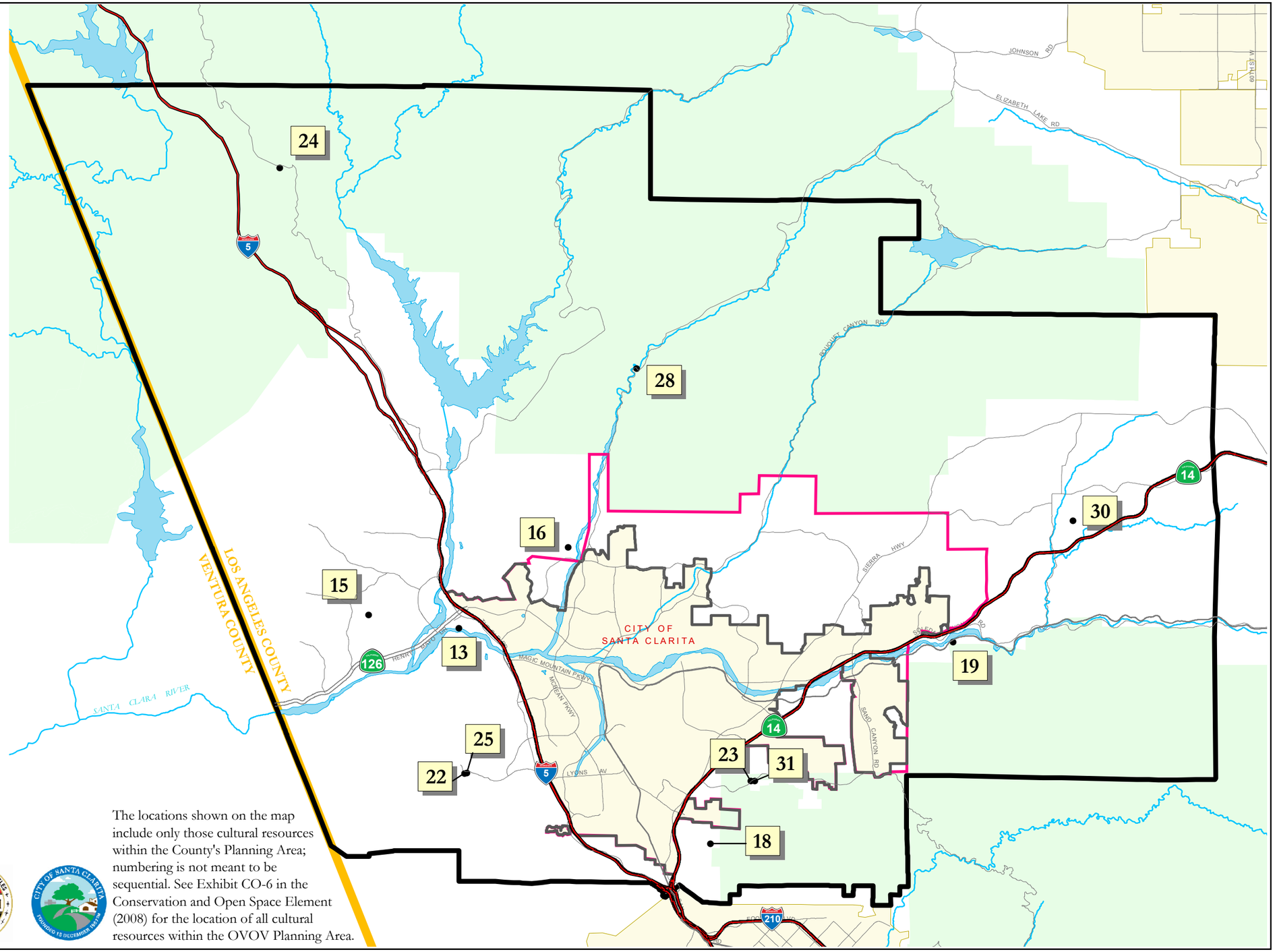
15 Rincon (2002).

16 City of Santa Clarita (1999).

17 Rincon (2002).

*NOTE ON CULTURAL RESOURCES
The locations of some of the cultural resources on this draft have been approximated.



Legend:

- Cultural Resources
- SOI
- OVOV Planning Area
- City Boundary
- Angeles National Forest
- County Boundary

Roads
- Freeway
- Highway

Hydrography
- Waterbody and Perennial Stream

NOTE: The Cultural Resouce locations are referred to by name and description in Tables 3.8-1 and 3.8-2.

Note: GIS Projection - CA State Plane, Zone 5, NAD83, Feet.

3 1.5 0 3
APPROXIMATE SCALE IN MILES

The locations shown on the map include only those cultural resources within the County's Planning Area; numbering is not meant to be sequential. See Exhibit CO-6 in the Conservation and Open Space Element (2008) for the location of all cultural resources within the OVOV Planning Area.

SOURCE: One Valley, One Vision Draft Conservation and Open Space Element, Table CO 6, 2008

FIGURE **3.8-1**

Cultural Resources Within the County's Planning Area

In addition to these sites, literature surveys prepared for recent studies identified 69 archaeological sites or isolated artifacts within 0.25 mile of the Santa Clara River as it runs through the Santa Clarita Valley.[18] Additional sites are likely present, as the river represented a major resource for Native American groups in the vicinity. Historical and archaeological sites can also be important cultural resources for Native American groups, as the activities that lead to the creation of the sites may have been ceremonial or otherwise culturally significant. This is especially true for gravesites, which are afforded special protection by state law. It is important to note, however, that not all such sites are indicated by artifactual evidence. These sites generally occur in the same types of locations as archaeological sites, often (but not always) near resource areas such as watercourses, drainages, and woodlands. These sites are also at risk from development, particularly because no outward signs are often provided, and Native Americans are reluctant to discuss the locations of these sites due to cultural taboos and/or a desire to protect the sites from intrusion.

Table 3.8-1
Locations of Cultural and Historical Resources in the County's Planning Area*

Map Reference Number	Cultural Site
13	Asistencia/Rancho San Francisco
15	Bowers Cave
16	Harry Carey Ranch
18	La Puerta
19	Lang Station
22	Mentryville
23	Oak of the Golden Dream
24	Old Ridge Route
25	Pico #4 Oil Well
28	St. Francis Dam Disaster Site
30	Vasquez Rocks
31	Walker Cabin

** Locations of historic resources are identified on **Figure 3.8-1 Cultural Resources** within the County's Planning Area using the map reference number provided in **Table 3.8-1**. The numbering of cultural resources in **Table 3.8-1** and on **Figure 3.8-1** is not intended to be sequential and represent only those resources located within the County's Planning Area. A complete listing of cultural and historical resources within the OVOV Planning Area can be found in the proposed Area Plan Conservation and Open Space Element.*
Source: Draft One Valley One Vision, Conservation and Open Space Element, pg CO-39, 2008.

18 CH2MHill (1996).

Table 3.8-2
Cultural and Historical Resources in the County's Planning Area

Cultural Site	Historical Significance
Asistencia/Rancho San Francisco (State Historic Landmark #556) West of Magic Mountain Parkway near SR-126 (Plaque located at Blue Moon Restaurant), Castaic Map Reference Number (MRN 13)	The Santa Clara River Valley was a part of Mission San Fernando in 1797. A granary and estencia (outpost) was established here in 1804.
Bowers Cave MRN 15	Discovery site of significant Native American cultural artifacts. Located in the hillside at the entry to Chiquita Canyon Landfill.
Harry Carey Ranch Historic District (California Register of Historical Resources) 28515 San Francisquito Canyon Road MRN 16	This complex contains historic buildings associated with western film actor Harry Carey, who purchased the property for a residence and filming in 1916. Nine buildings of the complex comprise the Harry Carey Historic District. Harry and Olive Carey had the ranch house and its various outbuildings built during the 1920s and 1930s, a period when they and their children lived at the ranch. Carey's 20-year career included more than 200 films. In 2005, the County accepted the donation of the Historic District from the property owner as part of the approval process for an adjacent housing development. The significance of the district is based not only on its role in the early film industry, but on the character and quality of the ranch buildings and the main residence known as the Tesoro Adobe. The property is maintained as a museum by the County of Los Angeles.
La Puerta MRN 18	The "door of The Old Road" is located in the southwestern portion of Elsmere Canyon. Identified as both a natural physical and visual resource, La Puerta figures as a significant anthropological, military, religious, economic, and cultural resource in the Planning Area. La Puerta served as an ancient defining geographic marker and point of reference for local Native Americans (the Tatavium Indians). La Puerta ("The Door") of El Camino Viejo Is the one feature that has been consistently recognized as a major landmark to Native Americans, Spanish Explorers and American pioneers, effectively placing these historic trails in Elsmere Canyon.
Lang Station (State Historic Landmark #590) East of Lang Station Road MRN 19	A health spa, hotel, and freight station were established here in 1871. In 1876, a golden spike was driven connecting San Francisco and Los Angeles by rail. Only relics of the station remain.
Mentryville (State Historic Landmark #516-2) 27201 West Pico Canyon, Newhall MRN 22	The town grew around Pico #4 for derrick workers. Four buildings remain. Many others have been relocated to Newhall.

Cultural Site	Historical Significance
Oak of the Golden Dream (State Historic Landmark #168) MRN 23	Gold was first discovered in California under this tree in 1842.
Old Ridge Route (National Register of Historic Places) MRN 24	First opened in 1915, the narrow, curvy 30-mile Ridge Route is a 20-foot-wide roadway, carved out using horse-drawn dirt scrapers that zigzagged across the ridges of the western San Gabriel Mountains. The road was named for the way it followed the ridgeline of the mountains. Paved in 1919, the Ridge Route Highway, officially named the Castaic-Tejon Route, became the first direct road connecting Los Angeles and Bakersfield. Often referred to as the original Grapevine route, the nickname stems from the fact that early wagoners had to hack their way through thick patches of Cimarron grapevines that inhabited "La Canada de Las Uvas" ("Canyon of the Grapes"). Without this road, California may have become two separate states. In 1933 the State opened the Ridge Route Alternate, a three-lane road with fewer curves that would eventually be designated California Route 99. This alternate was widened to four lanes in the 1950s, then realigned and rebuilt in the 1960s as a high-speed interstate freeway. The original Ridge Route was abandoned, but parts of the old road are still visible north of Castaic.
Pico # 4 Oil Well (National Register of Historic Places) (State Historic Landmark #516) 27201 West Pico Canyon, Newhall MRN 25	First successful oil well in California and longest producing commercial oil well in the world in 1876 by California Star Oil Company, a predecessor of Standard Oil Company of California. Located in Mentryville/Pico Canyon.
St. Francis Dam Disaster Site (State Historic Landmark #919) DWP Power Plant 2 San Francisquito Canyon Road MRN 28	On March 12, 1928, the dam, a part of the Los Angeles Aqueduct at San Francisquito Canyon, collapsed, spilling more than 12 billion gallons of water into the Valley and killing at least 450 people.
Vasquez Rocks Agua Dulce National Register of Historic Places (Site # 72000228, 1972) MRN 30	This 745-acre park of unique geological rock formations is located near Agua Dulce Springs. The park features a history trail tour about the Tataviam Indians and early Spanish settlers. Located on the San Andreas fault, the sandstone rock formations were uplifted during the Cenozoic era, approximately 25 million years ago. In 1873-74, one of California's most notorious bandits, Tiburcio Vasquez, used these rocks as a hiding place to evade law enforcement. His name has since been associated with the geologic feature.
Walker Cabin Placerita Canyon Natural Area MRN 31	Built by Frank Walker around 1920, the cabin served as the family's second home for about 10 years. The cabin has been fully restored and refurnished as part of the County-maintained Visitor's Center.

Sources: Santa Clarita Valley Historical Society, http://www.scvhistory.com/scvhistory/index2.htm, 1991; State of California, Office of Historic Preservation, November 27, 2002, The Signal, and the City of Santa Clarita.

REGULATORY SETTING

The treatment of cultural resources is governed by federal, state, and local laws and guidelines. There are specific criteria for determining whether prehistoric and historic sites or objects are significant and/or protected by law. Federal and state significance criteria generally focus on the resource's integrity and uniqueness, its relationship to similar resources, and its potential to contribute important information to scholarly research. Some resources that do not meet federal significance criteria may be considered significant by state criteria. The laws and regulation seek to mitigate impacts on significant prehistoric or historic resources. The federal, state, and local laws and guidelines for protecting historic resources are summarized below.

Federal Regulations

The National Historic Preservation Act of 1966

The National Historic Preservation Act of 1966 established the National Register of Historic Places (NRHP) as the official federal list of cultural resources that have been nominated by state offices for their historical significance at the local, state, or national level. Properties listed in the NRHP, or "determined eligible" for listing, must meet certain criteria for historical significance and possess integrity of form, location, and setting.

Criteria for listing on the NRHP are significance in American history, architecture, archaeology, engineering, and culture as present in districts, sites, buildings, structures and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and that are (a) associated with events that have made a significant contribution to the broad patterns of our history; (b) associated with the lives of persons significant in our past; (c) embody the distinctive characteristics of a type, period, or method of construction; represent the work of a master; possess high artistic values, represent a significant and distinguishable entity whose components may lack individual distinction; or (d) have yielded, or may be likely to yield, information important in prehistory or history. Criterion D is usually reserved for archaeological and paleontological resources. Eligible properties meet at least one of the criteria and exhibit integrity, measured by the degree to which the resource retains its historical properties and conveys its historical character, the degree to which the original fabric has been retained, and the reversibility of changes to the property.

State Regulations

California Senate Bill 18

Cities and counties are required pursuant to Senate Bill (SB) 18 to notify and consult with California Native American Tribes about proposed local land use planning decisions for protecting Traditional Tribal Cultural Places.[19] Cities and counties must obtain a list of the California Native American tribes from the NAHC whose traditional lands within the agency's jurisdiction may be affected by a proposed adoption or amendment of a General Plan or Specific Plan. Prior to the adoption or any amendment of a General Plan or Specific Plan, a local government must notify the appropriate tribes of the opportunity to conduct consultations on the proposed action. Prior to the adoption or substantial amendment of the General Plan or Specific Plan, a local government must refer the proposed action to those tribes on the Native American contact list that have traditional lands within the agency's jurisdiction.

To help local officials meet these new obligations, SB 18 requires the Governor's Office of Planning and Research (OPR) to amend its General Plan Guidelines to include advice to local government on how to consult with California Native American tribes.

Developed in consultation with the NAHC, the OPR guidelines include advice for consulting with California Native American Tribes for:

- the preservation of or the mitigation of impacts to, cultural places.
- procedures for identifying through the NAHC the appropriate California Native American tribes.
- procedures for continuing to protect the confidentiality of information concerning the specific identity, location, character, and use of cultural places. [20]
- procedures to facilitate voluntary landowner participation to preserve and protect the specific identity, location character, and use of cultural places.

The California Register of Historic Resources

State law[21] also protects cultural resources by requiring evaluations of the significance of prehistoric and historic resources in CEQA documents. A cultural resource is an important historical resource if it meets

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19 California Senate Bill 18, Chapter 905, Statutes of 2004.

20 California Government Code, Section 65040.2(g).

21 Public Resource Code. Section 5020 et seq. "State Historical Resources Commission."

any of the criteria found in Section 15064.5(a) of the *State CEQA Guidelines*. These criteria are nearly identical to those for the NRHP, which are listed above.

The State Historic Preservation Office (SHPO) maintains the CRHR. Properties listed, or formally designated eligible for listing, on the NRHP are automatically listed on the CRHR, as are state landmarks and points of interest. The CRHR also includes properties designated under local ordinances or identified through local historical resource surveys.

California Health and Safety Code

These sections[22] collectively address the illegality of interference with human burial remains (except as allowed under applicable sections of the Public Resources Code), as well as the disposition of Native American burials in archaeological sites and protects such remains from disturbance, vandalism, or inadvertent destruction; establishes procedures to be implemented if Native American skeletal remains are discovered during construction of a project, treatment of the remains prior to, during and after evaluation, and reburial procedures.

California Senate Bill 297 (1982)

This bill addresses the disposition of Native American burials in archaeological sites and protects such remains from disturbance, vandalism, or inadvertent destruction; establishes procedures to be implemented if Native American skeletal remains are discovered during construction of a project; and establishes the NAHC to resolve disputes regarding the disposition of such remains.

Local Regulations

Los Angeles County Historical Landmarks and Records Commission

Reviews and recommends cultural heritage resources in the unincorporated area for inclusion in the State Historic Resources Inventory.[23] The Commission shall consider and recommend to the Board local historical landmarks defined to be worthy of registration by the State of California Department of Parks and Recreation, either as "California Historical Landmarks" or as " Points of Historical Interest," and may consider and comment for the Board on applications relating to the National Register of Historic Places.

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22 California Health and Safety Code. Sections 7050.5, 7051, and 7054.

23 Los Angeles County. "Chapter 6: Conservation and Open Space Element." *Draft General Plan*. 2008; Historical Landmarks and Records Commission. "Fact Sheet." http://bos.co.la.ca.us/Rosters/FactSheets/Frame.htm. (2008).

Criteria for designation, including significance and access and provision for maintenance, shall be as specified in state law, including the California Public Resources Code, or in regulations and interpretations of the State Historical Resources Commission.

THRESHOLDS OF SIGNIFICANCE

The *State CEQA Guidelines* identifies certain criteria for determining whether any significant cultural resources will result with the implementation of the County's Santa Clarita Valley Area Plan:

- The Area Plan will cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5;
- The Area Plan will cause a substantial adverse change in the significance of an archeological resource pursuant to Section 15064.5;
- The Area Plan will directly or indirectly destroy a unique paleontological resource or site or unique geologic feature;
- The Area Plan will disturb any human remains, including those interred outside of formal cemeteries.

IMPACT ANALYSIS

This impact analysis section evaluates the potential effects of the proposed Area Plan policies on cultural resources within the County's Planning Area using the *State CEQA Guidelines* thresholds of significance.

Impact 3.8-1: The Area Plan will cause a potentially substantial adverse change in the significance of a historical resource as defined in Section 15064.5.

As defined by CEQA Section 15064.5(b), "substantial adverse change in the significance of a historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired." In order to create such a substantial adverse change, the resource must first possess historical significance. Secondly, the resource must meet the time and integrity criteria to be eligible for listing in the CRHR. Fifty years is used as a general estimate of the time needed to develop this perspective and permit a legitimate understanding of the resource's significance. A resource less than 50 years old may be considered for listing in the California Register if it can be demonstrated that sufficient time has passed to understand its historical importance.

Historic Significance. The resource has historical significance as defined by the State Office of Historic Preservation. A resource possesses historical significance if it meets one or more of the following criteria:

1. It is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States; or

2. It is associated with the lives of persons important to local, California, or national history; or

3. It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master, or possesses high artistic values; or

4. It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

Buildout in the County's Planning Area would result in a substantial increase in population and infrastructure. This increase in population would require the development and disturbance of vacant lands. Implementation of the Area Plan would then have the potential to have a substantial adverse change in the significance of a historical resource as defined in Section 15064.5.

As the County expands, the development of infrastructure would potentially encroach on designated historical structures. Identification of known structures, (**Figure 3.8-1** and **Table 3.8-2**) will help protect them and contribute to community identity and a sense of history. **Policy CO 5.1.1** to **Policy CO 5.1.3** require review of appropriate documentations for sites identified on the actual and historic resources map (**Figure 3.8-1**) prior to issuance of any permits for grading, demolition, alteration, and/or new development, to avoid significant adverse impacts. **Policy CO 5.1.2** requires review of any proposed alterations to cultural and historic sites identified in **Table 3.8-2** or other sites which are so designated based on guidelines contained in the Secretary of the Interior's Standards for the Treatment of Properties or other adopted County guidelines. As new information about other potentially significant historic and cultural sites becomes available, an update to the cultural and historic resources inventory would be required and appropriate measures applied to all identified sites to protect their historic and cultural integrity (**Policy CO 5.1.3**). The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association.

Federal, state, and local regulations help determine if a structure, building, or land site should be listed as a historical resource. The County should maintain and acquire, where appropriate, open space to preserve cultural and historic resources (**Policy CO 10.1.4**). As identified in the federal, state, and local regulations any new development, as a result of the proposed build out, would have to conform to the aforementioned regulations to enhance and maintain the character, architectural style, or significance of

the historical or cultural resource (**Policy LU 2.2.2**). **Policy LU 6.4.6** requires the development review and environmental review processes to evaluate impacts on historic and cultural sites. The implementation of the policies would reduce the potential impact on significant historical resources to less than significant.

Proposed Area Plan Policies

Policy CO 5.1.1: For sites identified on the Cultural and Historical Resources Map (Figure CO 6), review appropriate documentation prior to issuance of any permits for grading, demolition, alteration, or new development, to avoid significant adverse impacts. Such documentation may include cultural resource reports, Environmental Impact Reports, or other information as determined to be adequate by the reviewing authority.

Policy CO 5.1.2: Review any proposed alterations to cultural and historic sites identified in Table CO 1 or other sites which are so designated, based on the guidelines contained in the Secretary of the Interior's Standards for the Treatment of Properties (Title 36, Code of Federal Regulations, Chapter 1, Part 68, also known as 36 CFR 68), or other adopted County guidelines.

Policy CO 5.1.3: As new information about other potentially significant historic and cultural sites becomes available, update the Cultural and Historical Resources Inventory and apply appropriate measures to all identified sites to protect their historical and cultural integrity.

Policy CO 10.1.4: Maintain and acquire, where appropriate, open space to preserve cultural and historical resources.

Policy LU 2.2.2: Identify sites and areas with historical or cultural value to the community, and ensure that uses in or adjacent to these areas will not impact their historical integrity.

Policy LU 6.4.6: Through the environmental review and development review processes, evaluate impacts on historic and cultural sites from proposed development and require appropriate mitigation.

Effectiveness of Proposed Area Plan Policies

Implementation of the proposed Area Plan policies related to historic resources would reduce the effects of growth and development by (1) requiring development proposals be evaluated for the presence of historic resources and (2) by protecting historic buildings from demolition by undergoing review of appropriate documentation (i.e., cultural resource reports) as seen in mitigation measure **MM 3.8-1**.

Plan to Plan Analysis

Both the proposed Area Plan and the existing Area Plan contain policies that address the protection of historical properties. However, this EIR would provide mitigation which would reduce potential impacts to historic buildings. Consequently, the proposed Area Plan would have fewer impacts when compared to the existing Area Plan.

Impact 3.8-2 **The Area Plan will cause a potentially substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.**

In the protection and management of the cultural environment, *State CEQA Guidelines* provides definitions and standards for cultural resource management. The term "unique archaeological resource" has the following meaning according to CEQA[24]:

"An archaeological artifact, object, or site about which it can be clearly demonstrated that without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

1. Contains information needed to answer important scientific research questions, and there is a demonstrable public interest in that information.
2. Has a special and particular quality, such as the oldest of its type or the best available example of its type.
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person."

The County's Planning Area is rich with many different cultural and archeological resources with many of the potential archeological resources still buried under soil. The disturbance of the soil has the potential to uncover any unknown resources that have contributed to the contribution of California's history. The implementation of the Area Plan would have the potential to negatively impact these

24 *State CEQA Guidelines*, Section 21083.2

resources. If a site is deemed to have an archeological resource then the appropriate measures will be applied. If the site does not meet the criteria defined[25] but meets the definition of a unique archeological resource, the site shall be treated in accordance with *State CEQA Guidelines*[26] (**Policy CO 5.1.1**). As the County approaches buildout there is the potential to demolish existing buildings which are in the timeline or timeframe of becoming historic landmarks or buildings. Implementation of **Policies CO 5.1.1** through **CO 5.1.3** would reduce the impacts to less than significant.

As stated in *State CEQA Guidelines*[27] and in Senate Bill 18 the notification to any of the appropriate California Native American tribes via the contact list maintained by the California Native American Heritage Commission would be conducted on a project-by-project basis by the County (**Policy CO 5.3.1**). Notification to the Native American Heritage Commission for contacting the appropriate tribes would be required on a project-by-project basis (**Policy CO 5.3.2**). **Policy CO 5.3.3** requires the appropriate environmental impact analysis that is required by CEQA. Vasquez Rocks and the Santa Clara River have been designated open space on the Land Use Map (**Policy LU 6.4.3**). The identification and preservation areas for open space would help conserve and protect significant cultural and historical resources (**Policy CO 10.1.4** and **Policies LU 6.4.3 and LU 6.4.6**). The incorporation of designating open space in these sensitive areas would further (**Policy CO 10.1.4** and **Policies LU 6.4.3** and **LU 6.4.6**) the County to add more recreation areas. The preservation of open space within the County's Planning Area would be consistent with the proposed Area Plan.

Proposed Area Plan Policies

Policy CO 5.3.1: For any proposed Area Plan Amendment, Specific Plan, or Specific Plan Amendment, notify and consult with any California Native American tribes on the contact list maintained by the California Native American Heritage Commission that have traditional lands within the County's jurisdiction, regarding any potential impacts to Native American resources from the proposed action, pursuant to State guidelines.

Policy CO 5.3.2: For any proposed development project that may have a potential impact on Native American cultural resources, provide notification to California Native American tribes on the contact list maintained by the Native American Heritage

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25 *State CEQA Guidelines*, Section 15064.5(a)

26 California Public Resources Code, Section 21084.1; *State CEQA Guidelines* 15126.4

27 California Public Resources Code, Section 21084.1; *State CEQA Guidelines*, Section 15064

Commission that have traditional lands within the County's jurisdiction, and consider the input received prior to a discretionary decision.

Policy CO 5.3.3: Review and consider a cultural resources study for any new grading or development in areas identified as having a high potential for Native American resources, and incorporate recommendations into the project approval as appropriate to mitigate impacts to cultural resources.

Policy LU 6.4.3: Maintain cultural resources from pre-historical Native American habitation and historical settlement in the areas around Vasquez Rocks, Elsmere Canyon, and along the Santa Clara River, through designation of these areas as Open Space on the Land Use Map.

Effectiveness of Proposed Area Plan Policies

The above policies of the Area Plan would reduce potential impacts on archeological resources. However, the policies above do not identify mitigation measures required if archeological resources are found to be impacted by the proposed buildout. Implementation of mitigation measures **MM 3.8-1** to **MM 3.8-5** would reduce any potentially adverse impacts on archeological resources to less than significant.

Plan to Plan Analysis

Both the proposed Area Plan and the existing Area Plan contain policies that address potential impacts to archaeological resources. However neither Area Plan contains policies that address the potential for resources found during Plan buildout. The proposed Area Plan provides for mitigation to address potential resource occurrence. Consequently, impacts associated with the proposed Area Plan would be fewer when compared to the existing Area Plan.

Impact 3.8-3 **The Area Plan will potentially directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.**

Significant paleontological resources are fossils or assemblages of fossils that are unique, unusual, rare, uncommon, diagnostically or stratigraphically important, and those that add to an existing body of knowledge in specific areas, stratigraphically, taxonomically, or regionally. They include fossil remains of large to very small aquatic and terrestrial vertebrates, remains of plants and animals previously not represented in certain portions of the stratigraphy, and assemblages of fossils that might aid stratigraphic correlations, particularly those offering data for the interpretation of tectonic events, geomorphologic

evolution, paleoclimatology, and the relationships of aquatic and terrestrial species. Most of the potential fossil-producing rock formations are located within hilly terrain in the County Planning Area (**Policy LU 6.4.6**). The potential increase in development potentially affect paleontological and unique geologic resources. This would conflict with the potential for preserving significant fossil remains (**Policy CO 10.1.4**). Implementation of mitigation measures listed below would reduce potentially significant impacts on paleontological or unique geologic resources to less than significant.

Proposed Area Plan Policies

The proposed Area Plan **Policies LU 6.4.6** and **CO 10.1.4** have already been cited.

Effectiveness of Proposed Area Plan Policies

The proposed Area Plan policies would reduce the impacts on paleontological and/or unique geologic resources. However, the policies above do not identify general mitigation measures required if archeological resources are found to be impacted by the proposed buildout. Implementation of mitigation measures **MM 3.8-4** and **MM 3.8-6** would reduce potentially significant paleontological and/or unique geological impacts to less than significant.

Plan to Plan Analysis

The existing Area Plan does not contain policies that address potential impacts to paleontological and unique geotechnical resources. The proposed Area Plan provides for mitigation to address potential resource occurrence. The proposed Area Plan provides for mitigation to paleontological and unique geotechnical resources, and the existing Area Plan does not. Impacts to this resource would be greater under the existing Area Plan.

Impact 3.8-4 **The Area Plan will potentially disturb any human remains, including those interred outside of formal cemeteries.**

The County's Planning Area has been a very active geologic area and has been transformed throughout the years. With the location of the San Andreas Fault within miles of the OVOV Planning Area the shape and the history of the Valley will always change and has the potential to uncover many unknown resources (**Policies CO 5.3.1** to **CO 5.3.3**). There is potential for many human remains to be located near the Santa Clara River and the foothills of the surrounding mountains (**Policy LU 6.4.3**). Future development would require the disturbance and movement of earth and would thus have the potential for adverse impacts on human remains (**Policy LU 6.4.6**). Implementation of the policies of the proposed

Area Plan and implementation of mitigation measure **MM 3.8-7** would reduce the impacts to less than significant.

Proposed Area Plan Policies

The proposed Area Plan **Policies CO 5.3.1 to CO 5.3.3, LU 6.4.3**, and **LU 6.4.6** have already been cited.

Effectiveness of Proposed Area Plan Policies

The proposed Area Plan would reduce impacts on the potential disturbance of human remains. If the presence of human remains is identified during the County's buildout, mitigation measure **MM 3.8-7** shall be implemented to reduce potential impacts on human remains.

Plan to Plan Analysis

The existing Area Plan does not contain policies that address potential impacts to the disturbance of human remains. The proposed Area Plan provides for mitigation to address potential resource occurrence. The proposed Area Plan provides for mitigation to disturbance of human remains, and the existing Area Plan does not. Impacts to this resource would be greater under the existing Area Plan.

MITIGATION FRAMEWORK

Implementation of the following mitigation measures would reduce potential impacts on cultural resources to a less than significant level.

MM 3.8-1: Avoidance is the preferred treatment for cultural resources. Where feasible, project plans shall be developed to allow avoidance of cultural resources. Where avoidance of construction impacts is possible, covering of the cultural resource site with a layer of chemically stable soil and avoidance planting (e.g., planting of prickly pear cactus) shall be employed to ensure that indirect impacts from increased public availability to the site are avoided. Where avoidance is selected, cultural resource sites shall be deeded into permanent conservation easements or dedicated open space.

MM 3.8-2: If avoidance and/or preservation of in place cultural resources is not possible, the following mitigation measures shall be initiated for each impacted site:

a. A participant-observer, as determined by the Native American Heritage Commission (NAHC), shall be used during archaeological testing or excavation in the project site.

b. Prior to the issuance of a grading permit for the project, the project proponent shall develop a test level research design detailing how the cultural resource investigation shall be executed and providing specific research questions that shall be addressed through the excavation program. In particular, the testing program shall characterize the site constituents, horizontal and vertical extent, and, if possible, period of use. The testing program shall also address the California Register and National Register eligibility of the cultural resource and make recommendations as to the suitability of the resource for listing on either Register. The research design shall be submitted to the County of Los Angeles Regional Park and Open-Space District for review and comment. For sites determined, through the Testing Program, to be ineligible for listing on either the California or National Register, execution of the Testing Program will suffice as mitigation of project impacts to this resource.

MM 3.8-3: In the unlikely event that artifacts are found during grading within the County's Planning Area or future roadway extensions, an archaeologist will be notified to stabilize, recover, and evaluate such finds.

MM 3.8-4: Prior to grading, as part of an inspection testing program, a Los Angeles County Natural History Museum-approved inspector is to be on site to salvage scientifically significant fossil remains. The duration of these inspections depends on the potential for the discovery of fossils, the rate of excavation, and the abundance of fossils. Geological formations (like the Saugus Formation) with a high potential will initially require full time monitoring during grading activities. Geologic formations (like the Quaternary terrace deposits) with a moderate potential will initially require half-time monitoring. If fossil production is lower than expected, the duration of monitoring efforts should be reduced. Should the excavations yield significant paleontological resources, excavation is to be stopped or redirected until the extent of the find is established and the resources are salvaged. A report of the inspection testing program shall include an itemized inventory of the fossils, pertinent geologic and stratigraphic data, field notes of the collectors and include recommendations for future monitoring efforts in the County's Planning Area. Prior to grading, an agreement shall be reached with a suitable public, non-profit scientific repository, such as the Los Angeles County Museum of Natural History or similar institution, regarding acceptance of fossil collections.

MM 3.8-5: For archeological sites accidentally discovered during future construction, there shall be an immediate evaluation of the find by a qualified archeologist. If the find is determined to be a historical or unique archeological resource, as defined under CEQA, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation shall be provided. Construction work may continue

on other parts of the construction site while historical/archeological mitigation takes place, pursuant to Public Resources Code Section 21083.2(i).

MM 3.8-6: During grading activities. In the unlikely event that artifacts are found during grading within the planning area or future roadway extensions, a paleontologist will be notified to stabilize, recover, and evaluate such finds.

MM 3.8-7: If human remains are encountered during a public or private construction activity, other than at a cemetery, State Health and Safety Code 7050.5 states that no further disturbance shall occur until the Los Angeles County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. The Los Angeles County Coroner must be notified within 24 hours.

a. If the coroner determines that the burial is not historic, but prehistoric, the Native American Heritage Commission (NAHC) must be contacted to determine the most likely descendent (MLD) for this area. The MLD may become involved with the disposition of the burial following scientific analysis.

SIGNIFICANCE OF IMPACT WITH MITIGATION FRAMEWORK

Provided that the County implements the proposed Area Plan policies and the above mitigation measures, potentially significant cultural, historic, paleontological impacts and disturbance to human remains would be reduced to less than significant.

3.9 GEOLOGY, SOILS, SEISMICITY

EXECUTIVE SUMMARY

This section describes the types of soils present within the County's Planning Area. Development constraints associated with soil hazards, subsidence, and geological hazards are discussed along with County development standards. The County's Planning Area consists of unincorporated land outside the City's boundaries and Sphere of Influence (SOI) but within the One Valley One Vision (OVOV) Planning Area boundaries. The City's Planning Area consists of its incorporated boundaries and adopted SOI. Together the County and City Planning Areas comprise the OVOV Planning Area. With implementation of the proposed Area Plan policies and mitigation measures defined in this section, potential impacts from geology, soils, and seismicity would be less than significant.

EXISTING CONDITIONS

Soils

Various soil types exist within the County's Planning Area as shown on **Figure 3.9-1, Soil Types within the OVOV Planning Area**. Saugus loam, 30 to 50 percent slopes, eroded (ScF2) is the most abundant type of soil within the County's Planning Area with approximately 22,781 acres (approximately 17.8 percent of the total County's Planning Area). A detailed description of each soil type found within the County's Planning Area is presented in **Appendix 3.9** of this environmental impact report (EIR) and corresponds with the soil types mapped on **Figure 3.9-1**. Each soil characteristic is identified to determine the Capability Classification of the soil on site, which in turn determines the predicted productivity of the soil if it were under agricultural production; the majority of the soils within the County's Planning Area would be used for wildland/grazing areas, and would not be able to economically or physically sustain agricultural production.

The following text describes the soil associations found within the County's Planning Area. A soil association is a landscape that has a distinctive proportional pattern of soils. It normally consists of one or more major soils and at least one minor soil, and is named for the major soils. The soils in one association may occur in another association but in a different pattern. A soil series is the lowest category of the national soil classification system. The name of a soil series is the common reference term, used to name soil map units. The soil series are presented in this section by their location (i.e., Upland, Alluvial Fans, Alluvial Fans and Floodplains, Terraces, and Terraces and Foothills). **Appendix 3.9** provides a cross-reference to the soil type and soil association.

Yolo-Metz-Cortina Association

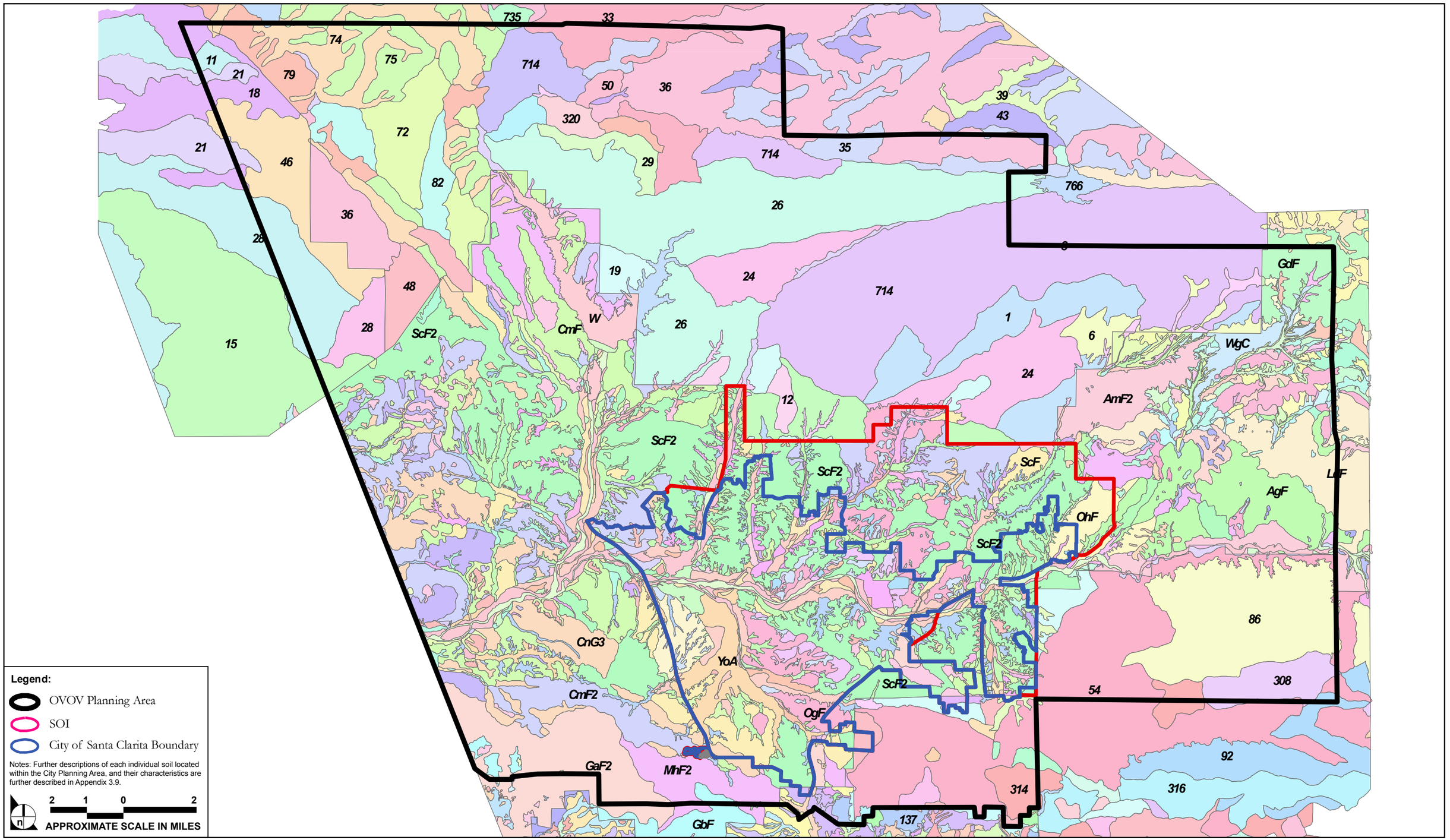
This soil association includes soils that are nearly level to moderately sloping, well drained to excessively drained, very deep that consist of a loam to loamy sand surface layer on alluvial fans and flood plains. Yolo soils make up about 40 percent of this association; Metz soils, about 25 percent; and Cortina soils, about 20 percent. The 15 percent consists of Mocho, Sorrento, and Zamora series.

Yolo Series (Alluvial Fans)

The Yolo series are well-drained soils that have formed in sedimentary alluvium. These soils are on alluvial fans with slopes that range from 0 to 9 percent. Elevations range from 1,175 to 1,200 feet. Grasses and oaks make up the vegetation. Average annual precipitation ranges from 14 to 16 inches, average annual temperature is 63 degrees Fahrenheit, and the frost-free season ranges from 240 to 300 days. Yolo soils are associated with Metz, Mocho, and Sorrento soils. Typically, the surface layer is grayish-brown loam about 18 inches thick. Below is grayish-brown loam, also about 18 inches thick, underlain by light yellowish-brown loam near silt loam about 36 inches thick. These soils are used mainly for irrigated crops, for range, and for home sites.

Metz Series (Alluvial Fans and Flood Plains)

The Metz series consist of somewhat excessively drained soils that have formed in mixed alluvium. These soils are located on alluvial fans and flood plains with slopes from 0 to 9 percent. Elevations range from 1,175 to 1,250 feet. The vegetation is mainly grass oaks. Average annual precipitation ranges from 14 to 16 inches, average annual temperature is 63 degrees Fahrenheit, and the frost-free season ranges from 275 to 300 days. In a typical profile, the surface layer is brown loamy sand about 7 inches thick. Below is brown and light brownish-gray loamy sand and sand that contains some fine gravel and extends to a depth of 60 inches or more. In some areas the surface layer is loam. These soils are used for irrigated crops, dryland farming, and wildlife habitat.



SOURCE: USDA Soil Conservation Service, Soil Survey Antelope Valley Area, January 1970; USDA Soil Conservation Service, Soil Survey Los Angeles, West San Fernando Valley Area, 1980; USDA Soil Conservation Service, Soil Survey Angeles National Forest Area, 1980.

FIGURE **3.9-1**

Soil Types within the OVOV Planning Area

Cortina Series (Alluvial Fans)

The Cortina series consists of excessively drained soils that have formed in alluvium that is predominantly sedimentary. These soils are on alluvial fans with slopes from 0 to 9 percent. Elevations range from 1,200 to 1,400 feet. Vegetation consists of stands of chamise and juniper that have an understory of annual grasses and forbs Average annual precipitation ranges from 14 to 16 inches, average annual temperature is about 63 degrees Fahrenheit, and the frost-free season ranges from 275 to 300 days. In a typical profile the surface layer is pale-brown cobbly sandy loam about 6 inches thick. Below, to a depth of 60 inches or more, is a pale-brown and light yellowish-brown very gravelly and cobbly sandy loam. In some areas the surface layer is not cobbly. These soils are used for dryland pasture and small grains, for range, and for irrigated crops.

Mocho Series (Alluvial Fans)

The Mocho series consists of moderately well-drained soils that formed in sedimentary alluvium. These soils are on alluvial fans along major drainageways with slopes from 0 to 9 percent. Elevations range from 1,175 to 1,225 feet. Vegetation consists of grasses and oaks. Average annual precipitation ranges from 14 to 16 inches, average annual temperature is about 63 degrees Fahrenheit, and the frost-free season ranges from 275 to 300 days. Typically the surface layer is grayish-brown and light brownish-gray calcareous loam to a depth of more than 60 inches. In some places the surface is sandy loam. These soils are used for dryland and irrigated crops.

Sorrento Series (Alluvial Fans)

The Sorrento series consists of well-drained soils that have formed in mixed alluvium. These soils are located on alluvial fans with slopes from 0 to 5 percent. Elevations range from 1,175 to 1,250 feet. Vegetation consists of grasses and oaks. Average annual precipitation ranges from about 14 to 16 inches, average annual temperature is 63 degrees Fahrenheit, and the frost-free season ranges from 275 to 300 days. In a typical profile the surface layer is brown loam about 7 inches thick. The subsoil is also brown loam about 7 inches thick. Below is yellowish-brown and light yellowish-brown loam to a depth of 72 inches or more. These soils are used for irrigated crops.

Zamora Series (Terraces)

The Zamora series consist of well-drained soils that have formed in old alluvium derived from material that was dominantly sedimentary. These soils are located on terraces with slopes that range from 2 to 15 percent. Elevations range from 1,220 to about 1,300 feet. Vegetation consists of grasses and oaks.

Average annual precipitation ranges from about 14 to 16 inches, average annual temperature is 63 degrees Fahrenheit, and the frost-free season ranges from 240 to 300 days. In a typical profile, the surface layer is grayish-brown loam about 11 inches thick. Below is brown and dark grayish-brown loam and clay loam underlain at a depth of about 58 inches by pale-brown loam. In some places, the surface layer is clay loam. These soils are used for dryland grains and for range. They also provide habitat for wildlife.

Saugus-Castaic-Balcom Association

This association is located on gently sloping to very steep, well-drained soils that are loam to silty clay loam throughout; deep to moderately deep over soft sandstone or shale; on foothills and mountains. Some areas of this soil association are adjacent to Ventura County, and others are north and south of the Santa Clara River and its tributaries near Saugus. Saugus soils make up about 50 percent of this association. Castaic soils make up about 25 percent of this soil association and Balcom soils about 20 percent. Mocho, Sorrento, and other alluvial fans make up the remaining 5 percent of this soil association.

Saugus Series (Uplands)

The Saugus series consists of well-drained soils located on uplands. These soils formed on weakly consolidated sediment that contained pebbles and cobblestones in some places. Slopes range from 15 to 50 percent. Elevations range from 1,300 to 2,250 feet. Vegetation consists of dense stands of chamise and candlestick yucca with an understory of annual grasses, forbs, and remnant stands of perennial grasses. Average annual precipitation ranges from 14 to 16 inches, average annual temperature is about 63 degree Fahrenheit, and the frost-free season ranges from about 275 to 300 days. In a typical profile, the surface layer is grayish-brown loam about 15 inches thick. Below is grayish-brown loam about 15 inches thick. Below is grayish-brown loam underlain by weakly consolidated sediment at a depth of 42 inches. These soils are used for range and for home sites. They also are used for wildlife and watershed purposes.

Castaic Series (Uplands)

The Castaic series consists of well-drained soils that formed in material from soft shale and sandstone. These soils are located on uplands with slopes from 2 to 65 percent. Elevations range from 1,250 to 1,500 feet. Vegetation consists mainly of annual grasses and forbs, but stipa, a perennial grass, grows in small areas and brush grows in some places on north slopes. Average annual precipitation ranges from 14 to 16 inches, average annual temperature is 63 degrees Fahrenheit, and the frost-free season ranges from 275 to 300 days. In a typical profile the surface layer is pale-brown silty clay loam underlain by soft

shale and sandstone at a depth of about 26 inches. These soils are used for dryland small grains and pasture, for range, for watershed, and as wildlife habitat.

Gazos Series (Mountainous Areas)

Gazos Series consists of well-drained soils that formed in material weathered from hard shale. These soils occupy mountainous areas. Slopes range from 30 to 50 percent. Elevations range from 2,750 to 3,100 feet. The vegetation associated with these soils includes grasses and oaks. Elevations range from 2,750 to 3,100 feet. Average annual precipitation ranges from 14 to 16 inches, average annual temperature is about 63 degrees Fahrenheit, and the frost-free season ranges from about 250 to 275 days. These soils are used only for range.

Gaviota-Millsholm Association

This soil association is located on moderately steep or steep areas on foothills and mountains. Soils of this association are well-drained and somewhat excessively drained that have a sandy loam or loam surface layer, and are typically shallow over sandstone or shale. Gaviota soils make up about 50 percent of this association, and Millsholm soils, about 45 percent. The remaining 5 percent consists of Gazos soils.

Gaviota Series (Uplands)

The Gaviota series is comprised of well-drained to somewhat excessively drained soils that formed in material weathered from hard sandstone. These soils are on uplands with slopes from 15 to 50 percent. Elevations range from 2,000 to 3,500 feet. Annual grasses, forbs, and chamise make up the vegetation. Average annual precipitation ranges from about 12 to 16 inches, average annual temperature is 62 degrees Fahrenheit, and the growing season ranges from 250 to 275 days. Typically the surface layer is light brownish-gray sandy loam about 10 inches thick, underlain by 4 inches of similar material. Below is hard sandstone. Outcrops of rock cover 2 to 10 percent of the surface. These soils are used for range, wildlife habitat, and watershed.

Millsholm Series (Uplands that include Fault Scarps)

The Millsholm series consists of well-drained soils that formed in material weathered from hard shale and fine-grained sandstone. These soils are on uplands that include fault scarps. Slopes range from 15 to 20 percent. Elevation ranges from 2,000 to 3,000 feet. The vegetation located on these soils consists of fairly thin stands of chamise that have a thin understory of annual grasses and forbs. Average annual precipitation ranges from about 14 to 16 inches, average annual temperature is about 62 degrees

Fahrenheit, and the frost-free season ranges from about 240 days to 270 days. These soils are used for range, wildlife habitat, recreation, and watershed purposes.

Ojai-Agua Dulce Association

The soils of this association are near Newhall, Saugus, and Solemint and are found on gently sloping to steep, well-drained, very deep to moderately deep soils that have a loam or stony loam surface layer; on terraces and foothills.

Agua Dulce Series (Uplands)

The Agua Dulce Series consists of well-drained soils that formed in uplifted non-marine sedimentary alluvium. These soils are on foothills in the uplands. Slopes range from 30 to 50 percent. Elevations range from 2,200 to 2,700 feet. The vegetation is mainly annual grasses and forbs, but California juniper is scattered over the areas. Average annual precipitation ranges from about 12 to 14 inches, average annual temperature is about 63 degrees Fahrenheit, and the frost-free season ranges from 265 to 285 days. These soils are used for range, wildlife habitat, and watershed.

Ojai Series (Terraces and Foothills)

The Ojai series consists of well-drained soils that have formed in weakly consolidated sedimentary alluvium containing somewhat weathered pebbles and cobblestones of mixed origin. These soils are located on terraces and foothills and on slopes that range from 2 to 50 percent. Elevations range from 1,300 to 2,200 feet. The vegetation is mainly annual grasses and oaks, but some chamise and Manzanita grow on the foothills. Average annual precipitation ranges from 14 to 16 inches, average annual temperature is 63 degree Fahrenheit, and the frost-free season ranges from 275 to 300 days. In a typical profile the surface layer is grayish-brown and brown loam, about 25 inches thick. The subsoil is reddish-brown and brown clay loam about 28 inches thick. It is underlain by reddish-yellow sandy loam that has lenses of gravelly sandy loam and is stratified. These soils are used for dryland and irrigated crops. They also are used for range, for home sites, as wildlife habitat, and for watershed purposes.

Vista-Amargosa Association

The soils of this association are located on foothills and mountains with strongly sloping to steep, well-drained to excessively drained soils that have a coarse sandy loam surface; and is moderately deep to shallow over granite. Vista soils make up about 55 percent of this association, and Amargosa soils, about 40 percent. The remaining 5 percent consists of the land type Rock land.

Vista Series (Uplands)

Vista series are well-drained soils that formed in material weathered from granitic rock. These soils are located on foothills in the uplands with slopes that range from 9 to 50 percent. Elevation ranges from 2,200 to 3,900 feet. Vegetation is primarily annual grasses and forbs, though clumps of chamise and California juniper are scattered over the areas and Manzanita grows in some places. Average annual precipitation ranges from 14 to 16 inches, average annual temperature is about 62 degrees Fahrenheit, and the frost-free season ranges from 210 to 240 days. Typically the surface layer is brown coarse sandy loam about 16 inches thick. The subsoil is brown sandy loam about 12 inches thick and contains 2 or 3 percent more clay than the surface layer. Below is yellowish-brown coarse sandy loam about 4 inches thick. Hard granitic rock is at a depth of about 32 inches. These soils are used for dryland small grains and range. They also are used for wildlife habitat and for watershed purposes.

Amargosa Series (Uplands)

Soils of the Amargosa Series are excessively drained soils that formed in material weathered from granitic rock. Slopes range from 9 to 55 percent. Elevations range from 2,600 to 3,500 feet. The vegetation consists mainly of annual grasses and scattered California junipers and Manzanita bushes. Average annual precipitation ranges from 14 to 16 inches, average annual temperature is about 61 degrees Fahrenheit, and the frost-free season ranges from about 210 to 240 days. The soils of this series are used mostly for recreation, wildlife habitat, and watershed.

Las Posas-Toomes-Temescal Association

This association is located on strongly sloping to steep foothills. Soils of this association are well-drained or somewhat excessively drained and have loam or sandy loam surface layers, and are moderately deep to shallow on basalt or andesite. Las Posas soils make up 40 percent of this association; Toomes soils, 25 percent. The remaining 15 percent consists of Wyman soils and of the land type Rock land.

Las Posas Series (Uplands)

The Los Posas series includes moderately deep, well-drained soils that formed in material weathered from tuff and basalt. These soils are on uplands. Slopes range from 9 to 50 percent. Elevations range from 2,600 to 3,500 feet. The vegetation found on these soils consists of stands of chamise, candlestick yucca, and California juniper that have an understory of annual grasses and forbs. Average annual precipitation from about 9 to 12 inches, average annual temperature is about 62 degrees Fahrenheit, and the growing season ranges from about 240 to 275 days. These soils are used for ranges and as wildlife habitat.

Temescal Series (Uplands)

The Temescal series consists of well-drained soils formed in material weathered from andesite that included lenses of tuff. These soils are on hilly uplands. Slopes range from 30 to 50 percent. Elevations range from 2,900 to 3,400 feet. Vegetation found on these soils includes annual grasslands and forbs and a few scattered bushes of California juniper. Elevations range from 2,900 to 3,400 feet. Average annual precipitation ranges from 14 to 16 inches, average annual temperature is 61 degrees Fahrenheit, and the frost-free season ranges from 210 to 240 days. These soils are used for range and for wildlife habitat.

Wyman Series (Alluvial Fans and Terraces)

Wyman soils are well drained and have formed in basic igneous alluvium on alluvial fans and terraces. Slopes range from 2 to 15 percent. Elevations range from 2,800 to 3,400 feet. The vegetation located on the soils is chiefly annual grasses and forbs, but California juniper and candlestick yucca grow in some areas. Average annual precipitation ranges from 9 to 12 inches, average annual temperature is about 61 degrees Fahrenheit, and the frost-free season ranges from 240 to 275 days. These soils are used for dryland small grains and for range in spring. They also are used for wildlife habitat.

Hanford-Ramona-Greenfield Association

This soil association is located in areas on nearly level to moderately steep areas on alluvial fans and terraces, and includes soils that are well drained, and that have a loamy sand to loam surface layer. Hanford soils make up about 45 percent of this association; Ramona soils, about 25 percent; and Greenfield soils, about 20 percent. The remaining 10 percent consists of Chino, Oakdale, and Vernalis soils and of the land type Terrace escarpments.

Hanford Series (Alluvial Fans)

The Hanford series are well-drained or somewhat excessively drained soils that have formed in granitic alluvium. These soils are located on alluvial fans with slopes from 2 to 15 percent. Elevations range from 2,600 feet to 3,500 feet. Vegetation consists mainly of annual grasses and forbs, but California junipers are scattered over the areas. Average annual precipitation ranges from 9 to 12 inches, average annual temperature is about 62 degrees Fahrenheit, and the frost-free season ranges from about 220 to 260 days. The surface layer in a typical profile is pale-brown coarse sandy loam about 8 inches thick. Below is light yellowish-brown coarse sandy loam and gravelly loamy coarse sand that extends to a depth of 70 inches or more. In some places the surface layer is loamy sand, sandy loam, gravelly loam, or loam. These soils are used for irrigated crops, dryland small grains, range, and for wildlife.

Ramona Series (Terraces)

The Ramona series include well-drained soils that have formed in granitic alluvium. These soils are on terraces that are undulating in many places with slopes that range from 0 to 30 percent. The soils contain vegetation that consists of annual grasses and forbs, but clumps of California juniper are scattered over the areas. Elevations range from 2,750 to 3,900 feet. Average annual precipitation ranges from 9 to 12 inches, average annual temperature is 62 degrees Fahrenheit, and the frost-free season ranges from about 210 to 240 days. These soils are used for irrigated crops and for dryland small grains, orchards, and range. The areas also provide habitat for wildlife.

Greenfield Series (Alluvial Fans and Terraces)

The Greenfield Series consists of well-drained soils that have formed in granitic alluvium. These soils are on alluvial fans and terraces. Slopes are 0 to 15 percent and elevations range from 2,600 to 3,500 feet. Vegetation consists of annual grasses and forbs. Average annual precipitation ranges from 9 to 12 inches, average annual temperature is about 62 degrees Fahrenheit. And the frost-free season ranges from about 220 to 260 days. These soils are used for irrigated and dryland crops. They also are used for pasture and for range.

Chino Series (Narrow Valleys)

The Chino Series consists of a somewhat poorly drained soils that have formed in mixed alluvium that is dominantly granitic. These soils are in narrow valleys. Slopes range from 0 to 2 percent. Elevation is about 3,100 feet. The vegetation consists mainly of saltgrass, sedges, and wire grass, but wild rye grows in some places. Average annual precipitation ranges from 14 to 16 inches, average annual temperature is about 63 degrees Fahrenheit, and the frost-free season ranges from about 230 to 275 days. These wet soils are in meadow and are used only for pasture.

Vernalis Series (Alluvial Fans)

The Vernalis series consists of well-drained soils that have formed in alluvium fans. The alluvium is dominantly granitic, but it also includes material from andesite, tuff, and such sedimentary rocks as shale, sandstone, and limestone. Slopes are 0 to 5 percent. Elevations range from 2,900 to 3,000 feet. The vegetation is chiefly annual grasses and forbs, and sagebrush and rabbitbrush grow in some areas. Average precipitation is 9 to 12 inches, average annual temperature is 62 degrees Fahrenheit, and the frost-free season is about 220 to 260 days. These soils are used for irrigated crops and dryland crops. They also are used for range.

Oak Glen-Gorman Association

This soil association is located along the southern edge of the Tehachapi Mountains and near Gorman. The Oak Glen soils are on alluvial fans and along drainage-ways, and the Gorman soils are on old granitic sediment in the foothills. This association is nearly level to steep, well-drained, and includes very deep soils that have a sandy loam to loam surface layer. The Oak Glen soils and the Gorman soils each occupy about 50 percent of this association.

Oak Glen Series (Alluvial Fans)

The Oak Glen series consists of well-drained soils that have formed in granitic alluvium. These soils are located on alluvial fans with slopes from 0 to 9 percent. Elevations range from 3,400 to 4,000 feet. The vegetation is grasses and oaks. Average annual temperature is 57 degrees Fahrenheit and the frost-free season ranges from about 175 to 200 days. In a typical profile the surface layer is grayish-brown sandy loam about 32 inches thick. Below is grayish-brown and brown fine sandy loam, loamy coarse sand and sandy loam that extends to a depth of 70 inches or more. In some places, texture is gravelly sandy loam throughout the profile, and in other places it is loam. These soils are used mostly for dryland small grains, for range, and as wildlife habitat.

Anaverde-Godde Association

This association consists of moderately steep to steep, well-drained soils that have a loam surface layer; deep to shallow over schist; located on foothills and mountains. Anaverde soils make up about 55 percent of this association, and Godde soils, about 45 percent.

Anaverde Series (Foothills and Mountains)

The Anaverde Series consist of well-drained soils that formed in material weathered from schist. These soils are on foothills and mountains. Slopes range from 15 to 50 percent. Elevations range from 4,700 to 5,000 feet. The vegetation consists of grasses and oaks. Average annual precipitation is 12 to 16 inches, average annual temperatures is about 55 degrees Fahrenheit, and the frost-free season ranges from about 175 to 200 days. These soils are used for range, as wildlife habitat, and for recreation and watershed purposes.

Godde Series (Mountainous Areas)

Godde Series consists of well-drained soils that formed in material weathered from hard schist. These soils occupy mountainous areas. Slopes range from 15 to 50 percent. Vegetation that is located on these

soils consists of annual grasses and forbs, flattop buckwheat, and scattered clumps of California juniper. Elevations range from 4,200 to a little more than 5,000 feet. Average annual precipitation ranges from 16 to 20 inches, average annual temperature is 55 degrees Fahrenheit, and the frost-free season ranges from about 175 to 200 days. These soils are used for range, as wildlife habitat, and for recreation and watershed purposes.

Soil Hazards

Soil Erosion

Erosion refers to the removal of soil from exposed bedrock surfaces by water or wind. The effects of erosion are intensified with an increase in slope (as water moves faster, it gains momentum to carry more debris), the narrowing of runoff channels (which increases the velocity of water), and by the removal of groundcover, which leaves the soil exposed. Erosion is a concern in the OVOV Planning Area as some topsoil is sandy and varying topography exists.

Shrink/Swell Potential (Expansive)

A soil's potential to shrink and swell depends on the amount and types of clay in the soil. Certain clays are more responsive to changes in water content than other types: they expand when wet and disproportionately shrink when dry. Moreover, the higher the clay content the more the soil will swell when wet and shrink when dry. Highly expansive soils can cause structural damage to foundations and roads without proper structural engineering and are generally less suitable or desirable for development than non-expansive soils because of the necessity for detailed geologic investigations and costlier grading applications.

Generally, the potential for soils to exhibit expansive properties occur in low-lying areas, especially near river channels. Certain bedrock and soils within the County's Planning Area contain sufficient clay content; thus, the potential for shrink/swell to occur does exist.

Landslides

Landslides occur when the underlying geological support on a hillside can no longer maintain the load of material above it, causing slope failure. The term landslide also commonly refers to a falling, sliding, or flowing mass of soil, rocks, water, and debris which may include mudslides and debris flows. Landslides generated by the El Nino storms of 1992 and 1998 illustrate the hazards to life and property posed by debris flows and landslides. The size of a landslide can vary from minor rock falls to large hillside slumps. Deep-seated landslides are caused by the infiltration of water from rain or other origin into unstable material. Fast-moving debris flows are triggered by intense rains that over saturate pockets of

soil on hillsides. Landslides may result from either natural conditions or human activity. They are often associated with earthquakes although there are other factors that may influence their occurrence, including improper grading, soil moisture and composition, and subsurface geology. Soils with high clay content or those that are located on shale are susceptible to landslides, especially when saturated from heavy rains or excessive landscape irrigation.

A majority of the land within the County's Planning Area consists of mountainous or hilly terrain, in which conditions for unstable soils and landslides may be present.[1]The California Division of Mines and Geology has prepared Seismic Hazard Zone Maps of the Newhall, Mint Canyon, Oat Mountain, and San Fernando 7.5-minute quadrangles. These four quadrangles include land within the County's Planning Area.[2] The maps identify areas of liquefaction hazard and earthquake-induced landslide hazard, as further shown in **Figure 3.9-2, Liquefaction and Landslide Hazards within the OVOV Planning Area.**

Subsidence

Subsidence is the gradual, local setting or sinking of the earth's surface with little or no horizontal motion. Subsidence usually occurs as a result of the extraction of subsurface gas, oil, or water or from hydro-compaction. It is not the result of a landslide or slope failure. Subsidence typically occurs over a long period of time and can result in structural impacts to developed areas, such as cracked pavement and building foundations, and dislocated wells, pipelines, and water drains. No large-scale problems with ground subsidence have been reported in the County's Planning Area.[3]

Top-Soil Loss

The loss of topsoil is the most significant on-site consequence of erosion that occurs during and after construction or other soil disturbance. Topsoil is the soil layer that contains organic matter, plant nutrients, and biological activity. Loss of topsoil reduces the soil's ability to support plant life, regulate water flow, and maintain the biodiversity of soil microbes and insects that control disease and pest outbreaks. Loss of nutrients, soil compaction, and decreased biodiversity of soil inhabitants can severely limit the vitality of landscaping. This can lead to additional site management and environmental concerns, such as increased use of fertilizers, irrigation and pesticides, and increased stormwater runoff that contribute pollution to nearby water bodies.

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1 Los Angeles County Department of Regional Planning, "Preliminary Draft Santa Clarita Valley Area Plan – One Valley One Vision," Chapter 5, "Safety Element," (2008), 220.

2 Ibid.

3 Ibid.

Legend:

- OVOV Planning Area
- City of Santa Clarita Boundary
- Angeles National Forest
- County Boundary

Hydrography
- Waterbody and Perennial Stream

Seismic Hazard Zones *
- Earthquake - Induced Landslide
- Liquefaction

Dam Inundation Areas
- Castaic Lake
- Bouquet Reservoir

* All available seismic hazard data shown.

GIS Projection - CA State Plane, Zone 5, NAD83, Feet.

Source: Seismic Hazard Zones from California Geological Survey, 2004, Seismic Hazard Mapping Program
City of Santa Clarita - Planning, City Boundary, 2008; Thomas Bros., Hydrology, Waterbodies, and Streets, 2008; LA County - Planning, OVOV Boundary and Forest Boundaries, 2008.

3 1.5 0 3

APPROXIMATE SCALE IN MILES

Lancaster
Palmdale
Santa Clarita
Los Angeles
VENTURA COUNTY
LOS ANGELES COUNTY
5
14
126
210

SOURCE: City of Santa Clarita, County of Los Angeles, Valleywide General Plan - March 2008

FIGURE **3.9-2**

Liquefaction and Landslide Hazards within the OVOV Planning Area

The off-site consequences of soil erosion from developed sites include a variety of water quality issues. Runoff from developed sites carries pollutants, sediments, and nutrients that disrupt aquatic habitats in the receiving waters. Nitrogen and phosphorus from runoff hasten eutrophication by causing unwanted plant growth in aquatic systems, including algal blooms that alter water quality and habitat conditions. Algal blooms can also result in decreased recreation potential and diminish diversity of indigenous fish, plant, and animal populations.

Sedimentation also contributes to the degradation of water bodies. The buildup of sedimentation in stream channels can lessen flow capacity, potentially leading to increased flooding. Sedimentation also affects aquatic habitat by increasing turbidity levels. Turbidity reduces sunlight penetration into the water and leads to reduced photosynthesis in aquatic vegetation, causing lower oxygen levels that cannot support diverse communities of aquatic life.

Erosion and sedimentation control measures are needed in order to minimize difficult and expensive mitigation measures in receiving waters. The cost of erosion and sedimentation control on construction sites involves minimal expense associated with installing and inspecting control measures and devices, particularly before and after storm events.

Best management practices have been established under the National Pollutant Discharge Elimination System (NPDES) as part of the federal Clean Water Act, to decrease erosion and sedimentation. The topic of post-construction runoff management continues to expand and is addressed in NPDES permits, which require pre-project runoff water balance, sedimentation balance, and channel protection. Policies have been included in the Area Plan to assist in acknowledging the importance of soil conservation in the County's Planning Area, as further analyzed below.

Geologic Hazards

Seismicity and Faulting

The County's Planning Area contains, and is in the vicinity of, several known active and potentially active earthquake faults and fault zones. The term *fault* describes a fracture or zone of closely associated fractures, along which rocks on one side have been displaced with respect to those on the other side. A fault zone consists of a zone of related faults which may be braided or branching. New faults within the region continue to be discovered. Scientists have identified almost 100 faults in the Los Angeles area known to be capable of a magnitude 6.0 or greater earthquake. The January 17, 1994, magnitude 6.7 Northridge Earthquake, which produced severe ground motions causing 57 deaths and 9,253 injuries, left over 20,000 displaced from their homes. Scientists have indicated that such devastating shaking

should be considered the norm near any large thrust fault earthquake in the region. Recent reports from the US Geological Survey and the Southern California Earthquake Center conclude that the Los Angeles area could expect one earthquake every year of magnitude 5.0 or more, for the foreseeable future.

A major earthquake in or near the County's Planning Area may cause deaths and casualties, property damage, fires, hazardous materials spills, and other hazards. The effects could be aggravated by aftershocks and the secondary effects of fire, chemical accidents, water contamination, and possible dam failures. The time of day and season of the year could affect the number of casualties and property damage sustained from a major seismic event. In addition to impacts on human safety and property damage, a major earthquake could cause socioeconomic impacts on Valley residents and businesses through loss of employment, interruption of the distribution of goods and services, and reductions in the local tax base. Disruption of transportation, telecommunications, and computer systems could further impact financial services and local government. A catastrophic earthquake could exceed the response capability of the OVOV Planning Area, requiring disaster relief support from other local governmental and private organizations, and from the state and federal governments.

Earthquakes are classified by their magnitude and by their intensity. The intensity of seismic ground shaking is a function of several factors, including the magnitude of the quake, distance from the epicenter, and local geologic conditions. The largest or maximum credible earthquake a fault is capable of generating is used for community planning purposes. Earthquakes are typically defined by their magnitude as measured on the Richter Scale. Each whole number step in magnitude on the scale represents a tenfold increase in the amplitude of the waves on a seismogram, and about a 31-fold increase in energy released. For example, a 7.5-magnitude earthquake is 31 times more powerful than a 6.5-magnitude quake. The Modified Mercalli Intensity Scale is a measure of the damage potential of earthquakes, and contains 12 levels of intensity from I (tremor not felt) to XII (damage nearly total). For purposes of the discussion in this section, intensity is given using the Richter Scale, which is generally described in **Table 3.9-1, Richter Scale of Magnitude for Earthquakes.**

Table 3.9-1
Richter Scale of Magnitude for Earthquakes

Richter Magnitude	Earthquake Effects
– Less than 3.5	Generally not felt, but recorded
– 3.5 to 5.4	Often felt, but rarely causes damage
– 5.5 to 6.0	At most slight damage to well-designed buildings. Can cause major damage to poorly constructed buildings over small regions
– 6.1 to 6.9	Can be destructive in areas up to about 100 kilometers across, in areas where people live.
– 7.0 to 7.9	Major earthquake. Can cause serious damage over large areas.
8.0 or greater	Great earthquake. Can cause serious damage in areas several hundred kilometers across.

Reference: Los Angeles County Department of Regional Planning, "Preliminary Draft Santa Clarita Valley Area Plan – One Valley One Vision," Chapter 5, Safety Element, 2008, 214.

Faults[4]

Active faults are those that have caused soil and strata displacement within the last 11,000 years (the Holocene epoch). Potentially active faults show evidence of surface displacement during the last 2 million years (the Quaternary period). Faults capable of causing major damage within the County's Planning Area are listed below, with estimated potential magnitude indicated on the Richter scale. **Figure 3.9-3, Faults within or adjacent to the OVOV Planning Area,** shows the general location of faults in the vicinity of the County's Planning Area.

- The San Andreas Fault Zone extends approximately 746 miles from the Gulf of California north to the Cape of Mendocino, where it continues northward along the ocean floor. The San Andreas Fault Zone marks the boundary between the Pacific and North American geotechnical plates; it is a right-lateral strike-slip fault that occurs along the line of contact between the two plates. The fault zone is located north of the City of Santa Clarita and extends through the communities of Frazier Park, Palmdale, Wrightwood, and San Bernardino. In 1857, a magnitude 8.0 earthquake occurred along a 255-mile-long segment of this fault, between Cholame and San Bernardino. This seismic event is the most significant historic earthquake in Southern California history. The length of the San Andreas Fault Zone and its active seismic history indicate that it has a high potential for large-scale movement in the near future, with an estimated Richter magnitude of 6.8–8.0. Along the Mojave segment, closest to the Santa Clarita Valley, the interval period between major ruptures is estimated to be 140 years.

4 Los Angeles County Department of Regional Planning, "Preliminary Draft Santa Clarita Valley Area Plan – One Valley One Vision," Chapter 5, "Safety Element," (2008), 214-216.

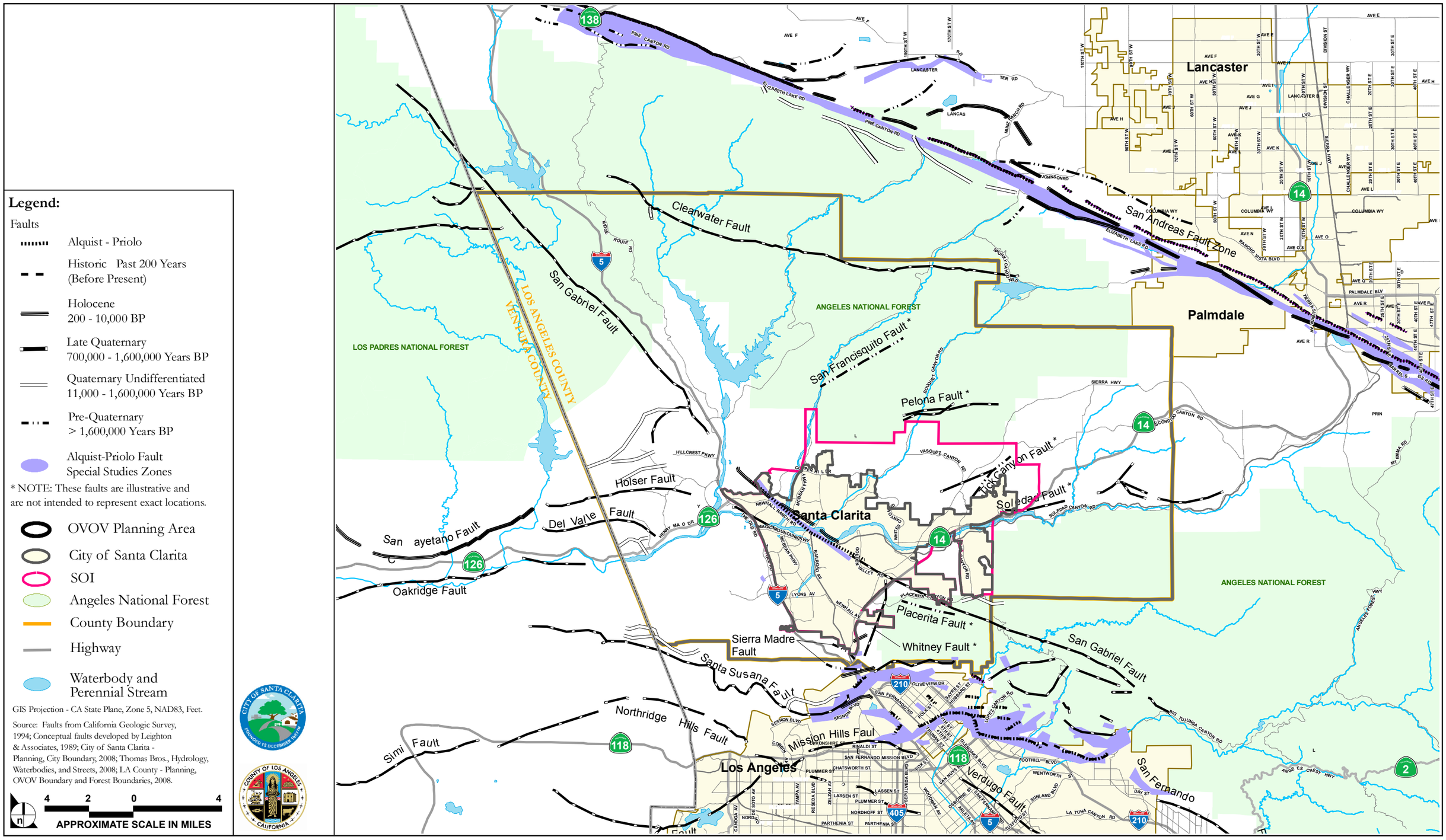
- The San Fernando Fault Zone is a thrust fault, 11 miles long, generally located approximately 20 miles southeast of Santa Clarita near the communities of San Fernando and Sunland. The fault zone's last major movement occurred on February 9, 1971, producing a quake with a Richter magnitude of 6.6 known as the San Fernando earthquake. The ground surface ruptures during this earthquake occurred on a little-known pre-existing fault in an area of low seismicity and previously unknown historic ground placement. The zone of displacement was approximately 12 miles long and had a maximum of 3 feet of vertical movement. The estimated interval between major ruptures along the San Fernando fault zone is estimated between 100 and 300 years, with a probable earthquake magnitude of 6.0–6.8.

- The San Gabriel Fault zone traverses the planning area from northwest to southeast, extending 87 miles from the community of Frazier Park (west of Gorman) to Mount Baldy in San Bernardino County. Within the Santa Clarita Valley, the San Gabriel Fault Zone underlies the northerly portion of the community from Castaic and Saugus, extending east through Canyon Country to Sunland. Holocene activity along the fault zone has occurred in the segment between Saugus and Castaic. The length of this fault, and its relationship with the San Andreas Fault system, contribute to its potential for future activity. The interval between major ruptures is unknown, although the western half is thought to be more active than the eastern portion. The fault is a right-lateral strike-slip fault with an estimated earthquake magnitude of 7.2.

- The Holser Fault is approximately 12 miles in length extending from just east of former Highway 99, westward to the vicinity of Piru Creek. Nearby communities include Castaic, Val Verde, and Piru. The surface trace of the fault intersects the San Gabriel Fault east of Saugus. The most recent surface rupture has been identified as Quaternary period. Subsurface data in nearby oil fields demonstrate that the Holser Fault is a southward dipping, sharply folded reverse fault. Subsurface exposures of this fault in the Metropolitan Water District's Saugus Tunnel show at least 14 feet of terrace deposits offset by this fault, which suggest that the fault is potentially active. This fault could generate a maximum estimated earthquake magnitude of 6.5.

- The Sierra Madre Fault is a 34 mile long fault zone generally located southeast of the planning area along the south side of the San Gabriel Mountains, extending from Sunland to Glendora. The fault is a reverse fault that dips to the north. The zone of faulting is similar to, and may lie within, the same fault system as the San Fernando fault zone (which moved in 1971). Movement along faults in this zone has resulted in the uplift of the San Gabriel Mountains. Geologic evidence indicates that the Sierra Madre Fault Zone has been active in the Holocene epoch. The interval between major ruptures is estimated at several thousand years, and the zone has an estimated earthquake magnitude of 6.0–7.0.

- The Santa Susana Fault is a thrust fault, dipping to the north. The fault is located south of the intersection of Interstate 5 and SR-14, and extends 24 miles from Simi Valley to the San Fernando Valley. Nearby communities include Sylmar and San Fernando. This fault has been classified as potentially active by geologists based on evidence suggesting that movement has occurred within the past 2 million years (Quaternary period). In its western portions, there is evidence that the fault plane has been folded and would, therefore, probably not have renewed movement. The interval between major ruptures is unknown. Portions of the fault zone have an estimated earthquake magnitude of 6.5–7.3.



SOURCE: City of Santa Clarita, County of Los Angeles, Valleywide General Plan - March 2009

FIGURE **3.9-3**

Faults within or adjacent to the OVOV Planning Area

- The Oak Ridge Fault is a thrust fault extending 56 miles. The fault is located west of the City and parallels the Santa Clara River and State Route 126 from Piru to the coast. Movement along the portion of the fault between Santa Paula and Ventura has been identified in the Holocene period. At its eastern end, the Oak Ridge thrust becomes more difficult to trace and appears to be overthrust by the Santa Susana fault. The magnitude 6.7 Northridge earthquake in 1994 is thought to have occurred along the eastern edge of the Oak Ridge Fault. The interval between major ruptures is unknown, and the maximum earthquake magnitude is estimated to be 6.5–7.5.

- The Clearwater Fault is an east/west trending reverse fault, approximately 20 miles in length. The fault is located approximately 10 miles northeast of the Castaic community and runs through Lake Hughes and Leona Valley, where it merges with the San Andreas Fault Zone. Evidence of movement along this fault has been identified in the Late Quaternary period. Although an estimate of the amount and type of displacement on the Clear Water Fault is difficult to determine, the fault is considered to be potentially active.

- The Soledad Fault is a left-lateral normal fault 12 miles in length, located near the communities of Acton and Soledad Canyon. The fault is considered to be active, with surface rupture during the Quaternary period.

- The Northridge Hills Fault crosses the San Fernando Valley through Sepulveda, Northridge and Chatsworth, disappearing under thick alluvium in the east central valley. This fault is believed either to be more than one fault plane or a splinter of faults that align and possibly blend with the fault complex in the Santa Susanna Pass, which extends west into Simi Valley. Near the town of Northridge, the Northridge Hills Fault is buried beneath the alluvium, and the fault's location is interpreted from oil industry data and from topographic patterns. The fault is a reverse fault, 16 miles in length. This portion of the fault has had movement during the late Quaternary period. Despite its name, it is not the fault responsible for the Northridge Earthquake (which occurred along the Oak Ridge Fault).

- The San Francisquito Fault is a subsidiary fault of the San Andreas Fault zone. Although there is no evidence of recent activity, it has experienced up to 23 feet of vertical displacement in the past. Originating just north of the Bouquet Reservoir, it extends under the dam and travels southwest to San Francisquito Canyon.

- The Pelona Fault, 4 miles in length, is located near the community of Sleepy Valley and has ruptured in the Late Quaternary period.

In addition to seismic impacts from these faults, there is a potential for ground shaking from blind thrust faults, which are low angle detachment faults that do not reach the ground surface. Recent examples of blind thrust fault earthquakes include the 1994 Northridge (magnitude 6.7), 1983 Coalinga (magnitude 6.5), and 1987 Whittier Narrows (magnitude 5.9) events. Much of the Los Angeles area is underlain by blind thrust faults, typically at a depth of 6 to 10 miles below ground surface. These faults have the capacity to produce earthquakes of a magnitude up to 7.5. The Holser Fault is an east-west trending fault that dips to the north, and is modeled as being capable of generating a maximum moment magnitude of 6.5.

The Sierra Madre Fault Zone is a series of an echelon moderate angle, north-dipping, reverse faults (thrust faults). The zone of faulting is very similar to, and may be within, the same fault system as the San Fernando Fault Zone. Movement along these frontal faults has resulted in the uplift of the San Gabriel Mountains. Geologic evidence indicates that the Sierra Madre Fault Zone has been active in geologically recent time. Evidence supporting the recent activity of the fault zone is the thrusting of granitic rock over recent alluvial deposits, scarps that offset alluvial surfaces at several locations along the fault, and a general coincidence with a zone of epicenters of historic earthquakes of magnitude of 4.0 to 4.9.

Historic Seismic Activity

The County's Planning Area has experienced shaking from several earthquakes recorded back to 1855, as shown in **Table 3.9-2, Historic Earthquakes that Have Affected the County's Planning Area**. Prior to that date the historic record is incomplete. Epicenters of historic earthquakes affecting the planning area are shown on **Figure 3.9-4, Epicenters of Major Historic Earthquakes within the OVOV Planning Area**. One of the largest occurred in 1857 in the Fort Tejon area. Estimated at a magnitude of 8.0, this earthquake resulted in a surface structure scar of about 220 miles in length along the San Andreas Fault, and shaking was reported from Los Angeles to San Francisco.[5]

Recent Seismic Activity

The strongest, most recent seismic event nearest the County's Planning Area was the January 1994 Northridge earthquake (Richter magnitude 6.7). The epicenter of this event was located approximately 13 miles southwest of the City in the Northridge community of Los Angeles County. The Northridge earthquake caused over $650 million in damage to residential units, $41 million in damage to businesses and over $20 million in damage to public buildings and roads. No deaths were recorded in the OVOV Planning Area due to the earthquake. The earthquake damaged the water distribution and filtration systems, natural gas service, electrical service, and roads and bridges in and immediately surrounding the OVOV Planning Area. Road and bridge damage included the collapse of Interstate 5 and Highway 14 overpass, resulting in isolation of a portion of the OVOV Planning Area for an extended period of time. Other damage included a crude oil release from a pipeline rupture and other hazardous materials spills.[6]

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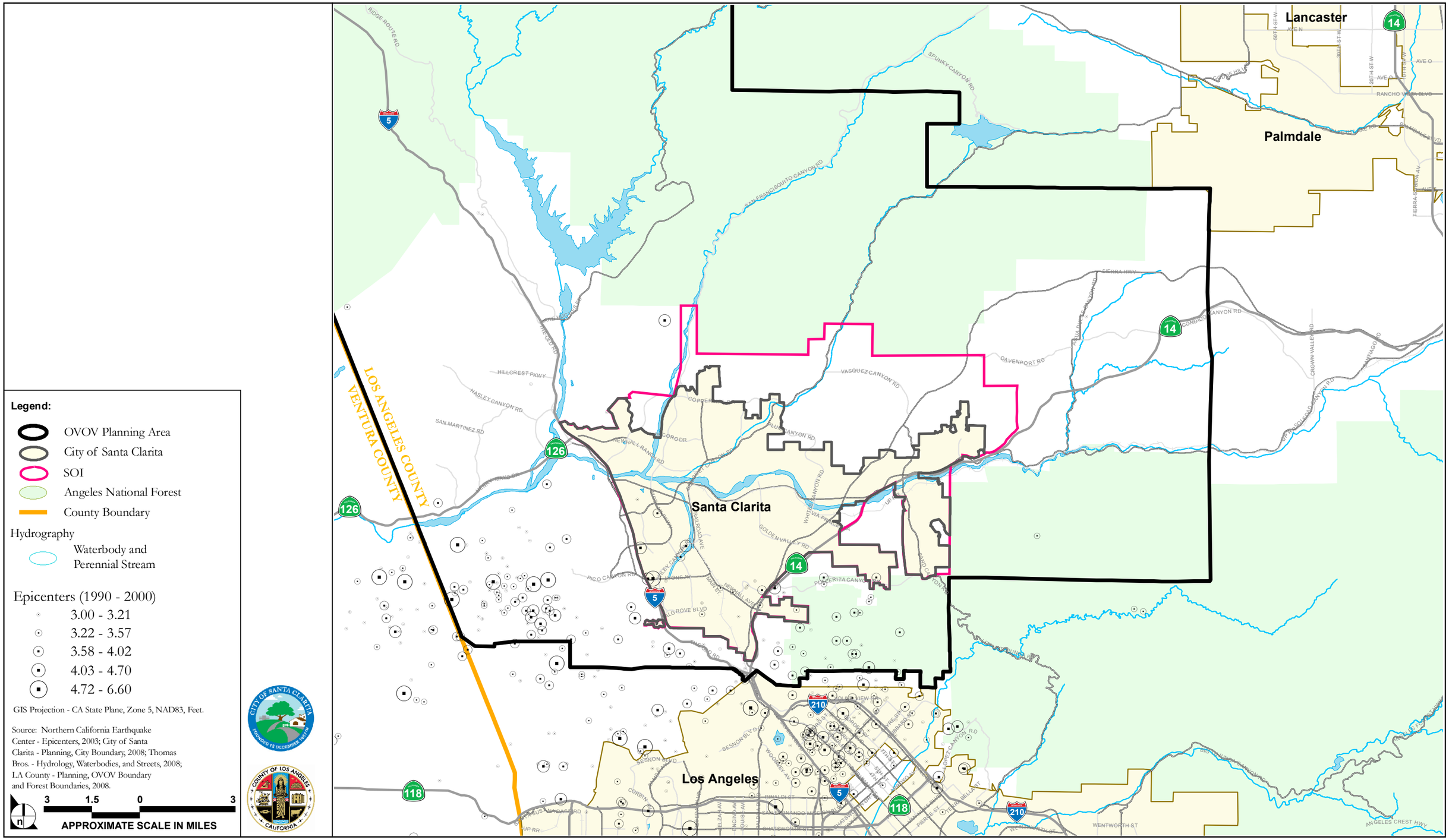
[5] Los Angeles County Department of Regional Planning, "Preliminary Draft Santa Clarita Valley Area Plan – One Valley One Vision," Chapter 5, "Safety Element," (2008), 217.

[6] Los Angeles County Department of Regional Planning, "Preliminary Draft Santa Clarita Valley Area Plan –One Valley One Vision," Chapter 5, "Safety Element," (2008), 217.



Legend:

- OVOV Planning Area
- City of Santa Clarita
- SOI
- Angeles National Forest
- County Boundary

Hydrography

- Waterbody and Perennial Stream

Epicenters (1990 - 2000)

- 3.00 - 3.21
- 3.22 - 3.57
- 3.58 - 4.02
- 4.03 - 4.70
- 4.72 - 6.60

GIS Projection - CA State Plane, Zone 5, NAD83, Feet.

Source: Northern California Earthquake Center - Epicenters, 2003; City of Santa Clarita - Planning, City Boundary, 2008; Thomas Bros. - Hydrology, Waterbodies, and Streets, 2008; LA County - Planning, OVOV Boundary and Forest Boundaries, 2008.

3 1.5 0 3

APPROXIMATE SCALE IN MILES

SOURCE: City of Santa Clarita, County of Los Angeles, Valleywide General Plan - March 2008

FIGURE **3.9-4**

Epicenters of Major Historic Earthquakes within the OVOV Planning Area

Table 3.9-2
Historic Earthquakes that Have Affected the County's Planning Area

Date	Earthquake Location and County	Earthquake Richter Magnitude
1855	Los Angeles, Los Angeles County	About 6.0
1857	Fort Tejon, Kern County	About 8.0
1883	Ventura-Kern County border	About 6.0
1893	San Fernando Valley, Los Angeles County	5.5–5.9
1916	Near Lebec, Kern County	5.2
1925	Santa Barbara Channel, Santa Barbara County	6.3
1933	Huntington Beach, Orange County	6.3
1941	Santa Barbara Channel, Santa Barbara County	5.9
1946	Northeastern Kern County	6.3
1947	Central San Bernardino County	6.2
1948	Near Desert Hot Springs, Riverside County	6.5
1952	White Wolf Fault, Kern County	7.5
1971	San Fernando (Sylmar), Los Angeles County	6.7
1988	Pasadena, Los Angeles County	5.0
1987	Whittier Narrows, Los Angeles County	5.9
1991	Sierra Madre, Los Angeles County	5.8
1994	Northridge, Los Angeles County	6.7
1999	Hector Mine, San Bernardino County	7.1

Source: Los Angeles County Department of Regional Planning, "Preliminary Draft Santa Clarita Valley Area Plan –One Valley One Vision," Chapter 5, "Safety Element," 2008, 218.

Alquist-Priolo Special Studies Zone

The Alquist-Priolo Earthquake Fault Zoning Act, administered by the California Geological Survey, was passed in 1972 to mitigate the hazard of surface faulting to structures for human occupancy, which are defined as any structure used or intended for supporting or sheltering any use of occupancy that is expected to have a human occupancy rate of more 2,000 person-hours per year. The main purpose of the Act is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. The law requires the State Geologist to establish regulatory zones (known as Earthquake Fault Zones or Special Studies Zone) around the surface traces of active faults and to issue appropriate maps. The maps are distributed to all affected cities, counties, and state agencies for their use in planning and controlling new or renewed construction. Local agencies must regulate most development projects within the zones. Projects include all land divisions and most structures for human occupancy. Single-family

wood-frame and steel-frame dwellings up to two stories not part of a development of four units or more are exempt. However, local agencies can be more restrictive than state law requires. Before a project can be permitted, cities and counties must require a geologic investigation to demonstrate that proposed buildings will not be constructed across active faults. An evaluation and written report of a specific site must be prepared by a licensed geologist. If an active fault is found, a structure for human occupancy cannot be placed over the trace of the fault and must be set back from the fault (generally 50 feet).

There is currently no Alquist-Priolo Special Studies Zone within the County's Planning Area. There is an Alquist-Priolo Zone, a long narrow strip (traveling in a northwest to southeast direction) extending from the central portion of the City of Santa Clarita, which runs along the San Gabriel Fault Zone. However, the closest Alquist-Priolo Special Studies Zone is located adjacent to, and south of the County's Planning Area, outside of the County Planning Area's boundaries.

Seismic Hazards

Seismic Hazards Map Act

The California Geological Survey also provides guidance with regard to seismic hazards. Under the Seismic Hazards Mapping Act, seismic hazard zones are to be identified and mapped to assist local governments in land use planning. The intent of this publication is to protect the public from the effects of strong ground shaking, liquefaction, landslides, ground failure, or other hazards caused by earthquakes. In addition, the California Geological Survey's Special Publications 117, "Guidelines for Evaluating and Mitigating Seismic Hazards in California," provides guidance for the evaluation and mitigation of earthquake-related hazards for projects within designated zones of required investigations.

Surface Rupture

Surface rupture or displacement is the break in the ground's surface and associated deformation resulting from the movement of a fault. Surface rupture occurs along the fault trace, where the fault breaks the ground surface during a seismic event. Buildings constructed on or adjacent to a fault trace are typically severely damaged from fault rupture in the event of a major fault displacement during an earthquake. As this hazard cannot be prevented, known faults are identified and mapped so as to prevent or restrict new construction of structures within fault hazard areas.[7]

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7 Los Angeles County Department of Regional Planning, "Preliminary Draft Santa Clarita Valley Area Plan –One Valley One Vision," Chapter 5, "Safety Element," (2008), 218.

Groundshaking

Ground shaking is the most significant earthquake action in terms of potential structural damage and loss of life. Ground shaking is the movement of the earth's surface in response to a seismic event. The intensity of the ground shaking and the resultant damages are determined by the magnitude of the earthquake, distance from the epicenter, and characteristics of surface geology. This hazard is the primary cause of the collapse of buildings and other structures. The significance of an earthquake's ground shaking action is directly related to the density and type of buildings and the number of people exposed to its effect. A landslide, which is also considered a soil hazard, is discussed earlier in this section.[8]

Liquefaction

Liquefaction refers to a process by which water-saturated granular soils transform from a solid to a liquid state during strong ground shaking. Liquefaction usually occurs during or shortly after a large earthquake. The movement of saturated soils during seismic events from ground shaking can result in soil instability and possible structural damage. In effect, the liquefaction soil strata behave as a heavy fluid. Buried tanks may float to the surface, and structures above the liquefaction strata may sink. Pipelines passing through liquefaction materials typically sustain a relatively large number of breaks in an earthquake.

Liquefaction has been observed to occur in soft, poorly graded granular materials (such as loose sands) where the water table is high. Areas in the Valley underlain by unconsolidated alluvium, such as along the Santa Clara River and tributary washes, may be prone to liquefaction (**Figure 3.9-2**).

Dam Inundation

Dam inundation is another potential hazard from seismic shaking. Within the Santa Clarita Valley, dams are located at the Castaic Reservoir and the Bouquet Reservoir. If the Castaic Reservoir Dam were to rupture from a seismic event, potential flooding could occur in Castaic, Val Verde, and Valencia. Failure of the two dams at the Bouquet Reservoir could result in flooding downstream in Saugus and Valencia.

Dam failure can result from natural or man-made causes, including earthquakes, erosion, improper siting or design, rapidly rising flood waters, or structural flaws. Dam failure may cause loss of life, damage to property, and displacement of persons residing in the inundation path. Damage to electric generating facilities and transmission lines could also impact life support systems in communities outside of the

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8 Los Angeles County Department of Regional Planning, "Preliminary Draft Santa Clarita Valley Area Plan –One Valley One Vision," Chapter 5, "Safety Element," (2008), 218.

immediate inundation area. Within the Santa Clarita Valley, the two major reservoirs which could have a significant impact on the Santa Clarita Valley in the event of a dam failure are located in Bouquet Canyon and Castaic.

Bouquet Canyon Reservoir is located approximately 17 miles northeast of Valencia. The reservoir has two earth-filled dams, one on the west side overlooking Cherry Canyon, and one on the south side above Bouquet Canyon. Both of these reservoirs are owned and operated by the City of Los Angeles, Department of Public Works. The Bouquet Reservoir has a maximum capacity of 36,505 acre-feet of water and 7.6 miles of shoreline. Because of its two dams, two potential inundation areas have been identified in the event of a dam failure. On the Cherry Canyon side, the water would flow west for approximately 2 miles through the Canyon into San Francisquito Canyon, and then south for approximately 11 miles into the Santa Clara River. The Bouquet Creek dam would drain south through Bouquet Canyon for 17 miles, into the Santa Clara River.

The Castaic Dam is located on Lake Hughes Road, 1 mile northeast of Interstate 5, just north of the town of Castaic. This dam is operated by the State of California Resources Agency, Department of Water Resources. Castaic Dam is an earth-filled dam located at the confluence of Castaic and Elizabeth Lake Creeks. The dam facing is approximately 1 mile across with a maximum capacity of 350,000 acre-feet of water, covering a surface area of 2,600 acres with 34 miles of shoreline. Should a breach in the dam occur, the water will flow south in Castaic Creek for approximately 5 miles to the Santa Clara River.

Failure of these dams during a catastrophic event, such as a severe earthquake, is considered unlikely, due to their type of construction. However, local safety plans, such as the Standardized Emergency, Management System and the Operational Area Emergency Response Plan, have considered the possibility of dam failure and have outlined a procedure for response and recovery from this type of hazard, including identification of inundation areas and evacuation routes.

A historic dam failure event occurred on March 12, 1928. The Saint Francis Dam, a part of the Los Angeles Aqueduct at San Francisquito Canyon, collapsed spilling over 12 billion gallons of water into the Valley. The dam failure resulted in approximately 450 deaths.

Seiches

A seiche is an earthquake-produced wave in a lake or reservoir. Seiches can be triggered by ground motion from distant earthquakes or from ground displacement beneath the water body. In reservoirs, seiches can generate short-term flooding of downstream areas. The closest bodies of water to the

County's Planning Area that are subject to seiches during a seismic event include the Bouquet and Castaic Reservoirs.[9]

REGULATORY FRAMEWORK

Local

County's Planning Area

Given that some soils within the County's Planning Area contain sufficient clay content, development could be constrained by soils that exhibit shrink/swell potential. A large portion of the land within the County's Planning Area is mountainous and/or contains hilly terrain. Thus, landslides represent a development constraint, especially within the western and eastern portions of the County's Planning Area. Any development within the Alquist-Priolo Special Studies Zone could also be constrained as they are subject to more strict development standards (**Figure 3.9-3**). Currently, no known Alquist-Priolo Special Studies Zones are located within the boundaries of the County's Planning Area. The closest Alquist-Priolo Special Studies Zone is located directly south of the County's Planning Area, along the Santa Susana Fault and the Missions Hills Fault. Additionally, an Alquist-Priolo Special Studies Zone is located within the City of Santa Clarita, along the San Gabriel Fault. Areas that are subject to liquefaction, which are shown above for the County's Planning Area on **Figure 3.9-2**, could expose people and structures to these hazards. Liquefaction also represents a development constraint. Areas subject to liquefaction within the County's Planning Area are primarily located along the Santa Clara River bed (western portion of the County's Planning Area), canyon bottoms (mostly in the western and northern portion of the County Planning's Area, and tributaries (northern and eastern portion of the County's Planning Area).

All grading and excavation must comply with Title 26 Building Code of the County of Los Angeles, California County Code. Rules and regulations contained within the chapters of Title 26 provide control of excavation, grading, and earthwork construction, including fills or embankment activities. During the grading permit application process, the County Engineer may require engineering geological and soil reports, as well as seismic hazard zone studies to be prepared for proposed developments within the OVOV Planning Area. The engineering geological report would require an adequate description of the geology on any development site within the County's Planning Area, along with conclusions and recommendations regarding the effect of geological conditions of any proposed development. Soil reports

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9 Los Angeles County Department of Regional Planning, "Preliminary Draft Santa Clarita Valley Area Plan –One Valley One Vision," Chapter 5, "Safety Element," (2008), 218-219.

would be required to characterize the existing soil resources on the development site and would provide recommendations for grading and design criteria. Development in seismic hazard zones will require studies that evaluate the potential for seismically induced liquefaction, soil instability, and earthquake induced landslides to occur on a site.

In addition to all of the requirements outlined in the Los Angeles County Building Code, the following guidelines apply to projects that are located within a Seismic Hazard Area as indicated above in **Figure 3.9-2:**

- A geology report, prepared by a registered geotechnical engineer, shall be submitted to the appropriate local agency for review prior to approval of a proposed development within a Seismic Hazard Area.
- No structure for human occupancy shall be constructed within 50 feet of an active fault trace (specific exceptions include individually constructed, wood frame, single-family residences and mobile homes).
- Applications for zoning or tentative subdivision approval or renewal shall be submitted to the County Engineer for review. On the basis of this review, the County Engineer shall determine the necessity for additional geologic data, and establish such conditions for development as may be appropriate.
- The following uses shall be prohibited in Seismic Zones: emergency response facilities including sheriff and fire stations; vital facilities including hospitals and major utility and communications installations; and facilities for dependent populations, including but not limited to, schools, day care centers, convalescent homes, institutions for the physically and mentally handicapped, and high security correctional institutions.

In order to limit structural damage from earthquakes, seismic design codes have undergone substantial revision in recent years. Earthquake safety standards for new construction became widely adopted in local building codes in Southern California following the 1933 Long Beach Earthquake, and have been updated in various versions of the California Building Code since that date. The 1994 Northridge Earthquake resulted in significant changes to building codes to ensure that buildings are designed and constructed to resist the lateral forces of an earthquake and repeated aftershocks. Required construction techniques to ensure building stability include adequate nailing, anchorage, foundation, shear walls, and welds for steel framed buildings.

The County of Los Angeles Department of Public Works enforces structural requirements of the building code, the Alquist-Priolo Special Studies Zone, and sound engineering and geotechnical practices in evaluating structural stability of proposed new development within the County's Planning Area. The proposed Area Plan policies ensure that proposals for new development within the County's Planning

Area are reviewed for seismic hazards, through analysis of existing conditions and requirements for safe building practices.

Critical, Sensitive, and High Occupancy Facilities

Critical, sensitive, and high-occupancy facilities, such as public schools and hospitals, are located within the County's Planning Area. The California Division of the State Architect regulates development standards for public schools and other public buildings. The County of Los Angeles does not have additional special development standards for critical, sensitive, and high occupancy facilities; however, the building officials will review all developmental projects proposed within the County's Planning Area for additional requirements.

THRESHOLDS OF SIGNIFICANCE

In order to assist in determining whether a project will have a significant effect on the environment, the *California Environmental Quality Act (CEQA) Guidelines*, Appendix G identify criteria for conditions that may be deemed to constitute a substantial or potentially adverse change in physical conditions.

Significant impacts resulting from geology/seismicity/soil impacts would occur if:

- The project would expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
  - The rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault
  - Strong seismic ground shaking
  - Seismic-related ground failure, including liquefaction
  - Landslides
- Result in substantial soil erosion or the loss of topsoil
- If the proposed project is 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
- If the proposed project is located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property

- If the proposed project is located on soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water.

IMPACT ANALYSIS

This impact analysis section evaluates the potential effects of the proposed Area Plan policies on geology, soils, and seismicity within the County's Planning Area using the *State CEQA Guidelines* thresholds of significance.

Impact 3.9-1 The project would expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving the 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.

As shown in **Figure 3.9-3**, an Alquist-Priolo earthquake fault hazard zone (**Policy S 1.1.1**) has been established along the traces of the San Gabriel Fault within the City of Santa Clarita, running in a northwest to southeast direction. There are currently no Alquist-Priolo earthquake fault hazard zones located within the County's Planning Area; adjacent to the planning area's southern boundary an Alquist-Priolo earthquake fault hazard zone has been established along the Santa Susana Fault and the Mission Hills Fault. Some lands that are adjacent to this existing Alquist-Priolo Zone, within the County's Planning Area, are designated as Rural Land 10 (RL-10), Rural Land 20 (RL-20), Light Industrial (IL), and Open Space. Future development on these lands may result in the construction and occupation of residential and business structures adjacent to a known Alquist-Priolo Fault Zone (**Policy S 1.2.1** and **Policy S 1.2.2**). Such development would increase the number of persons and the amount of developed property exposed to fault rupture hazards.

Implementation of **Policies S 1.1.4, and Policies 1.2.1** to **S 1.2.4** will provide direction in regulating new development in areas that are subject to geological hazards in order to reduce risks to the public from seismic events by maintaining maps showing potential inundation areas from dam failure; implementing and enforcing requirements and guidelines of the Alquist-Priolo Earthquake Fault Zoning Act; restricting new development and land use types in areas that could experience fault rupture, landslides, or liquefaction; and by requiring any new development within the County Planning Area to conduct soils and geotechnical reports to reduce the possibility of loss, injury or death to people in the case of a geologic or seismic event.

Proposed Area Plan Policies

Policy S 1.1.1: Maintain maps of potentially active faults and fault zones, based on information available from the Alquist-Priolo Special Studies Zone maps, United States Geological Survey, State Board of Geologists, State Mining and Geology Board, and other appropriate sources.

Policy S 1.1.4: Maintain maps showing potential inundation areas from dam failure.

Policy S 1.2.1: Implement requirements of the Alquist-Priolo Earthquake Fault Zoning Act.

Policy S 1.2.2: Restrict the land use type and intensity of development in areas subject to fault rupture, landslides, or liquefaction, in order to limit exposure of people to seismic hazards.

Policy S 1.2.3: Require soils and geotechnical reports for new construction in areas with potential hazards from faulting, landslides, liquefaction, or subsidence, and incorporate recommendations from these studies into the site design as appropriate.

Policy S 1.2.4: Enforce seismic design and building techniques in the County Building Code.

Effectiveness of Proposed Area Plan Policies

While implementation of the aforementioned policies would reduce impacts from fault rupture, they do not address potential impacts related to undiscovered faults or impact that may be identified through the use of new scientific data, equipment, or procedures. To provide adequate mitigation for potential fault rupture hazards, mitigation measure **MM 3.9-1** has been identified to provide flexibility to the County of Los Angeles in requiring site-specific geotechnical investigations in any area falling within identified or yet as unidentified fault zones, including Alquist-Priolo Fault Zones. Adherence to **MM 3.9-1** and the policies proposed above would reduce potential impacts from rupture of unidentified fault zones to a less than significant level.

Plan to Plan Analysis

Similar to the proposed Area Plan, the existing Area Plan does not contain policies that address potential impacts to undiscovered geotechnical resources. The proposed Area Plan provides for mitigation to address potential geologic resource occurrence. The proposed Area Plan provides for mitigation to

address undiscovered geotechnical resources, and the existing Area Plan does not. Impacts would be greater under the existing Area Plan.

Impact 3.9-2 The project would expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking.

Many of the earthquakes that the County's Planning Area has experienced in the past 50 years have involved ground shaking that has damaged residential and commercial buildings, as well as local infrastructure. There have been earthquakes that have had their epicenter within the existing County's Planning Area boundary (specifically in the southeast corner), but the majority of the earthquakes and resulting ground shaking that has occurred has been from earthquakes with their epicenters located outside of the OVOV Planning Area, south of its boundaries. Increases in population, and the development of residential and non-residential development that will occur upon implementation of the Area Plan, could result in the increased exposure of persons and property to ground shaking hazards.

Implementation of **Policy S 1.2.4** will allow the County to enforce seismic designs and building techniques in local building codes, thus reducing the potential injury to residents from seismic events. Implementation of **Policies S 1.3.1** to **S 1.3.4** will reduce the risk of damage in developed areas by identifying buildings within the County's Planning Area that are currently not seismically reinforced to meet seismic safety requirements; bracing cabinets, shelves, equipment in all public facilities; educating residents and persons working in the OVOV Planning Area on earthquake safety for their homes and places of business; and, encouraging cooperation between the County and other agencies to ensure regular inspections of public infrastructure such as bridges, dams, and other critical facilities within the County's Planning Area and require repairs to these structures as needed to prevent failure in the event of seismic activity.

Proposed Area Plan Policies

Policy S 1.3.1: Identify any remaining unreinforced masonry buildings or other unstable structures, and require remediation or seismic retrofitting as needed to meet seismic safety requirements.

Policy S 1.3.2: Increase earthquake safety in all public facilities through bracing of shelves, cabinets, equipment and other measures as deemed appropriate.

Policy S 1.3.3: Provide informational materials to the public on how to make their homes and businesses earthquake safe.

Policy S 1.3.4: Cooperate with other agencies as needed to ensure regular inspections of public infrastructure such as bridges, dams, and other critical facilities, and require repairs to these structures as needed to prevent failure in the event of seismic activity.

Effectiveness of Proposed Area Plan Policies

While implementation of the above mentioned proposed policies would reduce the significance of potential ground shaking impacts, they do not provide specific development standards for development within areas subject to potential ground shaking impacts, nor do they provide adequate mitigation for potential ground shaking impacts that may be identified through the use of new scientific data, equipment, or procedures. To provide adequate mitigation for potential ground shaking hazards, mitigation has been identified to provide flexibility to the County in requiring site-specific ground shaking assessment for any development subject to potential ground shaking impacts and to require adherence to identified design standards. Implementation and adherence to these mitigation measures, **MM 3.9.2** to **MM 3.9.4**, and the above mentioned proposed policies will reduce impacts related to seismically associated ground shaking to a less than significant level.

Plan to Plan Analysis

The existing Area Plan does not contain policies that address potential impacts of site specific seismic-shaking assessment. The proposed Area Plan provides for mitigation to address potential impacts of seismic-shaking. The proposed Area Plan provides for mitigation for site-specific seismic shaking, and the existing Area Plan does not. Impacts would be greater under the existing Area Plan.

Impact 3.9-3 The project would expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction.

Areas of susceptibility to liquefaction have been identified in the County's Planning Area (**Figure 3.9-2)** The proposed Area Plan would allow development and inhabitation of structures within these areas and other areas within the County's Planning Area that are susceptible to liquefaction. To lessen the potential for property loss, injury, or death resulting from liquefaction during earthquake events, policies are identified in the proposed Area Plan to reduce these potentially significant impacts.

Although the County has already determined areas of liquefaction and landslides within the Planning Area, implementation of **Policy S 1.1.2** requires that in the event of significant incidents of soil

subsidence, the County will compile data and prepare maps showing areas with potential for this hazard. By providing detailed maps of these areas, decision makers will be able to better regulate new development in the areas of these hazards that will provide protection to the public and public's property for these hazardous conditions within the County's Planning Area.

Proposed Area Plan Policies

Policy S 1.1.2: Maintain maps of areas subject to liquefaction and landslides, based on data provided by the State and other appropriate sources.

Effectiveness of Proposed Area Plan Policies

While implementation of the above policy would help reduce the significance of potential liquefaction within the County's Planning Area, it does not provide specific development standards for development within areas subject to liquefaction, nor does it provide adequate mitigation for potential liquefaction impacts that may be identified through the use of new scientific data, equipment, or procedures. To ensure that potential impacts associated with this issue of liquefaction are reduced to a less than significant level, the following mitigation measures, **MM 3.9.5** and **MM 3.9.6**, have been identified to provide flexibility to the County in requiring site-specific liquefaction assessments. With the implementation of these mitigation measures and the proposed Area Plan policies, potential impacts from liquefaction would be less than significant.

Plan to Plan Analysis

The existing Area Plan does not contain policies that address potential impacts to liquefaction impacts. The proposed Area Plan provides for mitigation to address potential liquefaction resource occurrence. The proposed Area Plan provides for mitigation to liquefaction impacts, and the existing Area Plan does not. Impacts would be greater under the existing Area Plan.

Impact 3.9-4 The project would expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides.

Areas susceptible to landslides are identified in **Figure 3.9-2**. Rural Land 20 (RL-20), Rural Land 1, (RL-1), Rural Land 2 (RL-2), Rural Land 5 (RL-5), Open Space (OS), Residential 2 (H2), Open Space-Bureau of Land Management (OS-BLM), Community Serving (P-CS), Industrial Office (IO), and Specific Plan (SP) land uses are mapped on the Land Use Map in the western portion of the County's Planning Area where the potential hazard areas for landslides is most prevalent. Additionally, small portions within the

County's Planning Area (located in the southern, northern, and eastern portions) are mapped as having the potential for landslides. The County has adopted policies and ordinances to regulate development in hillside areas, in order to protect the scenic quality and integrity of hillside areas from over-development and erosion. In the County average slopes exceeding 25 percent or more are subject to special development standards.[10] County standards for hillside development are intended to ensure that development in hillside areas maintains the natural topography, resources, and amenities of these areas. The County has designated significant ridgelines in the Castaic Area Community Standards District (CSD) and the San Francisquito Canyon CSD; however, the County has adopted standards to regulate development in order to preserve these scenic resource areas. Additionally, policies have been identified in the Area Plan that would help mitigate the potentially significant impacts associated with potential landslide hazards.

Implementation of **Policies CO 2.2.2** and **CO 2.2.5** require that hillsides be revegetated if disturbed, thus reducing the possibility of potential landslide hazards, and that adequate erosion control measures for all development in hillside areas, both during and after construction would be implemented.

Proposed Area Plan Policies

Policy CO 2.2.2: Ensure that graded slopes in hillside areas are revegetated with native drought tolerant plants or other approved vegetation to blend manufactured slopes with adjacent natural hillsides, in consideration of fire safety and slope stability requirements.

Policy CO 2.2.5: Promote the use of adequate erosion control measures for all development in hillside areas, including single family homes and infrastructure improvements, both during and after construction.

Effectiveness of Proposed Area Plan Policies

While implementation of the above policies would help reduce the significance of potential landslide impacts within the OVOV Planning Area, it does not provide specific development standards for development within areas subject to landslide hazards, nor does it provide adequate mitigation for potential landslide impacts that may be identified through the use of new scientific data, equipment, or procedures. To ensure that potential impacts associated with this issue of landslide hazards are reduced

[10] Los Angeles County Department of Regional Planning, "Preliminary Draft Santa Clarita Valley Area Plan –One Valley One Vision," Chapter 4, "Conservation and Open Space Element," (2008), 139.

to a less than significant level, the following mitigation measure, **MM 3.9.7**, has been identified to provide flexibility to the County in requiring site-specific landslide hazard assessments.

Plan to Plan Analysis

The existing Area Plan does not contain policies that address potential impacts of site specific landslide assessment. The proposed Area Plan provides for mitigation to address potential impacts of landslides. The proposed Area Plan provides for mitigation for site-specific landslides, and the existing Area Plan does not. Impacts would be greater under the existing Area Plan.

Impact 3.9-5 Result in substantial soil erosion or the loss of topsoil.

Buildout of the County's OVOV Area Plan will result in new residential and non-residential structures and facilities that would result in the alteration of existing topography and/or removal of existing vegetation/topsoil. The potential for soil erosion, either by wind or water, is substantially increased upon exposure of underlying soils during grading activities or other landform modifications. Measures are identified below to mitigate the potentially significant erosion impacts associated with implementation of the Area Plan.

Implementation of **Policy CO 2.2.5** would require developers to use erosion control techniques during grading and construction in hillside areas to allow the preservation of soils, and to minimize the amount of soil erosion and loss of topsoil that could result from development of hillside areas. **Policies CO 2.1.1** through **CO 2.1.3** provide direction for developers and residents within the County's Planning Area on how to best preserve topsoil by reviewing soil erosion and sedimentation control plans, stockpiling soil for later reuse,[11] and promoting soil enhancement through composting.

Proposed Area Plan Policies

Policy CO 2.1.1: Review soil erosion and sedimentation control plans for grading activities related to development, where appropriate to ensure mitigation of potential erosion by water and air.

Policy CO 2.1.2: Promote conservation of topsoil on development sites by stockpiling for later reuse, where feasible.

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11 California Stormwater Quality Association, California Stormwater BMP Handbook, Stockpile Management, January 2003, Section 4, "Non-Stormwater Management and Material Management BMPs." http://www.cabmphandbooks.com/Documents/Construction/WM-3.pdf.

Policy CO 2.1.3: Promote soil enhancement and waste reduction through composting, where appropriate.

Effectiveness of Proposed Area Plan Policies

The aforementioned policies provide specific requirements to identify, evaluate, and mitigate potential impacts associated with soil erosion and loss of topsoil throughout the County's Planning Area as buildout of the Area Plan occurs. Additionally, mitigation measures, **MM 3.9.8** through **MM 3.9.10**, will provide more direct methods to reduce impacts from soil erosion and loss of topsoil. Implementation of the proposed Area Plan's policies and mitigation measures will reduce potential impacts from soil erosion and loss of topsoil to a less than significant level.

Plan to Plan Analysis

The existing Area Plan does not contain policies that address potential impacts of soil erosion and loss of topsoil. The proposed Area Plan provides for mitigation to address potential impacts of soil erosion and loss of topsoil. The proposed Area Plan provides for mitigation for soil erosion and loss of topsoil, and the existing Area Plan does not. Impacts would be greater under the existing Area Plan.

Impact 3.9-6 If the proposed project is located on a geological 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.

Potential impacts from landslides and liquefaction have been discussed previously. Although the potential for subsidence exists within the County's Planning Area, no large-scale problems with ground subsidence have been reported within its boundaries. However, development within areas that are currently undeveloped, could reveal areas of subsidence or areas of soils that are susceptible to subsidence due to seismic activity and human activity. The County has adopted ordinances requiring soil and geotechnical investigations for grading or new construction areas with a potential for landslide or subsidence activity, in order to mitigate potential hazards from soil instability.

Implementation of **Policy S 1.1.3** requires mapping areas of subsidence and compilation of data in the event of significant incidents of soil subsidence. By providing detailed maps of these areas, decision makers will be able to better regulate new development in the areas subject to soil subsidence and provide protection to the public and public's property.

Proposed Area Plan Policies

Policy S 1.1.3: In the event of significant incidents of soil subsidence, compile data and prepare maps showing areas with potential for this hazard.

Effectiveness of Proposed Area Plan Policies

The aforementioned policy provides specific requirements to identify, evaluate, and mitigate potential impacts associated with subsidence, and collapsible soils. Implementation of the above policy, combined with the ordinances already adopted by the County of Los Angeles, would reduce impacts from subsidence to a less than significant level. No additional mitigation measurements would be required.

Plan to Plan Analysis

The existing Area Plan does not contain policies that address potential impacts of subsidence. The proposed Area Plan provides for mitigation to address potential impacts of subsidence. The proposed Area Plan provides for mitigation for subsidence, and the existing Area Plan does not. Impacts would be greater under the existing Area Plan.

Impact 3.9-7 If the proposed project is located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property.

Areas of the County's Planning Area could have areas of expansive soils as defined by the Uniform Building Code (1994). Site-specific areas within the County's Planning Area developed on land with underlain fine-grained alluvial soils containing primarily clay could result in the expansion of soils. Expansive soils could damage foundations of aboveground structures such as residential buildings, commercial buildings, paved roads and concrete foundations throughout the County's Planning Area. Any site-specific projects located within the County's Planning Area would be required to incorporate design measures that incorporate County Building Code Standards that reduce the possibility of expansive soils creating substantial risks to life or property (**Policy S-1.2.4**).

Proposed Area Plan Policies

Policy S 1.2.4: Enforce seismic design and building techniques in the County Building Code.

Effectiveness of Proposed Area Plan Policies

The aforementioned policy would require any site specific developments within the County's Planning Area to incorporate County Building Code Standards that would help reduce the risk of expansive soils damaging structures. Implementation of the above policy and incorporation of any ordinances already adopted by the County of Los Angeles would reduce impacts to a less than significant level. No additional mitigation measures would be required.

Plan to Plan Analysis

The existing Area Plan does not contain policies that address potential impacts of grading. The proposed Area Plan provides for mitigation to address potential impacts of grading through policies. The proposed Area Plan provides for mitigation for grading, and the existing Area Plan does not. Impacts would be greater under the existing Area Plan.

Impact 3.9-8 If the proposed project is located on soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water.

The County's Planning Area currently has areas that use septic tanks and alternative waste water disposal systems due to the lack of wastewater disposal infrastructure. Soils within the County's Planning Area are capable of adequately supporting the use of septic tanks; however, analysis of individual site-specific developments would be required to conclude that these soils would be supportive of such a system. Future developments within the County's Planning Area would be required to include an analysis of on site soil capability to adequately support the use of septic tanks.

Policy S 1.1.1 requires that the County maintain maps of potentially active faults and fault zones, based on information available from the Alquist-Priolo Special Studies Zone maps, US Geological Survey, State Board of Geologists, State Mining and Geology Board, and other appropriate sources. In addition, the proposed Area Plan would restrict land use type and intensity of development in areas subject to fault rupture, landslides, or liquefaction (**Policy S 1.2.2**). Soils and geotechnical reports would be required for new construction in areas with potential hazards from faulting, landslides, liquefaction, or subsidence of soils (**Policy S 1.2.3**). Maps of areas subject to liquefaction and landslides would be maintained (**Policy S 1.1.2).** These policies will require an analysis of on-site soil capability to adequately support the use of septic tanks.

Proposed Area Plan Policies

The above mentioned policies have been cited previously.

Effectiveness of Proposed Area Plan Policies

The proposed policies would reduce the potential of any septic tanks or alternative waste water disposal systems being located on soils that cannot support such infrastructure. Therefore, impacts would be less than significant. Future developments would be subject to CEQA review and any additional mitigation measures developed on a project-by-project basis.

Plan to Plan Analysis

The existing Area Plan does not contain policies that address potential impacts of septic tanks or alternative waste water disposal systems. The proposed Area Plan provides for mitigation to address potential impacts of septic tanks or alternative waste water disposal systems through policies. The proposed Area Plan provides for mitigation for septic tanks or alternative waste water disposal systems, and the existing Area Plan does not. Impacts would be greater under the existing Area Plan

Mitigation Framework

Implementation of the following mitigation measures would reduce soil and seismic impacts to a less than significant level.

MM 3.9.1 Before a project is approved or otherwise permitted within an Alquist-Priolo Zone within the County's Planning Area, or within 150 feet of any other active or potentially active fault mapped in a published United State Geologic Survey (USGS) or within other potential earthquake hazard area (as determined by the County Geologist), a site-specific geologic investigation shall be prepared to assess potential seismic hazards resulting from development of an individual project site within the County's Planning Area. Where and when required, the geotechnical investigation shall address the issue(s), hazard(s), and geographic area(s) determined by the County Geologist to be relevant to each individual development project. The site-specific geotechnical investigation shall incorporate up-to-date data from government and non-government sources.

Based on the site-specific geotechnical investigation, no structures intended for human occupancy shall be constructed across active faults. This site-specific evaluation and written report shall be prepared by a licensed geotechnical engineer and shall be

submitted to the County Geologist for review and approval prior to the issuance of building occupancy permits. If an active fault is discovered that has not previously been recorded, any structure intended for human occupancy shall be set back at least 50 feet from the fault. A larger or smaller setback may be established if such a setback is supported by adequate evidence as presented to and accepted by the County Geologist.

MM 3.9.2 The design and construction of structures and facilities shall adhere to the standards and requirements detailed in the California Building Code (California Code of Regulations, Title 24), Los Angeles County Building Code, Title 26, and/or professional engineering standards appropriate for the seismic zone in which such construction within the County would occur. Conformance with these design standards shall be enforced through building plan review and approval by the County of Los Angeles Department of Public Works, Building and Safety Division, prior to the issuance of building permits for any structure or facility.

MM 3.9.3 As determined by the County Geologist, a site-specific assessment shall be prepared to ascertain ground shaking impacts resulting from development. The site-specific ground shaking assessment shall incorporate up-to-date data regarding ground-shaking probabilities and strengths from government and non-government sources and may be included as part of any site-specific geotechnical investigation as required in **MM 3.9-1**. The site-specific ground shaking assessment shall include specific measures to reduce the significance of potential ground-shaking hazards to the individual development. The site-specific ground shaking assessment shall be prepared by a licensed geotechnical engineer and shall be submitted to the County Geologist for review and approval prior to the issuance of building permits.

MM 3.9.4 The standards stated in **MM 3.9.2** and **MM 3.9.3** shall apply to any structure or facility that undergoes expansion, remodeling, renovation, refurbishment or other modification within the County's Planning Area.

MM 3.9.5 As determined by the County Geologist, a site-specific assessment shall be prepared to ascertain potential liquefaction impacts resulting from development. The site-specific liquefaction assessment shall incorporate up-to-date data regarding liquefaction potential of site-specific projects from government and non-government sources and may be included as part of any site-specific geotechnical investigation. This site-specific ground shaking assessment shall be prepared by a licensed geotechnical engineer and shall be

submitted to the County Geologist for review and approval prior to the issuance of building occupancy permits.

MM 3.9.6 Where development is proposed within an identified or potential liquefaction hazard area or as defined by the County Geologist, adequate and appropriate measures such as design foundations in a manner that limits the effects of liquefaction, the placement of an engineered fill with low liquefaction potential, and the alternative siting of structures in areas with a lower liquefaction risk, shall be implemented to reduce potential liquefaction hazards. Any and all such measures shall be submitted to the County Geologist and the County Department of Public Works, Building and Safety Division, for review prior to the approval of the building permits.

MM 3.9.7 All engineered slopes shall be designed to reduce seismically induced failure. For lower risk projects, (projects that are not located in areas of seismically induced ground failure), slope design shall be based on pseudo-static stability analysis (a test to determine the strength of horizontal movement of retaining walls during a seismic event) using soil engineering parameters established on a site-specific basis. For higher risk projects (projects located in areas of seismically induced ground failure), the stability analyses that will be required shall factor in the intensity of expected ground shaking, prior to the issuance of building occupancy permits for the proposed developments.

MM 3.9.8 The County of Los Angeles, where required, and in accordance with issuance of a National Pollutant Discharge Elimination System (NPDES) permit, shall require the construction and/or grading contractor for individual developments to establish and implement specific Best Management Practices (BMPs) at time of project implementation.

MM 3.9.9 Prior to any development within the County's Planning Area, a Grading Plan shall be submitted to the County of Los Angeles Department of Public Works, Building and Safety Division, and/or the County Geologist for review and approval. As required by the County of Los Angeles, the grading plan shall include soil erosion and sediment control plans. Measures included in individual erosion control plans may include, but shall not be limited to the following:

a. Grading and development plans shall be designed in a manner which minimizes the amount of terrain modification.

b. Surface water shall be controlled and diverted around potential landslide areas to prevent erosion and saturation of slopes.

c. Structures shall not be sited on or below identified landslides unless slides are stabilized.

d. The extent and duration of ground disturbing activities during and immediately following periods of rain shall be limited, to avoid the potential for erosion which may be accelerated by rainfall on exposed soils.

e. To the extent possible, the amount of cut and fill shall be balanced.

f. The amount of water entering and exiting a graded site shall be limited though the placement of interceptor trenches or other erosion control devices.

g. Erosion and sediment control plans shall be submitted to the County for review and approval prior to the issuance of grading permits.

MM 3.9.10 Where required, drainage design measures shall be incorporated into the final design of individual projects on site. These measures shall include, but will not be limited to:

a. Runoff entering developing areas shall be collected into surface and subsurface drains for removal to nearby drainages.

b. Runoff generated above steep slopes or poorly vegetated areas shall be captured and conveyed to nearby drainages.

c. Runoff generated on paved or covered areas shall be conveyed via swales and drains to natural drainage courses.

d Disturbed areas that have been identified as highly erosive shall be (re)vegetated.

e. Irrigation systems shall be designed, installed, and maintained in a manner which minimizes runoff.

f. The landscape scheme for projects within the project site shall utilize drought-tolerant plants.

g. Erosion control devices such as rip-rap, gabions, small check dams, etc., may be utilized in gullies and active stream channels to reduce erosion.

Significance of Impact with Mitigation Framework

Implementation of the above mitigation measures along with the implementation of the Area Plan's policies would reduce soil, geology, and seismic impacts to a less than significant level.

3.10 MINERAL RESOURCES

EXECUTIVE SUMMARY

The One Valley One Vision (OVOV) Planning Area contains extensive mineral resources. Gold mining and oil production have, historically, been the primary mineral extraction activities in and around the Santa Clarita Valley area. Other minerals mined in the OVOV Planning Area include construction aggregate (sand and gravel), titanium, tuff, and rock. This chapter provides an analysis of the County's proposed Area Plan policies on the protection of mineral resources within the County's OVOV Planning Area. The County's Planning Area consists of unincorporated land outside the City's boundaries and adopted Sphere of Influence (SOI) but within the OVOV Planning Area boundaries. The City's Planning Area consists of its incorporated boundaries and adopted SOI. The County and the City Planning Areas together comprise the OVOV Planning Area. The analysis indicates that the potential impacts on the mineral resources within the County's Planning Area would be less than significant with implementation of the proposed Area Plan.

EXISTING CONDITIONS

Oil Production Wells

The majority of the existing oil and natural gas fields are located in the western portion of the County's Planning Area, as shown in **Figure 3.10-1, Existing Mineral Resources**. No known oil or gas wells are located east of Highway 14. As of 2003, approximately 3,180 acres are used for oil and natural gas extraction in the OVOV Planning Area.[1] As shown in **Figure 3.10-1**, there are approximately 712 oil producing and natural gas wells. An additional 835 wells have been abandoned and 31 wells are idle (currently not abandoned or used for production).[2]

In the 1920s, the County was the world's fifth largest oil producer.[3] Presently, oil production is not nearly as prevalent as it was almost a century ago. Small-scale oil production still occurs in many parts of the County, such as in the Baldwin Hills and the Santa Clarita Valley. The California Division of Oil, Gas, and Geothermal Resources permits and tracks each operating production well and natural gas storage well and ultimately monitors the decommissioning process. The County's involvement is limited to regulating the zoning and land use standards to protect surrounding communities from oil-production impacts.

1 EIP Associates, GIS Table, March 2003.

2 California Department of Oil, Gas, and Geothermal Resources, Well Locations and Oil/Gas Fields, July 2008.

3 County of Los Angeles, "Conservation and Open Space Element," *Draft General Plan*, 2008.

Strict standards for the installation, operation, and decommissioning of oil derricks are necessary to protect natural resources and prevent excessive grading in the hillside areas.[4]

Surface Mining Resources

Mineral Resource Zones

The mineral resources addressed in this section are those resources that are classified under the state Surface Mining and Reclamation Act (SMARA) of 1975. SMARA Chapter 9, Division 2 of the Public Resources Code, requires the State Mining and Geology Board to adopt state policy for the reclamation of mined lands and conservation of natural resources. Based on guidelines adopted by the California Geological Survey, areas known as Mineral Resource Zones (MRZ) are classified according to the presence or absence of significant mineral deposits, as defined below. These classifications indicate the potential for a specific area to contain significant mineral resources.

- MRZ-1: Areas where available geologic information indicates there is little or no likelihood for presence of significant mineral resources.

- MRZ-2a: Areas underlain by mineral deposits where geologic data indicate that significant measured or indicated resources are present. Areas classified MRZ-2a contain discovered mineral deposits 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 MRZ-2b contain discovered mineral deposits that are either inferred reserves as determined by limited sample analysis, exposure, and past mining history or are deposits that presently are sub-economic. Further exploration and/or changes in technology or economics could result in upgrading areas classified MRZ-2b to MRZ-2a.

- MRZ-3a: Areas containing known mineral occurrences of undetermined mineral resource significance. Further exploration within these areas could result in the reclassification of specific localities as MRZ-2a or MRZ-2b.

- MRZ-3b: Areas containing inferred mineral occurrences of undetermined mineral resource significance. Land classified MRZ-3b represents areas in geologic settings that appear to be favorable environments for the occurrence of specific mineral deposits. Further exploration could result in the reclassification of all or part of these areas as MRZ-3a or specific localities as MRZ-2a or MRZ-2b.

- MRZ-4: Areas of no known mineral occurrences where geologic information does not rule out the presence or absence of significant mineral resources.

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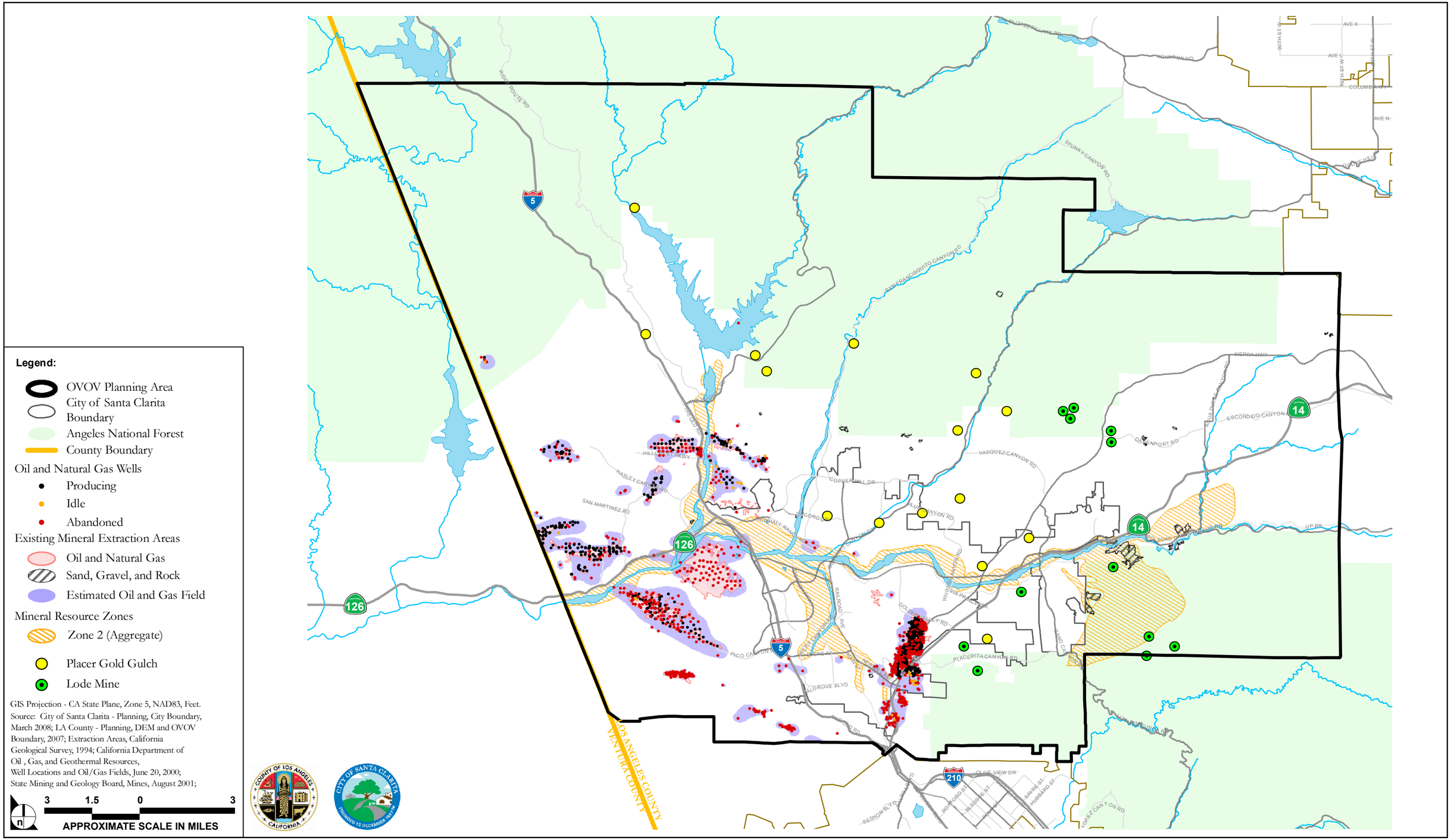
4 County of Los Angeles, "Conservation and Open Space Element," *Draft General Plan*, 2008.



SOURCE: City of Santa Clarita, County of Los Angeles, Valleywide General Plan - March 2008

FIGURE **3.10-1**

Existing Mineral Resources

Presence of Mineral Resource Zones within Planning Area

MRZ-2 areas are concentrated along waterways, such as the Santa Clara River, as well as SR-126, Castaic Creek, and east of Sand Canyon Road (**Figure 3.10-1**). As of 2008, there are approximately 18,868 acres used for mineral extraction of aggregate minerals (sand, gravel, and rock) within the OVOV Planning Area.[5] The MRZ-2 areas in the OVOV Planning Area contain construction-grade aggregate within the portion of the Santa Clara River that extends approximately 15 miles from Agua Dulce Creek in the east to the Ventura County boundary in the west. Approximately 12,215 acres of land within the County Planning Area are designated MRZ-2.[6] The majority of the MRZ-2 area east of Sand Canyon Road lies outside the City boundary in the unincorporated portion of the County and the Angeles National Forest.

These known mineral resources encompass portions of the San Fernando Valley–Saugus–Newhall Production-Consumption (P-C) Region and the Palmdale P-C Region. A P-C Region is one or more aggregate production districts, a group of producing aggregate mines, and the market area they serve. Aggregate resources are evaluated within the boundaries of the P-C Region. These mineral resources are considered as either:

- Permitted Resources, which are materials believed to be acceptable for commercial use that exist within property owned or leased by an aggregate producing company for which permission allowing extraction and processing has been granted, or
- Resources, which are permitted resources as well as all potentially usable aggregate material that may be mined in the future, but for which no use-permit allowing extraction has been granted.[7]

The San Fernando Valley–Saugus–Newhall P-C Region, contains a total of 88 million tons of permitted aggregate reserves[8]. The Palmdale P-C Region contains 181 million tons of permitted reserves of sand and gravel resources and no crush stone resources.

There are six active permits for surface mining activities filed with the County. No active permits for surface mining activities are filed with the City. The six permitted mining sites are generally, located in Canyon Country, Agua Dulce, Mint Canyon, and Soledad Canyon, which are in the County's portion of the OVOV Planning Area. The proposed mining activities for Soledad Canyon have been the source of litigation between the County, the City of Santa Clarita, the United States (US) Bureau of Land Management (BLM) and the US Fish and Wildlife Service.

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5 Impact Sciences. GIS-estimated acreages from **Figure 3.11-1,** prepared by the City of Santa Clarita. 2008.

6 Ibid.

7 County of Los Angeles, *OVOV Area Plan*, Draft Land Use Element, October 2008.

8 Department of Conservation, California Geological Survey, *Aggregate Availability in California*, Table 1. 2006.

That project is a split estate operation that proposes extracting 56.1 million tons of aggregate resources located in Soledad Canyon. The project site is located where a smaller mining operation previously existed. The City currently owns the property where the project would be located, but the BLM owns the mineral rights and has contracted with CEMEX, Inc., to allow CEMEX to mine 56.1 million tons of aggregate resources over a period of 20 years or less. The City opposes mining at the project site above levels of historic mining operations. The City is currently pursuing a cooperative federal legislative effort with CEMEX to resolve the mining dispute. The City sued to challenge the approvals for the project. Currently, one case is on appeal; that lawsuit challenges the County's approval on the grounds that the approval violates CEQA.

Other mineral resources include oil and natural gas, which are primarily located within the western portion of the County's Planning Area. Historically, other resources such as gold were found in the Placer gold gulches (ravines) that are situated in the western to central portion of the Planning Area. A little more than half were located within the unincorporated portion of the County, and lode mines (rock fissures containing metal ore) that are located primarily in the central portion of the Planning Area were actively mined.

REGULATORY FRAMEWORK

State Regulations

Surface Mining and Reclamation Act (SMARA) of 1975

The state Surface Mining and Reclamation Act of 1975 (SMARA), as amended in 2006, mandated the initiation of mineral land classifications to help identify and protect mineral resources in areas within the state that are subject to urban expansion or other irreversible land uses that would preclude mineral extraction. After designation of mineral resource areas, SMARA provided for the classification of designated lands containing mineral deposits of regional or statewide significance. In addition, SMARA was designed to provide guidelines for the proper reclamation of mineral lands.

The purpose of this act is to create and maintain an effective and comprehensive surface mining and reclamation policy with regulation of surface mining operations so as to ensure that

- adverse environmental effects are prevented or minimized and that mined lands are reclaimed to a usable condition which is readily adaptable for alternative land uses;
- the production and conservation of minerals are encouraged, while giving consideration to values relating to recreation, wildlife, range and forage, and aesthetic enjoyment; and
- residual hazards to the public health and safety are eliminated.

These goals are achieved through land use planning by allowing a jurisdiction to balance the economic benefits of resource reclamation with the need to provide other land uses.

Local Regulations

Depending on the location, approval and permitting of proposed excavation and mining activities rests with the County or City. However, if the site is owned by the state, jurisdiction is with the State Lands Commission.

County of Los Angeles

In a joint regulatory effort, SMARA authorizes local governments to assist the state in issuing mining permits and monitoring site reclamation efforts. To manage mining resources, the County has incorporated mineral resource policies into the Open Space and Conservation Element of its Santa Clarita Valley Area Plan. In addition to those policies, SMARA requires that applicants of surface mining permits submit a reclamation plan prior to receiving a permit to mine, describing how the excavated site will ultimately be remediated and transformed into another use. Mineral extraction within the County is an allowed use within the agricultural zone. Surface mining permits are required prior to any extraction activities.

City of Santa Clarita

The City of Santa Clarita has an overlay category that is used to designate areas that have significant mineral aggregate resource areas as determined by SMARA, and/or oil fields. This latter category, the Mineral/Oil Conservation Areas (MOCA), is located primarily in the southeastern portion of the City. The purpose of this overlay is to permit the continuation of the mineral/oil usage while providing development of the area if specific requirements are met.

THRESHOLDS OF SIGNIFICANCE

In order to assist in determining whether a project will have a significant effect on the environment, the *California Environmental Quality Act (CEQA) Guidelines*, Appendix G, identify criteria for conditions that may be deemed to constitute a substantial or potentially substantial adverse change in physical conditions.

Significant mineral resource impacts will result if

- there is the loss of availability of mineral resources that would be of value to the region and the residents of the Planning Area;
- there is a loss of availability of locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.

IMPACT ANALYSIS

This impact analysis section evaluates the potential effects of the proposed Area Plan policies on mineral resources within the County's Planning Area using the *State CEQA Guidelines* threshold of significance.

Impact 3.10-1 **There would potentially be a significant impact to the loss of availability of mineral resources that would be of value to the region and the residents of the County's Planning Area.**

Significant mineral resources identified as MRZ-2 areas have been identified within the County's Planning Area. A combined total of 269 million tons of permitted aggregate resources have been identified within the San Fernando Valley–Saugus–Newhall P-C Region and the Palmdale P-C Region. Significant mineral resources identified on **Figure 3.10-1**. The mapping of these resources is compatible with Conservation and Open Space element **Policy CO 2.3.1**. The County would be responsible for considering appropriate buffer areas near mineral resource areas planned for extraction (**Policy CO 2.3.2**) and to achieve Land Use Element **Policy LU 7.7.1**.

Identification of mineral resources locations and identification of the estimated amounts of resources available would promote the efficient use of these resources and will help conserve the Valley's hillsides, canyons, ridgelines, soils, and minerals by limiting exploration of additional mineral deposits. The extraction and processing of these mineral resources would be approved by the County on a project-by-project basis ensuring consistency with **Policies CO 2.3.3** and **2.3.4**. Approval of subsequent mining projects, per implementation of the Area Plan, would also ensure implementation (**Policy CO 1.3.3**) and that informational material would be available to the public to conserve non-renewable resources and recover materials from the waste stream.

Proposed Area Plan Policies

Policy CO 1.3.3: Provide informational material to the public about programs to conserve non-renewable resources and recover materials from the waste stream.

Policy CO 2.3.1: Identify areas with significant mineral resources that are available for extraction pursuant to Zoning Ordinance requirements.

Policy CO 2.3.2: Consider appropriate buffers near mineral resource areas that are planned for extraction, to provide for land use compatibility and prevent the encroachment of incompatible land uses.

Policy CO 2.3.3: Through the review process for any mining or mineral extraction proposal, ensure mitigation of impacts from mining and processing of materials on adjacent uses or on the community, including but not limited to air and water pollution, traffic and circulation, noise, and land use incompatibility.

Policy CO 2.3.4: Ensure that mineral extraction sites are maintained in a safe and secure manner after cessation of extraction activities, which may include the regulated decommissioning of wells, clean-up of any contaminated soils or materials, closing of mine openings, or other measures as deemed appropriate by the agencies having jurisdiction.

Policy LU 7.7.1: Maintain a suitable distance and/or provide buffering to separate aggregate mining and processing activities from nearby residential uses and other uses with sensitive receptors to noise and airborne emissions.

Effectiveness of the Proposed Area Plan Policies

Implementation of the proposed Area Plan policies related to mineral resources ensures that future development in the County would not have significant adverse impacts on mineral resources nor would future mineral resource extraction create significant adverse impacts on the environment or future development. Avoiding adverse impacts would be achieved by potentially adhering to these policies, reviewing all development proposals adjacent to MRZ-2 designated land or mining activity to safeguard against incompatible land uses, providing buffer zones between urban development mining activity, and requiring that development adhere to state mining policies and regulations.

Plan to Plan Analysis

Both the existing and proposed Area Plans contain policies intended to minimize impacts to the availability of mineral resources. Impacts would be similar under both Plans.

Impact 3.10-2 **There would potentially be a significant impact to a loss of availability of locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.**

Proximity of housing units to extraction sites would require the determination of a transition area and buffer zones from the proposed mining area to the housing area (**Figure 3.10-2).** Future development would be reviewed to ascertain project-specific impacts on mineral resources and to ensure compliance with applicable Area Plan policies. **Policy CO 2.3.1** serves to help reserve valuable mineral and aggregate resources by depicting their location within the OVOV Planning Area. Currently, no designated buffers are depicted on the Land Use Policy Map near mineral resource areas. Within the County's Planning Area, the MRZ-2 areas occur within the 100-year flood plain of the Santa Clara River and some of its tributaries, and in areas with the proposed land use designation of open space, specific plan, rural residential, and public institutional. Known oil and natural gas fields occur in the western portion of the County's Planning Area, within areas proposed primarily for specific plan use and urban residential. It will be the County's responsibility to designate the required buffer area on a land use map (**Policy CO 2.3.2**).

Management of mineral resources will help protect and guide the use of mineral deposits within the County's Planning Area. Management strategies, contained in the proposed Area Plan's policies, are directed towards mineral resources and their conservation and extraction. Implementation of the policies (**CO 1.3.3**, **CO 2.3.3,** and **CO 2.3.4**) would reduce or eliminate adverse impacts caused by mineral extraction. Ancillary structures or uses may be permitted which assist in the extraction, processing, or preservation of minerals. Actual building or structure size, siting, and design will be determined on a project-by-project basis.

Proposed Area Plan Policies

The proposed Area Plan policies have already been cited.

Effectiveness of Proposed Area Plan Policies

Potential adverse impacts on mineral resources would be less than significant because the policies within the proposed Area Plan state to identify, preserve from encroachment, conserve, and maintain the significant MRZ-2 lands. Implementation of the proposed Area Plan policies related to mineral resources ensure that future development in the County would not have any significant adverse impacts on mineral resources nor would future limited reasonable mineral resource extraction have any significant adverse impacts on the environment or on future development.

Legend:

Preliminary Land Use - Residential

Rural Residential

- NU1/RR1 = 0.05 du/a
- NU2/RR2 = 0.1 du/a
- NU3/RR3 = 0.2 du/a
- NU4/RR4 = 0.5 du/a
- NU5/RR5 = 1.0 du/a

Urban Residential

- UR1 = 2.0 du/a
- UR2 = 5.0 du/a
- UR3 = 11.0 du/a
- UR4 = min. 10 - max 18.0 (du/a)
- UR5 = min. 19 - max. 30.0 (du/a)

Oil and Natural Gas Wells

- Producing
- Idle
- Abandoned

Existing Mineral Extraction Areas

- Oil and Natural Gas
- Sand, Gravel, and Rock
- Estimated Oil and Gas Field

Mineral Resource Zones

- Zone 2 (Aggregate)
- Placer Gold Gulch
- Lode Mine
- OVOV Planning Area
- City of Santa Clarita Boundary
- SOI
- Angeles National Forest
- County Boundary

Source: City of Santa Clarita - Planning & LA County - Planning, OVOV land use & Boundary, 2008; Extraction Areas, December 2001; California Geological Survey, 1994; California Department of Oil , Gas, and Geothermal Resources, Well Locations and Oil/Gas Fields, June 20, 2000; State Mining and Geology Board, Mines, August 2001;

3 1.5 0 3

APPROXIMATE SCALE IN MILES

SOURCE: City of Santa Clarita, County of Los Angeles, Valleywide General Plan - March 2009

FIGURE **3.10-2**

Residential Land Uses / Mineral Land Uses Overlay

Plan to Plan Analysis

Both the existing and proposed Area Plans contain policies intended to minimize impacts lands designated as mineral resources. Impacts would be similar under both Plans.

MITIGATION FRAMEWORK

No mitigation measures are required for mineral resources because implementation of the County's Area Plan policies would limit potentially significant impacts on mineral resources to a less than significant level. No mitigation measures would be required because the Area Plan's mineral resource policies would ensure that future development in the Planning Area follow set codes and regulations. The proposed Area Plan policies would ensure that the future potential significant impacts on mineral resources through the following: (1) ensure restricted development in land designated as MRZ-2; (2) review future projects on a case-by-case basis to safeguard against incompatible land uses near or adjacent to land designated as MRZ-2; and (3) provide buffer zones between urban development and mining activity.

SIGNIFICANCE OF IMPACT WITH MITIGATION FRAMEWORK

Impacts on mineral resources would be less than significant and no mitigation measures are required.

3.11 HAZARDS AND HAZARDOUS MATERIALS

EXECUTIVE SUMMARY

This section provides information on hazardous materials and waste management in the County's Planning Area along with human-made hazards (e.g., wildland fires). Implementation of the Area Plan will provide policies that reduce potential impacts from hazards and hazardous materials to the public or environment within the County's Planning Area to a less than significant level. Additionally, the proposed Area Plan policies will provide for improved emergency response and emergency evacuation plans throughout the One Valley One Vision (OVOV) Planning Area. The County's Planning Area consists of unincorporated land outside the City's boundaries and adopted Sphere of Influence (SOI) but within the OVOV Planning Area boundaries. The City's Planning Area consists of its incorporated boundaries and adopted SOI. Both the County's and City's Planning Area comprise the OVOV Planning Area.

EXISTING CONDITIONS

Hazardous Materials and Hazardous Waste

Hazardous materials include any substance or combination of substances which, because of quantity, concentration, or characteristics, may cause or significantly contribute to an increase in death or serious injury, or pose substantial hazards to humans and/or the environment. These materials may include pesticides, herbicides, toxic metals and chemicals, liquefied natural gas, explosives, volatile chemicals, and nuclear fuels.

The County is one of the nation's largest industrial centers and is a major producer of a wide variety of toxic, flammable, and explosive materials. An assortment of toxic materials are stored and used in many small businesses and households throughout the County's Planning Area.

Sites with Known Contamination

Business practices and the laws that regulate them have changed dramatically over the years. Many businesses through intentional action, lack of awareness or accidental occurrences have caused contamination on and around their properties. The County's Planning Area contains properties that were once contaminated and are now clean as well as a few properties that are contaminated with a clean-up process underway. The US Environmental Protection Agency (US EPA) maintains a list of all contaminated sites in the nation that are currently, or have in the past, undergoing clean-up activities. This list is known as the Comprehensive Environmental Response, Compensation and Liability

Information System (CERCLIS) Database. There are currently no active sites listed on the CERCLIS Database within the County's Planning Area.[1] The California Department of Toxic Substances Control (DTSC) also maintains a list of all contaminated sites in the State for which it is providing oversight and enforcement of clean-up activities. This list is known as the Cal-Sites Database. **Table 3.11-1, Hazardous Materials Sites in the County's Planning Area,** lists the sites in the County's Planning Area that are currently undergoing cleanup. This information was gathered using the aforementioned databases through the internet. **Figure 3.11-1, Hazardous Materials Sites in the County's Planning Area,** shows the location of these sites within the boundaries of the County's Planning Area. In addition to these sites, other contaminated commercial/industrial properties with current and/or past use of hazardous materials may be in existence in Santa Clarita Valley and require investigation and remediation.[2]

Table 3.11-1
Hazardous Materials Sites in the County's Planning Area

Company	Location/Address	Latest Completed Activities	Cleanup Status
Cal-Sites			
Space Ordnance Systems – Placerita Canyon	25977 Sand Canyon Road Santa Clarita, CA 91351	Long Term Monitoring Report	Certified/Operation & Maintenance
Lubrication Company of America	12500 Lang Station Road Canyon Country, CA 91350	Remedial Design	Active

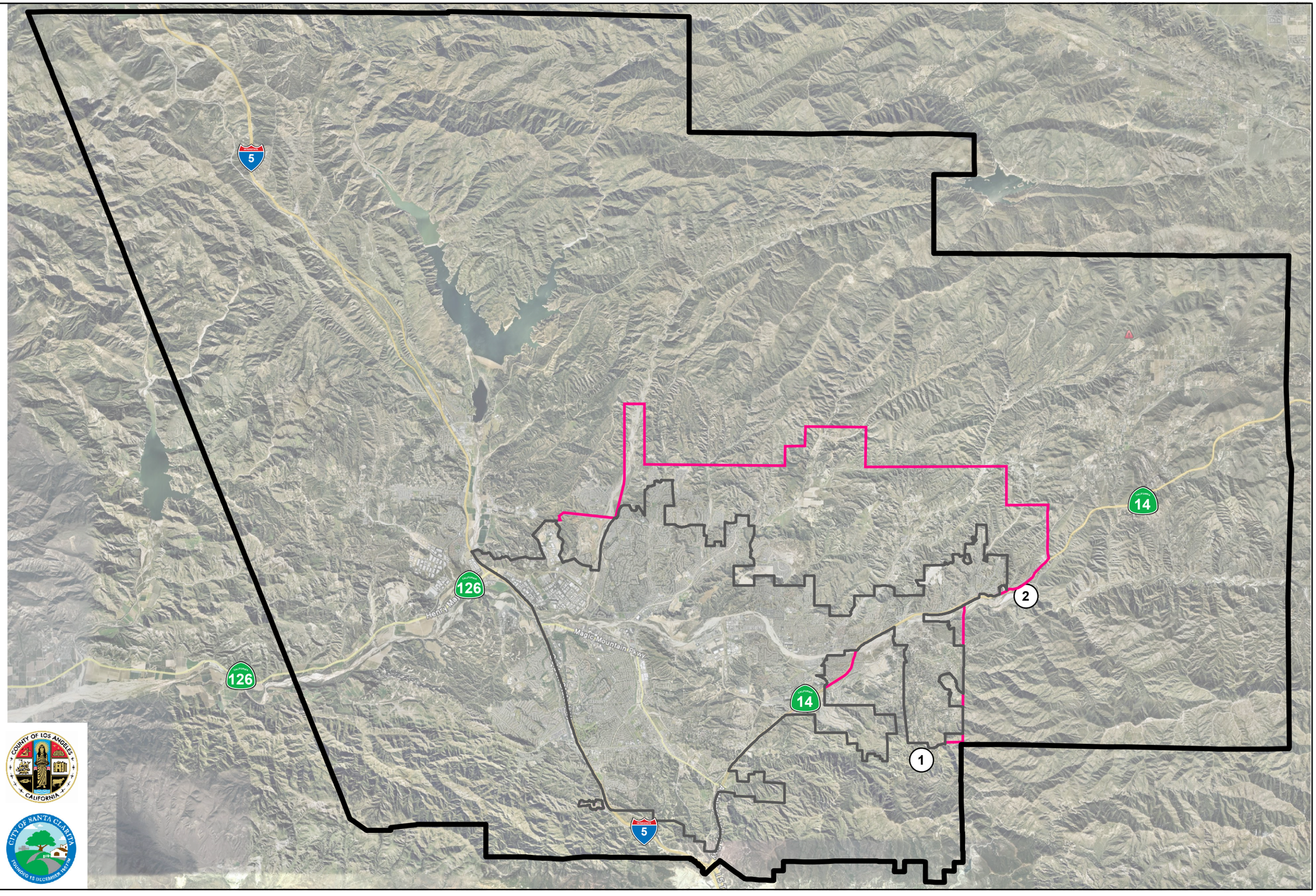
Source: California Department of Toxic Substances Control, EnviroStor Database 2008 http://www.envirostor.dtsc.ca.gov /public/. Accessed November 2008.

Space Ordnance Systems – Placerita Canyon

This site was utilized from 1967 through 1990, by Space Ordnance Systems (SOS) and other tenants to manufacture specialty devices. Propellant explosive and pyrotechnic (PEP) waste was generated on site and treated on site. Solid waste contaminated with PEP materials, solvents, and organic contaminants, including acetone, methyl ethyl ketone (MEK), 1,2,4-trichlorobenzene (TCB), and tri-chloroethylene (TCE) were also found on site.

1 United State Environmental Protection Agency, Superfund Information Site Information, http://www.epa.gov /superfund/sites/cursites/. Accessed March 11, 2009.

2 County of Los Angeles, Letter from Fire Department, Health Hazards Materials Division, to Mr. Mitch Glaser, Department of Regional Planning, June 17, 2009.



Legend:

- OVOV Planning Area
- City of Santa Clarita Boundary
- City of Santa Clarita Sphere of Influence Boundary

1. Space Ordnance Systems – Placerita Cyn
2. Lubrication Company of America

Note: GIS Projection - CA State Plane, Zone 5, NAD83, Feet

Source: City of Santa Clarita - Planning, City Boundary; Thomas Bros., Hydrology, Waterbodies, National Forests, and Streets, August, 2001; LA County - Planning, OVOV Boundary, 2006; ESRI, County Boundaries and Roads, 2006; and EIP Associates - Edited SCAG Landuse, March 24, 2003.

2 1 0 2

APPROXIMATE SCALE IN MILES

SOURCE: Impact Sciences, Inc., – November 2008

FIGURE **3.11-1**

Hazardous Materials Sites in the County's Planning Area

A site assessment, completed in September 1984, focused on areas suspected to contain soil and groundwater (on site and downgradient off site) contamination. Groundwater contamination was identified in both the South Gorman and North Gorman Canyon areas. Contaminants present in the water include TCE, 1,1-DCE, benzene, and 1,2-DCA. A Consent Order (for a RCRA [Resource Conservation and Recovery Act] facility investigation imposition) was signed by SOS on November 1985[3] Drums were removed from the drum storage area between 1984 and 1985, and soil removal from the drum storage area was conducted in January 1988. One water tank and six sumps, along with underlying soil, were also removed in January 1988. Groundwater treatment and monitoring has been in operation since July 1988. The final remedial groundwater measures were completed in June 1992.

Since groundwater remedial measures have been implemented, the monitoring wells located immediately down gradient of the site have continuously shown the levels of contaminants of concern to be decreasing. Remediation of the ground water consists of an activated carbon absorption plant, extraction wells, injection drains and extraction trenches. Possible receptors include homeowners located within one half mile of the site who may utilize private wells for human consumption. However, the DTSC knows of no private wells in Sand Canyon, which are currently being utilized for human consumption. The Homeowners in Sand Canyon are on the public water system. Other agencies involved with this site include the Regional Water Quality Control Board (RWQCB) and the Los Angeles County Department of Public Works (DPW). The Responsible Party (RP) is required to submit a monthly waste discharge report to the RWQCB for the effluent discharged from the treatment system.

Manufacturing operations at the site have ceased since the business was purchased by the Universal Propulsion and transferred to Arizona. The site is now vacant. The completion of the final Remedial Action was certified on May 17, 1993 as well as the approval of the Operation and Maintenance (O&M) Plan. The O&M for the site consists of the extraction and treatment of contaminated groundwater through an activated carbon absorption plant.[4]

Lubrication Company of America

The Lubrication Company of America (LCA) facility was authorized to recycle used oil under an Interim Status Document (IRM). From 1969, the LCA facility was used primarily as an oil processing and recycling plant. Between 1968 and 1976, LCA recycled bunker fuels, used engine oil, jet fuels, and hydraulic oil. In addition, LCA handled wastes containing polychlorinated biphenyls (PCBs), sulfuric

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3 Department of Toxic Substances Control, EnviroStor Database 2008; U.S. EPA Web site, Superfund Cite Information http://www.envirostor.dtsc.ca.gov/public/hwmp_profile_report.asp?global_id=CAD067776484.

4 California Department of Toxic Substances, Envirostor, http://www.envirostor.dtsc.ca.gov/public/profile _report.asp?global_id=19340736. Retrieved November 7, 2008.

acid, sulfur monochloride, and heavy metals during operations. LCA also stored mixed oily wastes containing PCBs, acids, caustics, solvents & other potentially hazardous substances. LCA's operations resulted in releases of hazardous substances.

During the rainy season, the contaminated surface water runoff could potentially impact the Santa Clara River. Direct contact with the contaminated soil by inhalation and dermal absorption are other potential routes of exposure.

From June 1983 to September 1986, the DTSC inspected and found numerous violations at the LCA facility. On March 16, 1987, a Remedial Action Order (RAO) was issued to characterize and remediate the site. On October 22, 1987, the DTSC issued a notice of Final Determination of Non-compliance (FDNC) to LCA for not complying with the RAO. On February 11, 1988, LCA filed for bankruptcy.

The DTSC initiated characterization and remediation activities at LCA, and has phased its investigation and mitigation activities. Phase I activities, completed in 1990, consisted of (1) the characterization and disposal of 383 drums containing hazardous waste and removed friable asbestos that was disposed of on site, (2) a field investigation to characterize the extent of on-site contamination, and (3) repairing and adding new fencing to prevent unauthorized site access. In August 1990, the DTSC made a determination that the site posed an Imminent and Substantial Endangerment (I&SE) to the public health and environment.

During Phase II, the DTSC (1) removed wastes with low flash points into Baker tanks, (2) pumped wastes from identified deteriorated tanks into Baker tanks,[5] and (3) placed wastes containing PCBs into bulk containers to consolidate all PCB wastes for disposal purposes. These activities accumulated approximately 52,940 gallons of liquid wastes (180 cubic yards of hazardous and nonhazardous wastes), which has been stored in nine roll-off bins. Another 25 cubic yards of contaminated soil was contained and covered on site. These activities were completed in December 1990. The Remedial Investigation/Feasibility Study (RI/FS) report which addresses the soil contamination was completed July 2, 1992.

During the RI, the DTSC's contractor collected and analyzed 188 surface and subsurface samples. Analytical results showed that the soils at the LCA site are contaminated by heavy fractions of petroleum hydrocarbons, polyaromatic hydrocarbons, volatile aromatic compounds (ethylbenzene, toluene, xylene), volatile halogenated organics (TCE and tetrachloroethylene), PCBs, lead, and acids. In general, petroleum hydrocarbon contaminated areas cover approximately half of the site's surface. TCE, tetrachloroethylene,

5 Baker tanks are containment units used by the DTSC, produced by the Baker Corporation, in order to store wastes that are being removed by DTSC on Hazardous Waste-Sites.

ethylbenzene, toluene, polyaromatic hydrocarbons, and xylenes were detected in the subsurface soils. PCBs and lead were generally limited to surface soils.

The DTSC has identified approximately 87 Potentially Responsible Parties (PRPs) for the site. The PRPs include owner/operators and various companies, including the Department of Defense, which had their wastes shipped to LCA. In March 1996, 19 PRPs settled their liability with DTSC. The RI/FS for the site was completed in 1998. The Remedial Action Plan (RAP) was signed in 1999, in which the chosen remedy includes removal of all tanks & infrastructures) installation of an asphalt cap, soil vapor extraction/air sparing unit and placement of a deed restriction.[6] A remedial design for the site was completed on November 11, 2004.[7] In this specific remedial design, a Phase 3 (which is the final phase) was approved.[8] The Remedial Design includes vapor extractions and treatment with carbon and potassium permanganate.[9] Certification of the site is expected to be completed by 2010.[10]

Wildland Fire Protection

Wildland fire refers to a fire that occurs in a suburban or rural area that contains uncultivated lands, timber, range, watershed, brush, or grasslands, including areas in which there is a mingling of developed and undeveloped lands. For thousands of years, fires have been a natural part of the Southern California ecosystem. However, as urban development has spread throughout hillside areas of the region, wildland fires have come to represent a significant hazard to life and property.[11]

The classic "wildland/urban interface" exists where well-defined urban and suburban development presses up against open expanses of wildland areas. Certain conditions must be present for significant interface fires to occur, including hot, dry, windy weather; the inability of fire protection forces to contain or suppress the fire; the occurrence of multiple fires that overwhelm committed resources; and a large fuel load (dense vegetation). Once such a fire has started, several conditions influence its behavior, including fuel load, topography, weather, drought, and development patterns. Southern California has two distinct areas of risk for wildland fires:[12]

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6 California Department of Toxic Substances, Envirostor, http://www.envirostor.dtsc.ca.gov/public/profile_report.asp?global_id=19340736. Retrieved November 7, 2008.

7 Ibid.

8 Ibid.

9 Ibid.

10 Ibid.

11 County of Los Angeles, "Safety Element," County of Los Angeles Preliminary Draft Santa Clarita Valley Area Plan One Valley One Vision, 2008.

12 County of Los Angeles, "Safety Element," County of Los Angeles Draft Santa Clarita Valley Area Plan One Valley One Vision, 2009.

- the foothills and lower mountain areas typically covered with scrub brush or chaparral, and;
- the higher elevations of mountains, covered with heavily forested terrain.

Historical records kept by the US Department of Forestry indicate that wildland fires occur regularly within the County's Planning Area, with large fires occurring approximately every 10 years. Fire danger rises based on the age and amount of vegetation; therefore, fire incidents tend to be cyclical in an area as vegetation intensity increases with age, and dead vegetation accumulates. The fall of 2003 was the most destructive wildfire season in California history. In a 10-day period, 12 separate fires raged across Los Angeles, Riverside, San Bernardino, San Diego and Ventura Counties, burning almost 750,000 acres and resulting in the loss of 22 lives and 4,812 homes. The magnitude of the 2003 fires resulted from a combination of factors, including extended drought followed by thunderstorms, lightning strikes and windy conditions; an infestation of bark beetles that killed thousands of mature trees; and the practice of suppressing wildfires over the last century that has led to a buildup of brush and highly flammable fuel loads. [13]

Wildland fires can require evacuation of portions of the population, revised traffic patterns to accommodate emergency response vehicle operations, and restrictions on water usage during the emergency. Health hazard may exist for elderly or disabled persons who cannot evacuate or succumb to smoke and heat. The loss of utilities, and increased demand on medical services, can also be anticipated.[14]

The County's Planning Area is susceptible to wildland fires because of its hilly terrain, dry weather conditions and native vegetation. Steep slopes allow for the quick spread of flames during fires, and pose difficulty for fire suppression due to access problems for firefighting equipment. Late summer and fall months are critical times of the year when wildland fires typically occur, when the Santa Ana winds deliver hot, dry desert air into the region of the County's Planning Area. Highly flammable plant communities consisting of variable mixtures of woody shrubs and herbaceous species, such as chaparral and sage vegetation, allow fires to spread easily on hillsides and in canyons. According to the Los Angeles County Fire Department, which serves the OVOV Planning Area, 80 to 90 percent of the planning area is located in a Very High Fire Hazard Severity Zone, which is the highest classification for areas subject to wildfires.

The potential wildland fire hazard areas within the County's Planning Area are shown on **Figure 3.11-2, Wildfire Hazard Zone within the OVOV Planning Area**. Areas subject to wildland fire danger include

13 Ibid.

14 Ibid.

portions of Newhall and Canyon Country, Sand Canyon, Pico Canyon, Placerita Canyon, Hasley Canyon, White's Canyon, Bouquet Canyon, and all the areas along the interface between urban development and natural vegetation in hillside areas. Fire hazards increase with any drought periods, and are highest for structures at the fringe of forested or wildland areas. In addition to the damage caused directly by a foothill fire, further damage may be caused by resulting mudslides during subsequent rains.[15]

In October 2007, wildfires again swept through southern California, including the County's Planning Area. Emergency response procedures put into place after the 2003 fires reduced losses through:[16]

- Better notification and evacuation procedures
- Quick action by the State and federal governments to declare an emergency and provide suppression support

Within the Area Plan, the location of the 2007 fires and acreage burned is as follows:[17]

- Buckweed Fire, 38,256 acres;
- Magic Fire, 1,750 acres;
- Newhall Fire, 40 acres; and the
- Ranch Fire, 55,756 acres, which started near Castaic and burned primarily wildland areas.

To respond to these fires the City set up a telephone bank that handled thousands of phone calls, and transformed Central Park into a Fire Department base camp for firefighters. Local Assistance Centers were set up to help residents file Federal Emergency Management Agency (FEMA) claims, and the nonprofit Santa Clarita Valley Disaster Coalition solicited and disbursed funds for fire victim relief.[18]

Twenty-one homes were destroyed and 15 homes damaged by the Buckweed fire, but no lives were lost. Local fire response sources include the:[19]

- Los Angeles County Fire Department
- Fire services mutual aid system
- California Division of Forestry

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15 County of Los Angeles, "Safety Element," County of Los Angeles Draft Santa Clarita Valley Area Plan One Valley One Vision, 2009.

16 Ibid.

17 Ibid.

18 Ibid.

19 County of Los Angeles, "Safety Element," County of Los Angeles Draft Santa Clarita Valley Area Plan One Valley One Vision, 2009.

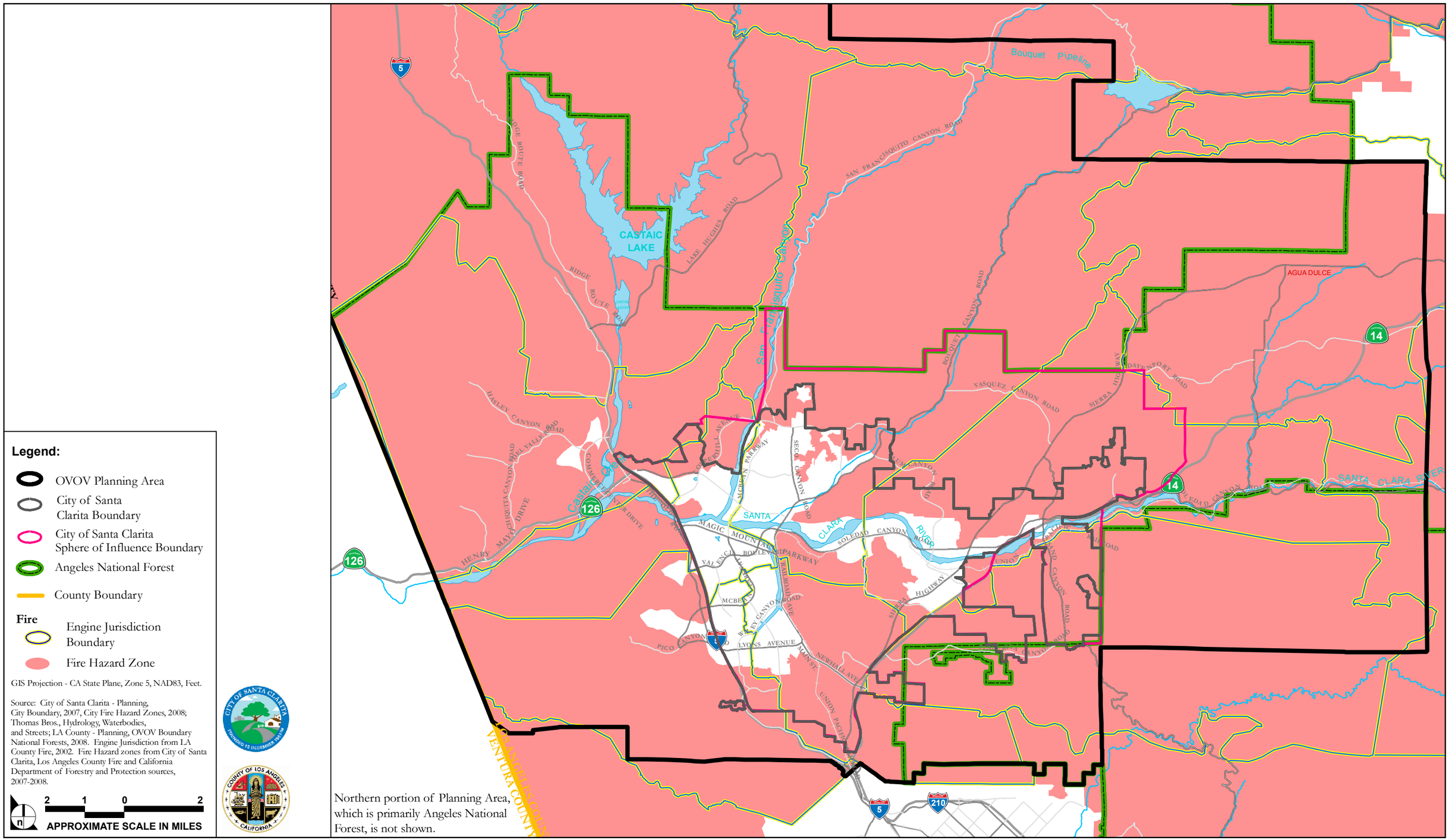
- United States Forest Service

The combination of forces applied will depend upon the severity of the fire, other fires in progress, and the availability of resources. Suppression efforts can involve fire equipment, heavy construction equipment, and air fire bombardment aircraft, in addition to hand crews.

The Los Angeles County Fire Department (LACoFD) operates six existing fire stations within the County's Planning Area, four of which are permanent fire stations. Of these four permanent fire stations, two stations house paramedic units and the other two are temporary fire stations. LACoFD operates 10 fire suppression camps assigned to the Air and Wildland Division of which four camps employ paid personal and six camps are staffed with inmate crews from detention facilities). Additionally, the LACoFD is proposing 11 new fire stations within the County's Planning Area. Wildland fire crews are used for fire protection, prevention, and suppression activities. They control wildland fires by cutting a control line around the perimeter of a fire, coordinating activities of bulldozers, and use of water-dropping helicopters and fixed wing aircraft, as deemed appropriate. The Fire Department also oversees vegetation management for fuel reduction, and provides response to other emergency incidents as required.

Under a mutual aid agreement covering federal forest lands, responsibility for non-structure fires within the National Forest belongs to the United States Forest Service (USFS), while the Fire Department has the responsibility for suppressing structure fires. In practice, each agency cooperates in fighting both wildland and structural fires during actual fire emergencies. There are five USFS fire stations located within the OVOV Planning area.[20]

20 Ibid.



SOURCE: City of Santa Clarita, County of Los Angeles, Valleywide General Plan - March 2008

FIGURE **3.11-2**

Wildfire Hazard Zone within the OVOV Planning Area

In addition to suppression activities, the Fire Department has adopted programs directed at wildland fire prevention, including adoption of the State Fire Code standards for new development in hazardous fire areas. Fire prevention requirements include provision of access roads, adequate road width, and clearance of brush around structures located in hillside areas. In addition, proof of adequate water supply for fire flow is required within a designated distance for new construction in fire hazard areas. The Fire Department also provides fire safety training to County residents and youth education programs on fire safety and prevention. The City teams with the County to provide training to residents on fire prevention and response, through the Community Emergency Response Training (CERT) program, and other educational programs.

Residents with homes located in urban/wildland interface areas must bear some of the responsibility for preventing the spread of wildland fires. Houses surrounded by brushy growth rather than cleared space allow for greater continuity of fuel and increase the fire's ability to spread. Homeowners should also consider whether their home is located near a fire station, has adequate access for fire suppression vehicles, has adequate water supply for fire flow, is located away from slopes or canyons which act to draw fires upward, and is constructed with fire-resistant materials and design features, such as non-combustible roofing and boxed eaves. The California Department of Forestry and Fire Protection has issued guidelines for fuel reduction and other fire safety measures in urban/wildland interface areas. These guidelines were issued in response to recent changes to Public Resources Code Section 4291 that increased space clearance requirement from 30 feet to 100 feet around structures. For fire protection purposes, "defensible space" means the area within the perimeter or a parcel where basic wildfire protection practices are implemented. This area is characterized by adequate emergency vehicle access, emergency water reserves, street names and building identification, and fuel modification measures. Fuel reduction through vegetation management around homes is the key to saving homes in hillside areas. The Los Angeles County Fire Department Fire Prevention Division will continue to provide public education programs about fire prevention strategies for residents in interface areas.

EMERGENCY PREPAREDNESS AND RESPONSE

Office of Emergency Management (OEM)

The Office of Emergency Management (OEM) is responsible for organizing and directing the preparedness efforts of the Emergency Management Organization of Los Angeles County. The OEM is the day-to-day Los Angeles County Operational Area coordinator for the entire geographic area of the County, including the County portion of the OVOV Planning Area. OEM's broad responsibilities include:

- Planning and Coordination:
  - Maintaining an approved Operational Area Emergency Response Plan; and,
  - Providing ongoing leadership and coordinating disaster plans and exercises with the 88 cities, 137 unincorporated communities, and 288 special districts within the county.
- Operations:
  - Maintaining the County Emergency Operations Center (CEOC) in a state of operational readiness, in partnership with the Sherriff's Emergency Operations Bureau;
  - Serving as on-call CEOC first responders on a 24-hour basis;
  - Providing an OEM duty officer on a 24-hour basis to address inquiries and concerns from County, local and state officials regarding potential or escalating emergency conditions; and,
  - Training and technical operations.
- Public Education and Grants Administration
  - Maintaining a cadre of CEOC team members trained in section and position responsibilities and use of the Emergency Management Information System (EMIS); and,
  - Providing ongoing training for County Department Emergency Coordinators (DECs) and Building Emergency Coordinators (BECs).

Operational Area Emergency Response Plan

The most crucial emergency response plan in the unincorporated areas of the County is the *Operational Emergency Response Plan* (OAERP), which is prepared by the OEM. The OAERP strengthens short and long-term emergency response and recovery capabilities, and identifies emergency procedures and emergency management routes in the County. The OAERP, along with more information on the OEM, can be found at the County's Chief Executive Office (CEO).

Los Angeles County Fire Department (LACoFD)

The LACoFD is organized into nine divisions throughout the unincorporated County. The LACoFD currently operates six fire stations within the County's Planning Area. Four of these fire stations are permanent and two of the four stations currently house paramedic units. The remaining two fire stations are temporary. The LACoFD is currently proposing the development of up to 11 new fire stations within the County's Planning Area. In 2005, the LACoFD had 4,547 personnel, which includes 639 administrative personnel, and an extensive reserve of safety and firefighting equipment. Out of the 282,091 emergency operations in 2005, over 68 percent were rescues, with the other incidents being fires or classified as others. The LACoFD operates other divisions including Emergency Services, Forestry, and a Health Hazard Material Division, whose mission is to "protect the public health and the environment throughout Los Angeles County from accidental releases and improper handling, storage, transportation, and disposal of hazardous materials and wastes through coordinated efforts of inspections, emergency response enforcement, and site mitigation oversight."[21]

Los Angeles County Sheriff's Department (LASD)

The LASD is the largest sheriff's department in the world. There are currently no sheriff's stations located within the County's Planning Area. In addition to specialized services, the LASD is divided into 10 divisions, each headed by a Division Chief. One of the newest divisions at LASD is the Office of Homeland Security, a proactive effort to enhance the Department's response to potential threats related to local homeland security issues, such as terrorism and bio-terrorism.

Hazard Mitigation Plan

The County, in conjunction with its many emergency services partners, has prepared a *Local All-Hazards Mitigation Plan* that sets strategies for coping with the natural and man-made hazards faced by residents. The plan is a compilation of information from County departments correlated with known and projected hazards that face southern California. The plan complies with, and has been approved by, the Federal Emergency Management Agency (FEMA) and the Governor's Office of Emergency Services (OES). The plan has been formally adopted by the County Board of Supervisors (BOS) for use in the development of specific hazard mitigation proposals.

The County *Local All-Hazards Mitigation Plan* addresses potential damages in the unincorporated portions of the County, as well as to County facilities. Cities, schools, special districts, and eligible non-profit

21 Los Angeles County Department of Regional Planning, "2009 Draft General Plan Safety Element," p. 177.

organizations within the County must prepare and submit separate Hazard Mitigation Plans to FEMA for approval.

Community Preparedness and Training

The County of Los Angeles has implemented comprehensive programs for emergency preparedness, including community involvement and training. To educate the public about emergency response, the County of Los Angeles offers residents training through the CERT program, which focuses on effective disaster/emergency response techniques. The CERT program is designed to:

- help families with disaster and emergency response techniques; and
- help families neighborhoods, schools and businesses prepare for effective disaster and emergency response through training and pre-planning.

Program material covers earthquakes, fires, floods, hazardous materials incidents, and other life-threatening situations. Participants attend seven weekly classes designed to:

- help them recognize potential hazards and take appropriate actions;
- identify, organize and utilize available resources and people; and
- treat victims of life-threatening conditions through Simple Triage and Rapid Treatment (START).

A second class is also offered to graduates of the basic CERT course, which provides more in-depth training on critical incident stress management, handling animals during disasters, community traffic safety, and the Incident Command System.

In 2001, the CERT program was expanded with another level of training, the CERT II. The training provided in the CERT II program was developed and implemented based on the emergency response issues of the County of Los Angeles, and includes classes on Community Traffic Safety; Psychological First Aid (Critical Incident Stress Management); SEMS, NIMS; and Incident Command; and Animal Preparedness.

Once a year the County of Los Angeles in conjunction with the City of Santa Clarita presents an Emergency Expo, attended by several thousand residents, at which residents are provided with information materials on emergency preparedness. Over 60 agencies and vendors participate in this event, in an effort to provide relevant information with an interactive approach. The County and City promotes the CERT program at the Emergency Expo by using CERT-Trained volunteers to provide information at various booths and activities. Through its emergency management program, the County

also provides ongoing training and outreach to schools, businesses, faith-based institutions, seniors, and the special needs community.

In spite of these programs and the outreach efforts by the County, many residents within the County's Planning Area are not adequately prepared for emergencies. In a major disaster each household may need to survive on its own resources for several days before help arrives. It is necessary for each family and head of household to proactively prepare for emergencies by developing a plan and stockpiling adequate supplies.

Emergency Response

Emergency response to accidents in the County's Planning Area associated with hazardous waste material is usually undertaken by the LACoFD and its Health Hazardous Materials Division. Fire stations serving the area are responsible for cleanup and evacuation procedures.

Depending on the situation and location of a hazardous waste incident, agencies other than the LACoFD would also help provide emergency response. The agencies may include, but are not limited to the following:

- California Department of Fish and Game
- United States Army Corps of Engineers
- United States Department of Transportation
- California Department of Transportation
- California Highway Patrol
- Southern California Air Quality Management District
- Los Angeles County Sheriff's Department
- City of Santa Clarita

As the OVOV Planning Area continues to undergo further urbanization and industrialization, the risks associated with hazardous waste/materials transportation through populated areas would also increase due to the establishment of new facilities. Therefore, the agencies listed above would also help provide emergency response to the OVOV Planning Area when their services are required by the LACoFD and its Health Hazardous Materials Division.

REGULATORY FRAMEWORK

California law provides the general framework for regulation of hazardous wastes by the Hazardous Waste Control Law (HWCL) passed in 1972. The DTSC is the State's leading agency in implementing the HWCL. The HWCL provides for state regulation of existing hazardous waste facilities, which include "any structure, other appurtenances, and improvements on the land, used for treatment, transfer, storage, resource recovery, disposal, or recycling of hazardous wastes," and requires permits for, and inspections of, facilities involved in generation and/or treatment, storage and disposal of hazardous wastes.

Although there are numerous state policies dealing with hazardous waste materials, the most comprehensive is the Tanner Act (AB 2948) that was adopted in 1986. The Tanner Act governs the preparation of hazardous waste management plans and the siting of hazardous waste facilities in the State of California. The act also mandates that each county adopt a Hazardous Waste Management Plan. To be in compliance with the Tanner Act, local or regional hazardous waste management plans need to include provisions that define the:

- planning process for waste management,
- permit process for new and expanded facilities, and
- appeal process to the State available for certain local decision.

Agency with Regulatory Responsibility

The regulatory responsibility of hazardous waste in the Planning Area belongs primarily to the LACoFD. LACoFD's Health Hazardous Material Division (HHMD) has authority as the Certified Unified Program Agency (CUPA) in the County's Planning Area. As the CUPA, HHMD directly administers programs related to waste generation, hazardous materials inventories, and risk management. The Los Angeles County Department of Public Works is a participating agency under the LACoFD CUPA and implements the underground storage tank program.

There are three Los Angeles County fire stations that handle hazardous materials incidents (known as Haz Mat stations), one of which, Station 76, is located in Valencia and serves the Santa Clarita Valley. In addition, HHMD's mission is to protect the public health and the environment throughout Los Angeles County from accidental release and improper handling, storage, transportation, and disposal of hazardous material and wastes through coordinated efforts of inspections, emergency response, enforcement, and site mitigation oversight. Furthermore, depending on the issue, situation, or conditions, there are also other federal, State, and local regulatory authorities that are involved with hazardous

waste. Additionally, existing policies and regulations issued by federal and state governments regarding hazardous materials are described below:

Federal

- Environmental Protection Agency (EPA)
- Department of Transportation (DOT)
- Department of Fish and Game (DFG)

Comprehensive Environmental Response, Compensation, and Liability Act

Discovery of environmental health damage from disposal sites, prompted the U.S. Congress to pass the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund). The purpose of CERCLA is to identify and clean up chemically contaminated sites that pose a significant environmental health threat. The Hazard Ranking System is used to determine whether a site should be placed on the National Priorities List for cleanup activities.

Superfund Amendments and Reauthorization Act

The Superfund Amendments and Reauthorization Act (SARA) pertains primarily to emergency management of accidental releases. It requires formation of state and local emergency planning committees, which are responsible for collecting material handling and transportation data for use as a basis for planning. Chemical inventory data is made available to the community at large under the "right-to-know" provision of the law. In addition, SARA also requires annual reporting of continuous emissions and accidental release of specified compounds. These annual submissions are compiled into a nationwide Toxics Release Inventory.

Hazardous Materials Transportation Act

The Hazardous Materials Transportation Act is the statutory basis for the extensive body of regulations aimed at ensuring the safe transport of hazardous materials on water, rail, highways, through air, or in pipelines. It includes provisions for material classification, packaging, marking, labeling, placecarding, and shipping documentation.

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) Subtitle C addresses hazardous waste generation, handling, transportation, storage, treatment, and disposal. It includes requirements for a system that uses

hazardous waste manifests to track the movement of waste from its site of generation to its ultimate disposition. The 1984 amendments to RCRA created a national priority for waste minimization. Subtitle D establishes national minimum requirements for solid waste disposal sites and practices. It requires states to develop plans for the management of wastes within their jurisdictions. Subtitle I requires monitoring and containment systems for underground storage tanks that hold hazardous materials. Owners of tanks must demonstrate financial assurance for the cleanup of a potential leaking tank.

State

- California Environmental Protection Agency (CalEPA)
- Department of Toxic Substances Control (DTSC)
- State Water Resources Control Board (SWRCB)
- California Integrated Waste Management Board (CIWMB)
- California Air Resources Board (ARB)
- State Board of Equalization (BOE)

The California Hazardous Waste Control Law

The Hazardous Waste Control Law (HWCL) is the primary hazardous waste statute in the State of California. The HWCL implements RCRA as a "cradle-to-grave" waste management system in the State of California. HWCL specifies that generators have the primary duty to determine whether their wastes are hazardous and to ensure their proper management. The HWCL also establishes criteria for the reuse and recycling of hazardous wastes used or reused as raw materials. The HWCL exceeds federal requirements by mandating source reduction planning, and a much broader requirement for permitting facilities that treat hazardous waste. It also regulates a number of types of wastes and waste management activities that are not covered by federal law with RCRA.

California Code of Regulations

Most state and federal regulations and requirements that apply to hazardous waste are spelled out in the California Code of Regulations (CCR), Title 22, Division 4.5. Title 22 contains the detailed compliance requirements for hazardous waste generators, transporters, and treatment, storage, and disposal facilities. Because California is a fully authorized state according to RCRA, most RCRA regulations (those contained in 40 Code of Federal Regulations [CFR] 260 et seq.) have been duplicated and integrated into Title 22. However, because the DTSC regulates hazardous waste more stringently than the U.S. EPA, the integration of California and federal hazardous waste regulations that make up Title 22 do not contain as

many exemptions or exclusions as does 40 CFR 260. As with the California Health and Safety Code, Title 22 also regulates a wider range of waste types and waste management activities than does the RCRA regulations in 40 CFR 260. To aid the regulated community, California compiled hazardous materials, waste and toxics-related regulations contained in CCR, Titles 3, 8. 13, 17, 19, 22, 23, 24, and 27 into one consolidated CCR Title 26 'Toxics.' However, the California Hazardous waste regulations are still commonly referred to as Title 22.

Department of Toxic Substance Control

The role of the DTSC, a Division of CalEPA, is to protect California and Californians from exposures to hazardous wastes by regulating hazardous waste, cleaning up existing contamination, and looking for ways to reduce the hazardous waste produced in California. The DTSC regulates hazardous waste in California primarily under the authority of the federal Resource Conservation and Recovery Act (RCRA) of 1976, and the California Health and Safety Code. Other laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning. In addition, DTSC reviews and monitors legislation to ensure that the position reflects the DTSC's goals. From these laws, DTSC's major program areas develop regulations and consistent program policies and procedures. The regulations spell out what those who handle hazardous waste must do to comply with the laws. Under RCRA, DTSC has the authority to implement permitting, inspection, compliance, and corrective action programs to ensure that people who manage hazardous waste follow state and federal requirements. As such, the management of hazardous waste in the Planning Area would be under regulation by the DTSC to ensure that state and federal requirements pertaining to hazardous waste are complied with.

Transportation of Hazardous Materials

The transport of hazardous materials and explosives through the County's Planning Area is regulated by the State Department of Transportation. Hazardous materials are transported to and through the OVOV Planning Area by vehicles using I-5, SR-14, and SR-126, and the Union Pacific Railroad. The risk of hazardous material spills during transport exists and may increase with continued industrial development in the Planning Area.

Local

- Los Angeles Regional Water Quality Control Board (RWQCB)
- Southern California Air Quality Management District (SCAQMD)
- Los Angeles County Flood Control

- Los Angeles County Department of Public Works
- County Sanitation Districts of Los Angeles County

Local Hazardous Waste Management Plan

According to the Los Angeles County Department of Public Works, untreated hazardous waste is shipped to distant disposal facilities in other counties and states. However, federal and state restrictions/regulations may preclude the County's continued reliance on distant disposal as its principal waste management method. As of January 1, 2003, there are no known hazardous waste treatment facilities located in the County's Planning Area.

Currently, Los Angeles County has a Hazardous Waste Management Plan describing and defining existing and future hazardous waste conditions, needed off-site management facilities, and recommended action programs on a countywide basis. It pertains to all of Los Angeles County, which includes the City of Santa Clarita Planning Area. Specific components of the plan include the following:

- Data regarding current hazardous waste generation
- Descriptions of current hazardous waste treatment facilities
- Feasibility of recycling or reducing hazardous waste generation
- Consideration of household and small generator hazardous waste
- Determination of the need for additional off-site hazardous waste treatment facilities
- Identification of facilities that can be expanded and general areas for future disposal of hazardous wastes or criteria for selecting sites
- A schedule to implement the County Hazardous Waste Management Plans

The plan also establishes siting criteria for development of needed off-site hazardous waste management facilities and designates general geographic areas within the unincorporated County and City areas where the siting criteria might be met. However, specific sites for hazardous waste management facilities are not identified because any future proponents of off-site hazardous waste management facilities must show a proposed project to be consistent with the plan. In addition, each off-site hazardous waste management project must undergo a rigorous site-specific assessment and permitting process at local, state, and federal levels, including addressing all environmental concerns as mandated by the CEQA.

The following objectives must be taken into consideration when deciding the location for a new hazardous waste management facility:

- Protect the residents
- Ensure the structural stability and safety of the facility
- Protect surface water
- Protect groundwater
- Protect air quality
- Protect environmentally sensitive areas
- Ensure safe transportation of hazardous waste
- Protect the social and economic development goals of the community

THRESHOLDS OF SIGNIFICANCE

In order to assist in determining whether a project will have a significant effect on the environment, the *State CEQA Guidelines* Appendix G identifies criteria for conditions that may be deemed to constitute a substantial or potentially adverse change in physical conditions.

Significant impacts resulting from human made hazards would occur if:

- the project would create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- the project would 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;
- the project would emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- the project is 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;
- the project is located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, that the project would result in a safety hazard for people residing or working in the project area;
- the project is within the vicinity of a private airstrip, which would result in a safety hazard for people residing or working the project area;

- the project would impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or

- the project would 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 ANALYSIS

The following text discusses the potential impacts from human made hazards per the County's Area Plan policies and the *State CEQA Guidelines* thresholds of significance criteria.

Impact 3.11-1 **The project would create a potentially significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials.**

Hazardous materials include any substances or combination of substances which, because of quantity, concentration, or characteristics, may cause or significantly contribute to an increase in death or serious injury, or pose substantial hazards to humans and/or the environment. These materials typically include nuclear fuels, explosives, volatile chemicals, liquefied natural gas (LNG), toxic metals and chemicals, herbicides and pesticides. Within the County's Planning Area, a hazardous materials release or spill would most likely involve either transportation of materials by railroad or truck, use of hazardous materials at a business, or illegal dumping of hazardous wastes. The County's Planning Area currently contains two of the busiest roadways for truck transportation in the state, Interstate 5 (the Golden State Freeway) and California Highway 14 (the Antelope Valley Freeway). The Golden State Freeway connects the southern California area with the northern California area, and is a popular route for truck transportation that transports hazardous materials. The Antelope Valley Freeway connects the Los Angeles area to eastern California desert areas and is a popular route for truck transportation that includes hazardous materials. The transport of hazardous materials and explosives through the County Planning Area on state highways and freeways is regulated by the California Department of Transportation (Caltrans). The County of Los Angeles adopted the Los Angeles County Hazardous Waste Management Plan, which provides for the proper management of all hazardous waste in the County's Planning Area, including data on hazardous waste generation, existing treatment facilities, and siting criteria for hazardous waste management facilities (**Policy S 4.1.2**).

During the development review process of any developments planned within the County's Planning Area it will be required that proper adequately designed setbacks, and buffers be developed to separate any use that stores or generates large amounts of hazardous materials next to new development (**Policy S 4.2.2**). The public and environment within the County's Planning Area will be protected from

businesses that use hazardous materials; because these businesses will be required to verify their procedures for storage, use and the disposal of any hazardous materials they may be using (**Policy S 4.2.3**). In order to promote the correct disposal techniques for any hazardous materials within the County's Planning Area, the County of Los Angeles, along with other agencies will hold regular events to promote safe disposal of household hazardous waste, including e-waste (**Policy S 4.2.4**).

Proposed Area Plan Policies

Policy S 4.1.2: Coordinate with other agencies to address contamination of soil and groundwater from hazardous materials on various sites, and require that contamination be cleaned up to the satisfaction of the County and other responsible agencies prior to issuance of any permits for new development.

Policy S 4.2.2: Through the development review process, ensure that any new development proposed in the vicinity of a use that stores or generates large amounts of hazardous materials provides adequate design features, setbacks, and buffers to mitigate impacts to sensitive receptors in the event of a hazardous materials incident.

Policy S 4.2.3: Require businesses to verify procedures for storage, use, and disposal of hazardous materials.

Policy S 4.2.4: Cooperate with other agencies to hold regular events to promote safe disposal of small amounts of household hazardous waste, including e-waste, by Santa Clarita Valley residents.

Effectiveness of Proposed Area Plan Policies

The above discussed policies are designed to reduce any significant hazards to residents or the environment within the County's Planning Area due to the transport, use or disposal of hazardous materials. Freeways within the County's Planning Area are protected in regards to hazardous materials transportation through guidelines and policies of Caltrans, the agency responsible for transportation of hazardous waste on the state's freeway system. Any new development that would be located in an area where businesses would use hazardous materials would be required to go through a review process ensuring that adequate setback and buffer features are established to protect residents and the environment from possible contamination. All new development that includes businesses that use hazardous waste will be required to verify their procedures for storage, use and disposal of hazardous waste materials to reduce exposure to residents and the environment. Additionally, the County of Los

Angeles will promote events to provide a correct means of disposing household hazardous waste and to prevent exposure to residents and the environment within the County's Planning Area. Implementation of these policies will therefore, reduce the possibility of exposure of hazardous materials to the public or environment through transportation, use and disposal, and impacts would be less than significant.

Plan to Plan Analysis

Both the existing and proposed Area Plans contain policies intended to minimize hazardous materials impacts. However, the proposed Area Plan proposes policies that would actively consider new development located near known hazardous sites and mitigate potential impacts. The proposed Area Plan employs more comprehensive policies with regard to the location, use and transportation of hazardous materials. Impacts would be less under the proposed Area Plan.

Impact 3.11-2 **The project would create a potentially significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment**

The County's Planning Area is governed by the Los Angeles County Hazardous Waste Management Plan, which deals with foreseeable upset and accident conditions involving the release of hazardous materials into the environment (**Policy S 4.1.2)**. The Los Angeles County Hazardous Waste Management Plan provides direction for the proper management of all hazardous waste in the County of Los Angeles and 38 contract cities including data on hazardous waste generation, existing treatment facilities, household and other small generator waste, and siting criteria for hazardous waste management facilities (**Policy S 4.1.2, Policies S 4.2.1 through S 4.2.4**). The potential for future residents and employees of the County's Planning Area to encounter accidental exposure from hazardous materials would increase with the expected buildout described in the Area Plan. The addition of new residential housing and commercial/industrial businesses would involve development on land that is currently vacant, or that has had existing residential or commercial/industrial businesses on site in the past. There is the potential for some of this land to contain hazardous materials. The Area Plan's policies require the identification of hazardous wastes and remediation of contamination (**Policy S 4.1.2**) as well as the proper storage, handling, and disposal of hazardous materials, which will protect residents and employees from increased exposure of hazardous materials. The potential for hazardous impacts from future projects implemented as a result of the Area Plan will be evaluated on a project by project basis (**Policies S 4.2.2 and S 4.2.3**).

Implementation of **Policy S 4.2.3** and **Policy S 4.2.4** will provide direction for businesses and households within the County's Planning Area in developing efficient ways to store, use and dispose of hazardous

materials, along with providing educational opportunities on why hazardous wastes are dangerous, and how to dispose of small quantities and amounts of these wastes. **Policy S 4.2.1** and **Policy S 4.2.2**, will provide decision makers, and developers with the ability to restrict future locations of industries or businesses using hazardous materials to minimize impacts on residents and other sensitive receptors in the event of a hazardous materials incident, and to provide guidance on what types of buffers and setbacks could be used to reduce possible hazardous waste exposure to residents.

Proposed Area Plan Policies

Refer to **Impact 3.11-1** for a listing of Policies **S 4.1.2,** and **S 4.2.2** through **S 4.2.4.** Additionally, the following policy shall be implemented:

Policy S 4.2.1: On the Land Use Map, restrict the areas in which activities that use or generate large amounts of hazardous materials may locate, to minimize impacts to residents and other sensitive receptors in the event of a hazardous materials incident.

Effectiveness of Proposed Area Plan Policies

The above polices are designed to reduce potentially significant impacts from the accidental release of hazardous materials to the public or the environment. The policies will help guide future development and provide protection of public safety and property by identifying sites within the County's Planning Area that may contain hazardous materials, and require their cleanup. They also provide guidance on handling hazardous waste by local citizens and businesses. There will be guidance for the development of residential and business areas near known hazardous waste sites, by promoting design buffers to separate sensitive areas from known hazardous materials sites, and by providing restriction to the area where activities that produce large amounts of hazardous waste can be located. Implementation of these policies will minimize the potential impacts involving the release of hazardous impacts into the environment to a less than significant level.

Plan to Plan Analysis

Both the existing and proposed Area Plans contain policies identifying hazardous materials sites within the community. Impacts would be similar under both Plans.

Impact 3.11-3 **The project would emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school**

The County's Planning Area will incorporate land uses within its boundaries that may include the development of new schools to serve the public. The possibility exists that development of schools within the County's Planning Area could be placed within 0.25 mile of a site specific project that could emit hazardous emissions or handle hazardous or acutely hazardous materials, substances or waste. However, individual site specific review will be required to determine if a site specific project using hazardous substances within the County Planning Area will be developed within a 0.25 mile of a existing or proposed school. The potential for hazardous impacts from future projects implemented as a result of the Area Plan will be evaluated on a project by project basis (**Policies S 4.2.2 and S 4.2.3**).

Proposed Area Plan Policies

Refer to **Impact 3.11-2** for a listing of **Policies S 4.2.2 and S 4.2.3**.

Effectiveness of Proposed Area Plan Policies

The build-out of the County's Area Plan has the potential to locate existing or proposed schools within a quarter mile of a site specific project that could use and release hazardous materials. However, each site specific project will be required to properly use and store any hazardous materials. Implementation of the above policies will minimize the potential of locating site specific projects that use hazardous materials within a quarter mile of an existing or proposed school. Potential impacts would be less than significant.

Plan to Plan Analysis

Both the existing and proposed Area Plans contain policies intended to minimize impacts to safety and evacuation plans. Impacts would be similar under both Plans.

Impact 3.11-4 **The project is 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**

Government Code Section 65962.5 states that the DTSC shall compile and update, on an annual basis, (1) hazardous waste facilities subject to corrective action, (2) land designated as hazardous waste property, (3) waste disposal sites, and, (4) sites included in the Abandoned Site Assessment Program. As described above in **Table 3.11-1** the County's Planning Area contains two sites that have been identified as containing hazardous materials that could potentially impact residents and employees (**Policy S 4.1.2**).

These sites are currently undergoing remediation (**Policy S 4.1.2**). Although the County is actively pursuing clean-up efforts on these above described sites, the potential for more hazardous materials sites to be identified could increase with buildout of the County's Planning Area. **Policy 4.2.1**, above, enables decision makers to restrict the locations of business or industries that would use or generate large amounts of hazardous waste, and **Policy 4.2.2** ensures that the development review process provides adequate design features, setbacks, and buffers to mitigate impacts on sensitive receptors in the event of a hazardous materials incident from any new development.

Proposed Area Plan Policies

Refer to I**mpact 3.11-2** for a listing of **Policies S 4.2.1** through **S 4.2.3**.

Effectiveness of Proposed Area Plan Policies

The build-out of the County's Planning Area has the potential to uncover sites containing hazardous materials. **Policy S 4.1.2** and **Policies S 4.2.1** through **S 4.2.3** require the County to identify other sites potentially containing hazardous materials and to evaluate potential hazardous waste impacts on a project by project basis following implementation of the Area Plan. **Policy S 4.1.2** requires that contaminants be cleaned up to the satisfaction of the agency having jurisdiction prior to issuance of any permits for new development. Implementation of these policies, would reduce potential impacts from a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 or a newly identified site from creating a significant hazard to the public or the environment. Implementation of these policies will reduce these potential impacts to a less than significant level.

Impact 3.11-5: **The project is 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, that the project would result in a safety hazard for people residing or working in the project area.**

The County's Planning Area currently contains one privately owned public airport within its boundaries, to the northeast of the community of Agua Dulce. The Agua Dulce Airpark is a privately owned airport serving general aviation needs with one runway, aircraft parking, fuel, and basic passenger services. The Airpark averages about 28 operations per week and stores about 35 aircraft on site. Most of the Airpark's activity involves local operations. The Airpark is located in an unincorporated area of Los Angeles County, and the County has adopted an Airport Land Use Plan to protect the clear zones and ensure land use compatibility with airport operations (**Policy C 1.3.5**). In 2006, the County approved continued operation and expansion of the Airpark services, including allowing up to 200 airplanes and adding

helicopter operations. The Airport Land Use Plan currently has goals and polices that will reduce the impact with development occurring around the airport. Any development within the County's Planning Area that will be proposed to be developed near the Airpark, will be required to abide to the County's adopted Airport Land Use Plan as it pertains to the Agua Dulce Airport in order to mitigate aviation-related hazards and protect airport operations from encroachment by incompatible uses (**Policy C 1.3.5)**.

Proposed Area Plan Policies

Policy C 1.3.5: Ensure consistency with the County's adopted Airport Land Use Plan as it pertains to the Agua Dulce Airport, in order to mitigate aviation-related hazards and protect airport operations from encroachment by incompatible uses.

Effectiveness of Proposed Area Plan Policies

Implementation of Policy S 6.3.1 would reduce any hazard that the Airpark may pose on future development within the area, including people residing or working close to the Airpark. Therefore, impacts would be less than significant.

Impact 3.11-6: The project is within the vicinity of a private airstrip, which would result in a safety hazard for people residing or working the project area

There may be private airstrips within the boundaries of the County's Planning Area. However, those locations were not identified during this analysis and should be considered during project-level analysis. Therefore, this criterion was not considered in the analysis, and is further discussed in **Section 5.0, Effects Found Not to be Significant.**

Impact 3.11-7: The project would impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan

The OVOV Planning Area is located in an area of Southern California that has the potential for residents and employees to encounter human made hazards and natural hazards. These hazards could have the potential to cause undo hardship to residents and employees. Human made hazards include the potential release of hazardous materials, the potential inundation of areas within the County's Planning Area from ruptured man-made dams, the potential for biological, nuclear and chemical attacks from foreign and domestic terrorism, and the potential for fires started by humans. Natural hazards include flooding, seismic activity, extreme weather conditions and fires that are started naturally.

During development review process, emergency access is evaluated for all pending development projects within the County's Planning Area. Two means of ingress and egress are required for all major

development projects, including subdivisions and commercial/industrial sites. Adequate road and driveway widths are required to provide access to fire trucks, along with turnouts and turnaround areas where deemed necessary. Traffic control during evacuation procedures will be based upon the nature of the emergency and the condition of the roads within the County's Planning Area. Temporary signage will be placed by the County of Los Angeles Public Works Department to ensure evacuation routes are clearly marked for motorists.

Although the County provides a number of emergency response plans and emergency evacuation plans as described above, the build-out of the County's Planning Area will increase the amount of residents and employees within the area. With this increase in population, there is potential for increased interference with the above discussed adopted emergency response plans and emergency evacuation plan. Implementation of **Policies S 7.1.1** through **S 7.1.4** will provide further standards to help better implement the County's existing emergency response plans and emergency evacuation plans.

Implementation of **Policies S 3.3.1** to **S 3.3.3** requires specific response times, installation and maintenance of street name signs on all new development and posting of address numbers on all homes and businesses so they are clearly visible from adjacent streets.

Policies S 7.2.1 through **7.2.4** promote agency cooperation in planning for temporary shelters, expedited plan check, permitting and inspection programs to aid in rebuilding damaged structures; proper record-keeping procedures, and the purchasing of disaster and recovery supplies locally to assist local businesses in their recovery efforts within the OVOV Planning Area.

Proposed Area Plan Policies

Policy S 3.3.1: Plan for fire response times of five minutes in urban areas, eight minutes in suburban areas, and 12 minutes in rural areas.

Policy S 3.3.2: Require the installation and maintenance of street name signs on all new development.

Policy S 3.3.3: Require the posting of address numbers on all homes and businesses that are clearly visible from adjacent streets.

Policy S 7.1.1: Regularly update emergency preparedness and response plans that are consistent with State plans.

Policy S 7.1.2: Continue to provide regular training to public officials and the public on emergency procedures.

Policy S 7.1.3: Ensure that evacuation routes are clearly posted throughout the Santa Clarita Valley.

Policy S 7.1.4: Strengthen communication and cooperation between agencies, citizens and non-profit groups to plan for disaster response.

Policy S 7.2.1: In cooperation with other agencies, plan for temporary shelters for residents displaced by disasters and emergency incidents.

Policy S 7.2.2: Plan for expedited plan check, permitting, and inspection programs to aid recovery efforts involving the rebuilding of damaged structures.

Policy S 7.2.3: Ensure that proper record-keeping procedures are in place for purposes of obtaining reimbursement from State and Federal agencies.

Policy S 7.2.4: Purchase disaster and recovery supplies locally to assist local businesses in their recovery efforts.

Effectiveness of Proposed Area Plan Policies

The proposed policies discussed above are designed to provide guidance on adopting any future emergency response plans or evacuation plans that will be complementary to the proposed Area Plan. Additionally, these goals, objectives and policies provide additional direction and strengthen the County's existing emergency response plans or evacuation plans. Since the above policies would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan, but strengthen these plans and any future adopted plans, potential impacts on emergency or evacuation plans from implementation of the proposed Area Plan would be less than significant.

Plan to Plan Analysis

Both the existing and proposed Area Plans contain policies intended to minimize impacts as a result of emergency and evacuation plans. Impacts would be similar under both plans.

Impact 3.11-8 **The project would 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.**

The County's Planning Area currently has four fire stations within its boundaries as further described in **Section 3.15, Public Services,** of this programmatic environmental impact report (EIR). Some fire stations in the County's Planning Area are geared toward providing urban fire protection services, while others in outlying areas respond to brush fires along the urban-wildland interface. The County's Planning Area is susceptible to wildland fires because of its hilly terrain, dry weather conditions, native vegetation, and urban/wildland interface areas along its boundaries. Historical records kept by the USFS indicate that wildland fires occur regularly within the County's Planning Area, with large fires occurring approximately every 10 years.

The combination of local fire forces applied to a wildland fire will depend upon the severity of the fire, other fires in progress, and the availability of resources. Suppression efforts can involve fire equipment, heavy construction equipment, and air fire bombardment aircraft, in addition to hand crews. The LACoFD which serves the existing OVOV Planning Area, has adopted programs directed at wildland fire prevention, including adoption of the State Fire Code standards for new development in hazardous fire areas. Fire prevention requirements include provision of access roads, adequate road widths, and clearance of brush around structures located in hillside areas within the County's Planning Area. In addition, proof of adequate water supply for fire flow is required within a designated distance for new construction in fire hazard areas.

The County provides training to residents on fire prevention and response, through the CERT program, and other educational programs (**Policy S 3.2.7**). Although the County provides these safety measures, and the associated fire departments are specialized in regards to battling fires in a wildland/urbanized interface region, the implementation of the proposed Area Plan will increase the population and employee count within the County's Planning Area, as full build-out approaches. This could cause an increase in encroachment into wildland areas that are currently uninhabited. With the encroachment of residents and businesses into wildland areas, the potential for risk of loss, injury or death involving wildland fires will increase.

Implementation of **Policies S 3.2.1** through **S 3.2.7** provide for the identification of areas prone to wildland fire hazards and their inclusion in fire safety plans (**Policy 3.2.1**), address defensible spacing of vegetation around structures through clearing of dry brush and vegetation (**Policy S 3.3.3**), establish landscape guidelines (**Policy S 3.2.3**), require sprinkler systems, fire resistant building materials and other

construction materials and provide this information to builders and the public (**Policy S 3.2.4**), and ensure adequate secondary and emergency access for fire apparatus (**Policy S 3.2.5**). Additionally, implementation of **Policy S 3.2.7** will act as a first line of defense, to allow residents within the urban/wildland interface to prepare their residences and business to help reduce the spread of wildfires into the OVOV Planning Area.

Proposed Area Plan Policies

Policy S 3.2.1: Identify areas of the Santa Clarita Valley that are prone to wildland fire hazards and address these areas in fire safety plans.

Policy S 3.2.2: Enforce standards for maintaining defensible space around structures through clearing of dry brush and vegetation.

Policy S 3.2.3: Establish landscape guidelines for fire-prone areas with recommended plant materials, and provide this information to builders and members of the public.

Policy S 3.2.4: Require sprinkler systems, fire resistant building materials, and other construction measures deemed necessary to prevent loss of life and property from wildland fires.

Policy S 3.2.5: Ensure adequate secondary and emergency access for fire apparatus, which includes minimum requirements for road width, surface material, grade, and staging areas.

Policy S 3.2.7: Continue to provide information and training to the public on fire safety in wildland interface areas.

Effectiveness of Proposed Area Plan Policies

The proposed policies are designed to guide the County in taking preventive measures against wildland fires. Since the County's Planning Area contains and is adjacent to high hazard wildland fires areas, appropriate measures must be taken to avoid the risk of a conflagration spreading into the OVOV Planning Area. The above policies offers ways in which to address the problems associated with the possibility of wildland fires occurring within the County's Planning Area. With their implementation, potential impacts from wildland fires would be reduced to a less than significant level.

Plan to Plan Analysis

Both the existing and proposed Area Plans contain policies intended to minimize impacts as a result of wildland fire hazards. Impacts would be similar under both plans.

MITIGATION FRAMEWORK

No mitigation measures are required.

SIGNIFICANCE OF IMPACT WITH MITIGATION FRAMEWORK

Potential impacts would be less than significant and no mitigation measures are required.

3.12 HYDROLOGY AND WATER QUALITY

EXECUTIVE SUMMARY

This section describes the drainage features, stormwater quality, flooding hazards, and flood-protection improvements within the County's Planning Area. Regulatory agencies governing stormwater quality and flooding hazards are also discussed. The Land Use Policy Map is inconsistent with **Policy S 2.1.1** in that it would designate some areas within the County's Planning Area that are within the 100-year flood plain as land uses other than Open Space. This would result in the possible inundation of residential, commercial, and industrial areas that would be located within the 100-year floodplain, which in turn can cause damage or possibly cause injury to residents and employees. With mitigation, this impact would be considered less than significant under California Environmental Quality Act (CEQA) Appendix G Thresholds. However, inconsistency with **Policy S 2.1.1** would be considered significant under CEQA Appendix G Thresholds.

EXISTING CONDITIONS

Surface Water Drainage Patterns within County's Planning Area

Surface water drainage patterns are dependent on topography, the amount and location of impervious surfaces, and the type of flood control that is located in an area. The size, or magnitude, of a flood is described by a term called a "recurrence interval." By studying a long period of flow record for a stream, hydrologists estimate the size of a flood that would have a likelihood of occurring during various intervals. For example, a five-year flood event would occur, on the average, once every five years (and would have a 20 percent chance of occurring in any one year). Although a 100-year flood event is expected to happen only once in a century, there is a 1 percent chance that a flood of that size could happen during any year. The magnitude of flood events could be altered if changes are made to a drainage basin, such as by diversion of flow or increased flows generated by additional impervious surface area. Additionally, flood control would help manage the surface runoff that occurs in a particular area.

The Federal Emergency Management Agency (FEMA) has mapped most of the flood risk areas within the United States as part of the National Flood Insurance Program (NFIP). The NFIP is a federal program that allows property owners in areas of participating communities to purchase insurance against possible loss due to flooding. The NFIP provides an insurance alternative to disaster assistance to offset the rising costs of repair due to losses in floods.

Most communities with a 1 percent chance of a flood occurring in any given year have a floodway depicted on a Flood Insurance Rate Map (FIRM). **Figure 3.12-1, 100-Year Flood Zone of the OVOV Planning Area**, shows the Special Flood Hazard Areas (SFHA), which are designated A zones or the 100-year flood zones. **Figure 3.12-1** depicts the 100-year flood event boundaries for the major watercourses in the County's Planning Area, which are generally located within and directly adjacent to the Santa Clara River, its tributaries, and along portions of Castaic Lake.

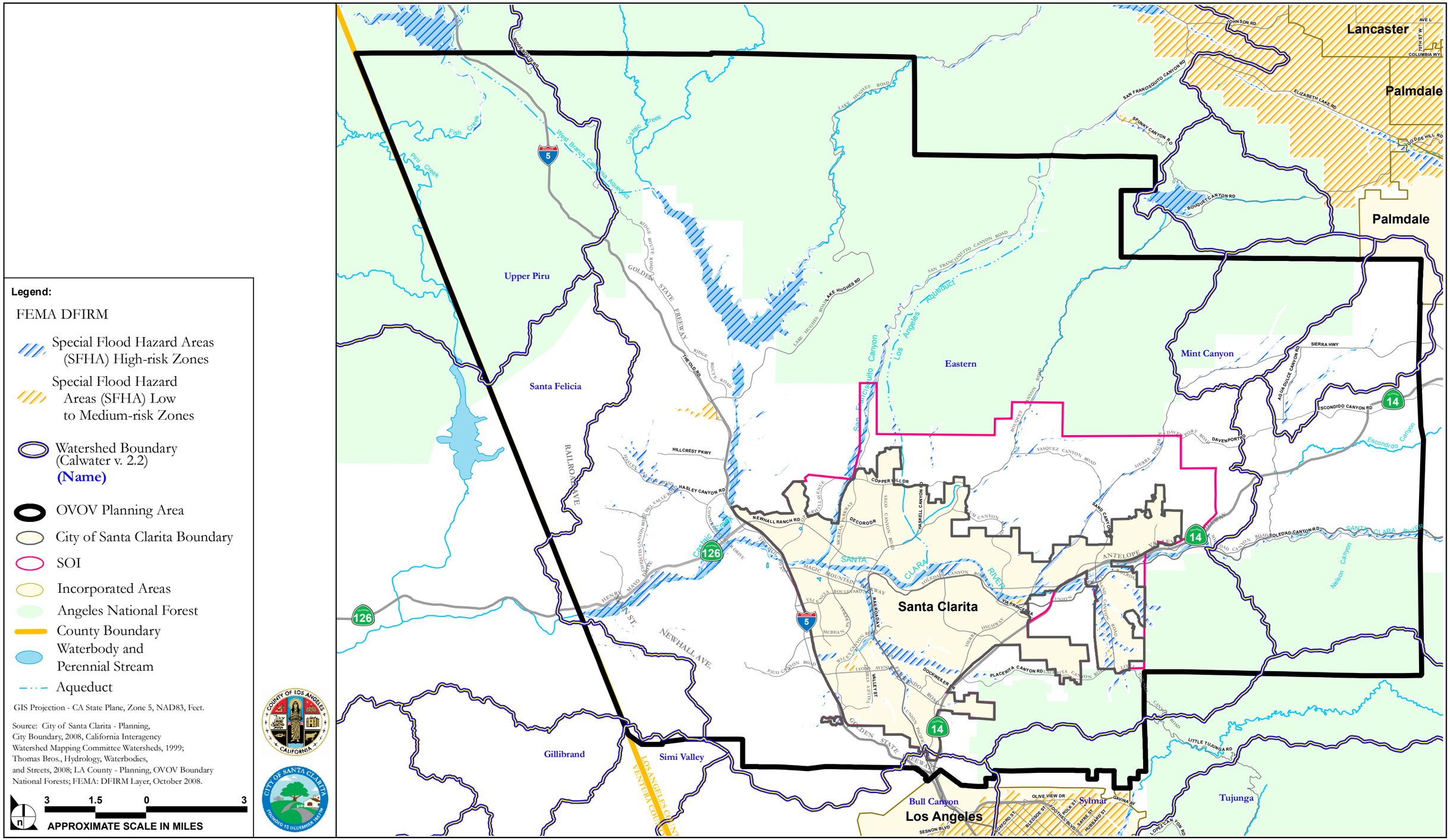
The County's Planning Area contains many natural streams and creeks (including San Francisquito Creek, Bouquet Canyon Creek, and Castaic Creek) that function as storm drain channels, conveying surface runoff into the Santa Clara River. From its headwaters in the San Gabriel Mountains to its mouth at the Pacific Ocean, the Santa Clara River drains a watershed of 1,643 square miles, approximately 80 miles in length and about 25 miles in width. Ninety percent of the river's watershed consists of mountainous terrain; the remaining portion is a mix of valley floor, floodplain, and coastal plain. Within the headwater areas of the County's Planning Area, discharge during rainfall events tends to be rapid due to the steep terrain. High intensity rainfalls, in combination with alluvial soils, sparse vegetation, erosion, and steep gradients, can result in significant debris-laden flash floods.

The Santa Clara River and its tributary streams play a major part in moving the large volume of runoff generated from the Santa Clarita Valley and surrounding foothills and mountains within the County's Planning Area. The drainage system, including natural streams as well as constructed storm drain infrastructure within the County's Planning Area, is adequate to handle normal precipitation in the region (15 to 19 inches per year). With the rapid urbanization of the Valley since 1960, stormwater volumes have increased due to increased impervious surface area from parking lots, rooftops, and streets. Flood control facilities have been constructed to mitigate the impacts of development on drainage patterns throughout the County's Planning Area.

Rainfall

Normal precipitation in the County's Area Plan ranges between 15 to 19 inches per year.[1]

1 Los Angeles County Department of Regional Planning, Preliminary Draft Santa Clarita Valley Area Plan One Valley One Vision, Chapter 5 Safety Element, (2008), pg. 221.



SOURCE: City of Santa Clarita, County of Los Angeles, Valleywide General Plan - March 2009

FIGURE **3.12-1**

100-Year Flood Zone of the OVOV Planning Area

Drainage Facilities

The Los Angeles County Flood Control Act was adopted by the state legislature in 1915. The Act established the Los Angeles County Flood Control District (LACFCD) and empowered it to provide flood protection, water conservation, recreation, and aesthetic enhancement within its boundaries. The Flood Control District is governed, as a separate entity, by the County of Los Angeles Board of Supervisors. In 1985, the responsibilities and authority vested in the Flood Control District were transferred to the County of Los Angeles Department of Public Works. The Watershed Management Division of the Department of Public Works is the planning and policy arm of the Flood Control District, while the Flood Maintenance and Water Resources Division of the Department of Public Works oversee its maintenance and operational efforts.[2] Parcels in the incorporated and unincorporated County of Los Angeles pay a fee on their annual tax bill for these services.[3] Currently, the fee provides additional funding to meet the mandates of the Federal Clean Water Act as implemented through the National Pollutant Discharge Elimination System (NPDES) permits (prior to recordation of tract maps on a project-by-project basis) that are issued by the Regional Water Quality Control Board (RWQCB). The NPDES permit is the responsibility of the cities within the County and LACFCD.

LACFCD and the County of Los Angeles are under the same administration but are separate legal entities. The funding for LACFCD is mainly for flood control purposes not for water quality compliance. With the addition of the NPDES permitting, the LACFCD augmented their efforts to address water quality in addition to just flood control. In the County's Planning Area, the LACFCD is responsible for annual maintenance of flood control facilities, mainly in the concrete lined portion of the Santa Clara River and its tributaries. This maintenance includes manual and chemical clearing of vegetation and debris before the rainy season each year, patching, and repair of concrete structures, and riprap and other bank stabilization structures, as needed. Maintenance activities also include clearing out of catch basin areas that are upstream of developed lands to catch brush, rocks, and other large debris that would clog the drainage system downstream. The LACFCD is also responsible for maintenance of all in-street storm drain catch basins, pipes, and outfalls.

Under the NPDES permit program, the LACFCD is also responsible to provide annual street catch basin cleaning for the unincorporated County areas and to provide regular street sweeping services. The NPDES permit program also requires the County to serve as the lead agency for all of the cities in Los

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2 Los Angeles County Department of Public Works, Los Angeles County Flood Control District, http://www.ladpw.org/wmd/dspFloodControlDist.cfm.

3 Telephone communication with Lucia Adams, Los Angeles County Watershed Management Division, with Impact Sciences, Inc., May 26, 2009.

Angeles County for production of regional public education materials and advertising to increase awareness of the need to keep stormwater clean. The majority of storm drain catch basins, pipes, and outfalls within the City of Santa Clarita's Planning Area have been transferred to the County for maintenance (May 14, 2002). The transfer of responsibility for these facilities to the County is a standard part of the development review and approval process.

Buried bank stabilization is a relatively new bank stabilization method that leaves the natural river bank in place for use by vegetation and wildlife and preserves the aesthetic appeal of the river. With this method, two levees are built one behind the other, 125 feet behind the natural surface of the bank. The levees are made of gunite, reinforced concrete lining, or soil cement and buried with a slope of 1.5:1 or greater. The County agreed to the use of this innovative measure with the understanding that the City of Santa Clarita would assume responsibility to maintain the banks into the future. No funding mechanism is in place for the City to pay for maintenance activities associated with buried bank stabilization. However, the County began to accept transfers of funds for buried bank stabilization in November 2005. Maintenance activities associated with buried bank stabilization are funded by developer agreements.

FLOODING

Flooding hazards are directly related to precipitation (rainfall) intensity and duration. Additionally, the regional topography, type and extent of vegetation coverage, amount of impermeable surfaces, local slope characteristics, and available drainage facilities all factor into the region's ability to divert precipitation runoff. Other key elements in a region's ability to safely manage runoff volume are the developments and urbanized areas within the region. Urbanization increases the volume and velocity of runoff water via two main processes:

- areas that would normally absorb rainfall (e.g., soils) have been replaced by impermeable surfaces (e.g., streets, houses); and
- the channelization and accumulation of runoff water adds to the collective whole, resulting in increased volumes and velocity.

Throughout the County's Planning Area, streams have been channelized to allow for development in the floodplain of the Santa Clara River and its tributaries. Soft bottom channels with concrete sides have been the predominant floodway improvement method used. However, the majority of the Santa Clara River has remained unchannelized, and a small portion has been stabilized using buried bank stabilization structures.

Localized Flood Areas

Two areas within the County's Planning Area are known to have periodic flooding problems. These areas are portions of Sand Canyon and Placerita Canyon. During storm events, transmission of storm flows within the street right-of-way may cause localized flooding making some roads impassable (e.g., Sand Canyon Road and Placerita Canyon Road). However, most streets in the County's Planning Area are designed to accommodate storm flow.

Along with heavy, prolonged rainfall, flooding within the County's Planning Area could also occur due to the leakage or collapse of nearby dams, the rupture of the Los Angeles Aqueduct, or on a smaller scale, within areas that have been cleared of vegetation by fires or mudslides. However, within the County's Planning Area, the primary flood hazard areas occur in and along natural drainage channels within the 100-year floodplain as shown above in **Figure 3.12-1**.

Dam Failure

Dam failure can result from natural or man-made causes, including earthquakes, erosion, improper siting or design, rapidly rising flood waters or structural flaws. Dam failure may cause loss of life, damage to property, and displacement of persons residing in the inundation path. Damage to electric generating facilities and transmission lines could also impact life support systems in communities outside of the immediate inundation areas.

The County's Planning Area has been inundated by flood waters from a failure of a dam in the past. The St. Francis Dam was built by the Bureau of Water Works and Supply of the City of Los Angeles between 1925 and 1926, as a concrete gravity dam in the San Francisquito Canyon, about 5 miles northeast of the City of Santa Clarita. In 1928 the dam failed, and resulted in billions of gallons of water being sent down the San Francisquito Canyon and eventually dumping into the Santa Clara River within the current boundaries of the City. The flood waters drained 54 miles down the Santa Clara River and dumped into the Pacific Ocean. The dam collapse killed approximately 450 people, damaged a total of 1,200 homes, and damaged 10 bridges on its 54 mile traverse to the Pacific Ocean. The St. Francis Dam disaster is the second largest disaster in California history in which people were killed, compared to the San Francisco Earthquake and Fire in 1906.

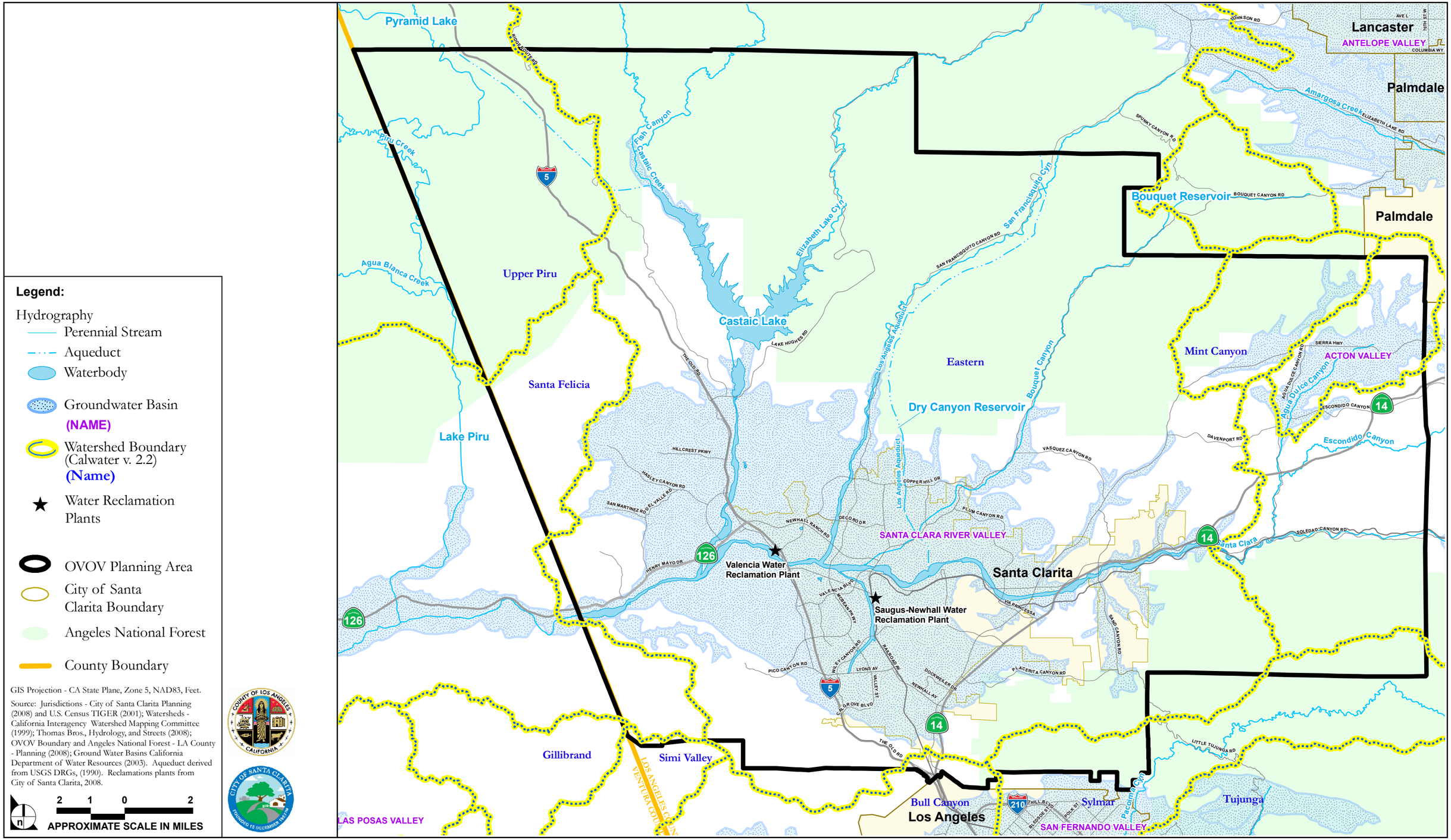
Within the County's Planning Area, the one major reservoir which could have a significant impact on the County's Planning Area in the event of a dam failure is located in Bouquet Canyon. The Bouquet Canyon Reservoir is located in the central portion of the County's Planning Area. The reservoir has two earth-filled dams, one on the west side overlooking Cherry Canyon, and one on the south side above

Bouquet Canyon. The Bouquet Reservoir has a maximum capacity of 36,505 acre-feet of water and 7.6 miles of shoreline. Because of its two dams, two potential inundation areas have been identified in the event of a dam failure. On the Cherry Canyon side, the water would flow west for approximately 2 miles through the Canyon into San Francisquito Canyon, and then south for approximately 11 miles into the Santa Clara River. The Bouquet Creek dam would drain south through Bouquet Canyon for 17 miles, into the Santa Clara River. Failure of the Bouquet Canyon dams during a catastrophic event, such as a severe earthquake, is considered unlikely, due to their type of construction. However, local County safety plans have considered the possibility of dam failure and have outlined a procedure for response and recovery from this type of hazard, including identification of inundation areas and evacuation routes.

The Castaic Dam is located on Lake Hughes Road, 1 mile northeast of Interstate 5, just north of the community of Castaic. This dam is an earth filled dam located at the confluence of Castaic and Elizabeth Lake Creeks. The dam facing is approximately 1 mile across with a maximum capacity of 350,000 acre-feet of water, covering a surface area of 2,600 acres with 34 miles of shoreline. Should a breach in the dam occur, the water will flow south in Castaic Creek for approximately 5 miles to the Santa Clara River. The Castaic Reservoir is within the boundaries of the County's Planning Area; a dam failure would result in a flow of flood water that would flow through portions of the County's Planning Area boundaries.

Groundwater Basins

Groundwater is concentrated into natural hydro-geological units called basins. An aquifer is a subsurface area where water collects, concentrates, and can be extracted within a basin. Multiple aquifers may be located within each basin. The two major groundwater basins underlying the County's Planning Area are the Santa Clara River Valley Groundwater Basin, East Subbasin, and the Acton Valley Groundwater Basin. The East Subbasin encompasses the upper Santa Clara River Valley and is comprised of two aquifer systems, the Alluvium (also referred to as the Alluvial Aquifer), and the Saugus Formation. The Alluvial Aquifer generally underlies the Santa Clara River and its tributaries, and the Saugus Formation underlies nearly the entire Upper Santa Clara River area. Groundwater from the East Subbasin generally flows from east to west, following the movement of the Santa Clara River. The East Subbasin is the sole source of local groundwater for urban water supply in the City of Santa Clarita. The groundwater basins within the proposed project area are shown in **Figure 3.12-2, Groundwater Basins Within and Adjacent to the OVOV Planning Area**.



SOURCE: City of Santa Clarita, County of Los Angeles, Valleywide General Plan - August 2009

FIGURE 3.12-2

Groundwater Basins Within and Adjacent to the OVOV Planning Area

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Because up to 80 percent of the average annual precipitation occurs between November and March, most groundwater infiltration is in the form of winter-storm flow. However, the East Subbasin is also replenished by deep percolation of agricultural land, urban irrigation, percolation from septic tanks and leach field systems, and treated effluent from water reclamation plants.

The Acton Valley Groundwater Basin encompasses about 17 square miles and is bounded by the Sierra Pelona on the north and the San Gabriel Mountains on the south, east, and west. Groundwater in the basin is unconfined and found in alluvium and stream terrace deposits. The regional direction of groundwater flow is in a southwesterly direction toward Soledad Canyon. Replenishment of this basin is through percolation of direct rainfall and infiltration of surface water runoff, agriculture and irrigation, and septic tanks. There is no pumping for urban water supply and distribution from this basin, although individual users in the far eastern portion of the OVOV planning area may have private wells in the Acton Valley Groundwater Basin.

Natural or soft bottom drainage channels and wide natural floodways and flood plains maximize the groundwater recharge and help to replenish the aquifers. As an unchannelized river, the Santa Clara River and its tributaries provide opportunities for groundwater recharge. The best available evidence shows that no adverse impacts on Basin recharge have occurred due to the existing or projected use of local groundwater supplies, consistent with the CLWA/purveyor groundwater operating plan for the basin (see *2005 Basin Yield Report*). In addition, according to the memorandum prepared by CH2MHill (*Effect of Urbanization on Aquifer Recharge in the Santa Clarita Valley*, February 22, 2004), urbanization in the Santa Clarita Valley has been accompanied by long-term stability in pumping and groundwater levels, and the addition of imported State Water Project water to the Valley, which together have not reduced recharge to groundwater, nor depleted the amount of groundwater in storage within the local groundwater basin.

Major Water Bodies and Tributaries

The area within the County's Planning Area contains abundant types of freshwater bodies, including lakes, rivers, streams, and tributaries. The following is a description of the lakes, rivers, streams, and tributaries that are nearest to the County's Planning Area, **Figure 3.12-3, Surface Water Within and Adjacent to the OVOV Planning Area.**

Santa Clara River

The County's Planning Area is located within the Santa Clara River Valley basin, a watershed that encompasses approximately 1,634 square miles. The Santa Clara River is the largest river system in

Southern California that remains in a relatively natural state. From its headwaters in the San Gabriel Mountains to its terminus at the Pacific Ocean, the Santa Clara River flows approximately 84 miles. Historically, the river generally flowed year-round from the area near Interstate 5 westerly into Ventura County (a noted exception is the "dry gap" area located between the Los Angeles County/Ventura County line and Piru Creek). The upper reach of the river, has been typically dry except in periods following storm events; this portion of the river extends from the Bouquet Canyon Road overpass to Lang Station, located on Lang Station Road south of Soledad Canyon Road and east of Lost Canyon Road within the County's Planning Area. Flows within the river are largely a result of stormwater runoff in the rainy months and wastewater treatment discharges in the drier months. Effluent from the Saugus Water Reclamation Plan (WRP) and Valencia WRP accounts for up to 40 percent of total stream flow within the Santa Clara River during the winter, and up to 90 percent during summer months.

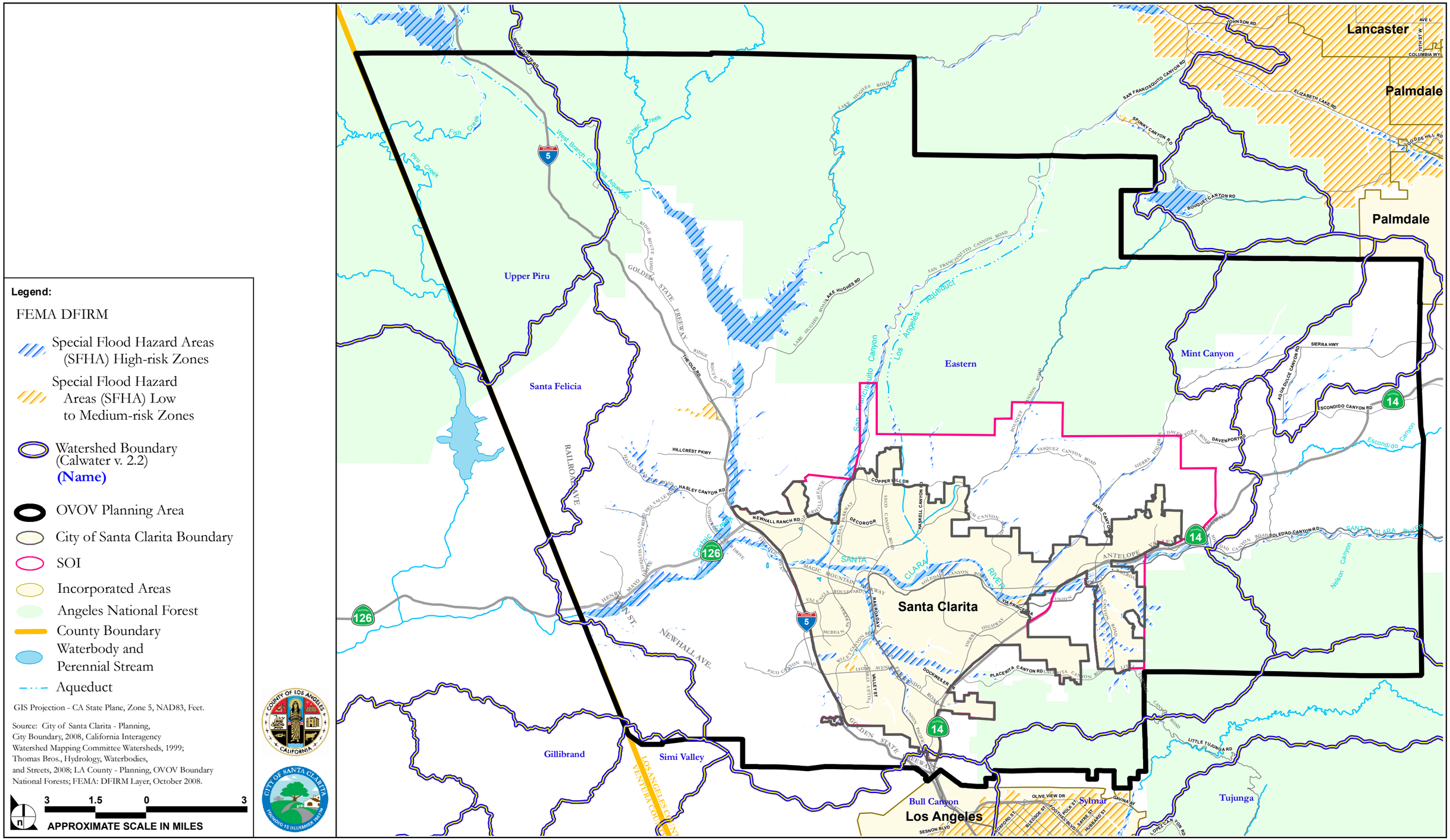
Principal tributaries to the upper Santa Clara River include creeks located in Mint, Bouquet, San Francisquito, Castaic, Oak Spring, and Sand Canyons. The principal tributaries of the South Fork of the river, which drains in a northerly direction toward its confluence with the main course of the river, include Placerita Creek, Newhall Creek, and Pico Creek. At higher elevations these creeks are typically perennial, flowing all year unless rainfall is below normal. Flow in the stream canyons near the valley floor is normally limited to the rainy season.

Castaic Lake

Castaic Lake is a 324,000 acre-foot storage facility created by an earth-filled dam across Castaic Creek. The reservoir serves as the West Branch Terminus of the California Aqueduct. In addition to its State Water Project (SWP) functions, the lake is operated to conserve local floodwaters for use in water recharge of underlying groundwater basins. Castaic Lagoon is located directly south and downstream of Castaic Dam, and was created by the California Department of Water Resources (DWR) to provide recreational opportunities. The lagoon has a surface area of 197 acres and a capacity of 5,701 acre-feet. Elderberry Forebay is also a part of the Castaic Reservoir system, and is an enclosed section of Castaic Lake.

California Aqueduct

State Water Project (SWP) water is one of the primary sources of water for County residents within the County's Planning Area. SWP water is conveyed from the Sacramento Delta through 444 miles of the Edmund G. Brown California Aqueduct, south to the Southern California region (see **Section 3.13, Water Service,** for a more detailed description of the SWP). As described above, Castaic Lake is the most southerly reservoir on the West Branch of the SWP California Aqueduct.



SOURCE: City of Santa Clarita, County of Los Angeles, Valleywide General Plan - March 2009

FIGURE **3.12-3**

Surface Water Within and Adjacent to the OVOV Planning Area

FLOOD CONTROL IMPROVEMENTS

Publicly maintained flood control facilities include approximately 12,000 linear feet of levee on the north bank and approximately 17,000 linear feet of levee on the south bank of the Santa Clara River.[4] These facilities are maintained by the Los Angeles County Department of Public Works.

Privately maintained levees amount to approximately 3,400 linear feet of the south bank of the river between Sierra Highway and State Route (SR) 14, and 5,000 linear feet east of Castaic Creek on the north bank of the river. Additionally, the Newhall Ranch Specific Plan intends to incorporate floodway improvements such as buried bank stabilization, and additional drainage systems into the development plan. Other flood control improvements include the use of detention basins, rip rap, and soft bottom methods that are biologically sensitive and aesthetically pleasing.

Low Impact Development

In the past, traditional planning and design techniques have often focused on particular characteristics of a building site and the immediate areas, rather than on the relationship of each new development project to the surrounding regional environment. Even more holistic planning concepts such as new urbanism and smart growth have often overlooked the implications of a specific development project on environmental conditions in the greater watershed. Planners now understand that development decisions cannot be limited to site specific conditions, but must be made in consideration of broader environmental conditions such as regional water quality.

The construction of impervious surfaces such as roads, parking lots, and rooftops leads to the degradation of water quality by increasing runoff volume, stream sedimentation and water acidity, altering regular stream flow and watershed hydrology, and reducing groundwater recharge. According to the EPA, a 1-acre parking lot produces a runoff volume almost 16 times as great as would an undeveloped meadow of the same size.

The concept of Low Impact Development (LID) was created to ensure that new development is designed in consideration of overall environmental conditions, including regional water quality. LID is a land-use planning approach that incorporates "green infrastructure" concepts such as zero runoff, rainfall harvesting, groundwater recharge, biofiltration, native landscapes, green streets, and other measures to promote water quality protection in new development. The goal of LID is to protect a community's natural, pre-development water flow in order to minimize ecological impacts from urbanization.

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4 Santa Clara River Project Steering Committee, Biological Resources, Vol. 1, 1996

The LID concept was created in the early 1990s in Maryland, with support from the U.S. Environmental Protection Agency, to improve water quality in Chesapeake Bay. LID was designed to provide cost-effective alternatives to conventional stormwater management, which is typically designed to transport heavily polluted stormwater and urban runoff through pipes and concrete channels as quickly as possible into larger regional water bodies. LID principles were developed to control runoff at the source. According to information from the LID Center, basic planning principles include the following:

- Stormwater management. In LID, stormwater is managed as in a natural system, by creating permeable surfaces to infiltrate stormwater and urban runoff into the underlying soil and reduce the amount of runoff from impervious surfaces. Design measures to manage stormwater at the source include trenches, drainfields, dry wells, and bio-retention areas. Rain gardens are shallow depressions filled with soil, sand and plants that retain, filter, and treat stormwater. Filter strips and bioswales provide pretreatment before waters enter an infiltrated area. Constructed wetlands are designed to remove pollutants from runoff and provide habitat and recreation value. Vegetated swales move runoff to infiltration systems, slow the erosive velocity, and filter pollutants.

- Urban runoff reduction. Urban runoff during dry weather is largely the result of too much water for landscaped irrigation, and washing of driveways and sidewalks. This runoff mixes with fertilizer, pesticides, pollutants on roadways, and other contaminants to create some of the most polluted water entering creeks and rivers. LID measures include irrigation control and the use of native and compatible plant species that require less water.

- Site design and circulation. Minimizing the amount of asphalt and other impervious road and parking surfaces in site design and circulation decreases the amount of runoff and pollutants, while reducing both infrastructure and maintenance costs. Modifications to conventional design to reduce impervious surfaces area includes reduced street widths, reduced parking, use of porous materials in driveways and parking areas, and the use of traffic calming measures that include stormwater capture components. Mixed use development that allows pedestrian circulation and incorporates green belts, conserves open space, and protects natural features will also protect water quality.

Policies have been proposed below that would require LID techniques in the design of both private development and capital projects, for the purpose of managing stormwater at the source, enhancing surface water quality, reducing runoff volumes, and economizing on infrastructure costs for drainage and treatment facilities. In 2008, the County adopted a LID ordinance.

Drainage Future Needs

In some portions of the County's Planning Area, major drainage improvements will be constructed by developers for new master-planned communities. Portions of Sierra Highway north of the Santa Clara River are subject to flooding from Mint Canyon, and the lack of adequate flood control facilities in this area represents the last major constraint to development along this arterial corridor in Canyon Country. Within the County's Planning Area, localized, short-term flooding resulting from excessive rainfall, soil

erosion resulting from wildland fires, or inadequate local drainage infrastructure will be addressed by providing or requiring local improvements as needed.[5]

WATER QUALITY

The Federal Clean Water Act was adopted to restore and maintain the chemical, physical, and biological integrity of the nation's waters. The act directs each state to establish water quality standards for all "water of the United States." The Environmental Protection Agency has delegated responsibility for implementation of portions of the Clean Water Act, including water quality control planning to the California State Water Resources Control Board (SWRCB) and nine RWQCB. The SWRCB establishes statewide policies and regulations for implementing water quality control programs. The RWQCBs develop and implement Water Quality Control Plans (Basin Plans) that consider regional beneficial uses, water quality characteristics, and water quality problems. Each Basin Plan also provides strategies and implementation plans for the control of pollutants, remediation of pollution, monitoring, and assessment of the region's waters.

The NPDES Program was established in the Clean Water Act to regulate discharges of pollutants into surface waters of the United States. Both point source discharges (such as a municipal or industrial discharge at a specific location or pipe) and nonpoint source discharges (such as diffuse runoff of surface water from streets and parking lots) are regulated by the NPDES Program. In addition, construction activities that may result in water-borne erosion from grading or stockpiling are regulated through various techniques called "best management practices." Water quality management plans and stormwater pollution prevention plans are required for development projects to meet the requirements of the NPDES Program to maintain water quality.

Surface water quality within the County's Planning Area is affected by a variety of discharges from both point and nonpoint sources. Wastewater treatment plant effluent is the largest and most common point-source discharge. Urban runoff, erosion, agricultural runoff, and other natural causes are common nonpoint sources. Pollutants from both point and nonpoint sources include dissolved and suspended solids, oil, grease, nutrients, metals, bacteria, and pesticides.

The County's Planning Area is within the hydrological areas covered by the 1994 Water Quality Control Plan for the Santa Clara River Basin (California Department of Water Resources Hydrological Unit No. 403.51). Portions of the Santa Clara River watershed have been identified as an "impaired water body" by

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5 Los Angeles County Department of Regional Planning, *Preliminary Draft Santa Clarita Valley Area Plan*, 2008, Chapter 5, "Safety Element," 223.

the SWRCB because waters in these areas exceed adopted standards for various pollutants. Pollutants of concern include chloride, coliform, ammonia, nitrates, nitrites, and various organics. In 2005, the Upper Santa Clara River Chloride Total Maximum Daily Load (TMDL) became effective, outlining a 13-year plan to reduce chloride levels in the river. Chloride sources include SWP Saugus WRPs and domestic sources (including water softeners and salt-water pools). Although installation of new automatic water softeners was prohibited in 2003 it is estimated that thousands of self-regenerating water softeners are still in use within the Santa Clarita Valley Joint Sewerage System. The Santa Clarita Valley Sanitation District has initiated a public awareness and education program, financial incentives for removal of water softeners, and a voluntary sales ban of salt and water softeners in local businesses. In 2007, the Santa Clarita Valley Sanitation District entered into an agreement with a water softener provider to remove nearly 600 rented water softeners from Valley residences in order to protect water quality. If salt levels discharged into the river do not decrease due to those voluntary compliance efforts, the Sanitation District may have to install additional costly treatment equipment, resulting in higher rates charges to sewage customers.

The Los Angeles County Public Works Environmental Programs Division is working closely with the SWRQCB to meet requirements for the TDML, through programs to provide proactive public education and outreach, incentives for residents and business owners, and implementation of new technologies.

To ensure drinking water quality of SWP water, the Castaic Lake Water Agency (CLWA) has two surface water treatment plants that eliminate microbial contaminant, salts, minerals, and algae. According to the 2005 Urban Water Management Plan (UWMP), groundwater from the East Subbasin does not have microbial water problems. Parasites, bacteria, and viruses are filtered out as water percolates through soil, sand, and rock on its way to the aquifer. However, disinfectants are added to local groundwater when it is pumped by wells to protect public health. All groundwater used for potable water meets or exceeds drinking water standards.

Perchlorate has been detected in two alluvial municipal-supply wells in the East Subbasin; however, wellhead treatment has been permitted and installed at one of the two impacted wells, Valencia Water Company's (VWC) Well Q2. The treatment removes perchlorate pumped from the well to a non-detect level. As discussed in the 2005 UWMP, Chapter 5 and Appendix D, there has been extensive investigation of the extent of perchlorate contamination, which, in combination with groundwater modeling has led to the current plan for integrated control of contamination migration and restoration of impacted pumping (well) capacity.

The short-term response plan for the protection of other alluvial wells, down gradient from the former Whittaker-Bermite site, is to promptly install wellhead treatment to ensure adequate water supplies. This plan complements the longer-term source control actions being undertaken by the Whittaker-Bermite property owner under supervision of the Department of Toxic Substances Control (DTSC) to address perchlorate contamination in the northern alluvium (to the north of the former Whittaker-Bermite site), and the subsequent restoration of the one other perchlorate-contaminated alluvial well (Stadium well). The long-term plan also includes the CLWA groundwater containment, treatment and restoration project to prevent further downstream migration of perchlorate, the treatment of water extracted as part of the containment process, and the recovery of lost local groundwater production from the Saugus Formation.

There are four Saugus wells contaminated by perchlorate. The four contaminated wells consist of one owned by Newhall County Water District, two owned by Santa Clarita Water District, and VWC well 157, which has been sealed and abandoned and replaced by VWC's Well 206 in a non-impacted part of the Basin. These four wells represent a total of 7,900 gallons per minute (gpm) of pumping capacity (or full-time source capacity of about 12,700 acre-feet per year (afy) inactivated due to perchlorate contamination.

REGULATORY FRAMEWORK

Federal

National Flood Insurance Program

The National Flood Insurance Program (NFIP) is a relatively recent federal program. The federal government has been actively involved in flood control since 1927, following major floods on the Mississippi River. Beginning with the Flood Control Act of 1936, Congress assigned the US Army Corps of Engineers (USACE) the responsibility for flood control engineering works and later for floodplain information services. Flood control is provided through construction of dams and reservoirs.

Despite these programs and rapidly rising federal expenditures for flood control, flood losses continued to rise. In 1968, Congress passed the National Flood Insurance Act, which created the NFIP. The Flood Disaster Protection Act of 1973, which also amended the 1968 act, requires the purchase of flood insurance by property owners who are located in special flood hazard areas and are being assisted by federal programs, or by federally supervised, regulated, or insured agencies or institutions.

National Flood Insurance Program Reform Act of 1994

In 1994, the National Flood Insurance Program Reform Act went through its first major revision since its inception. Included in this revision were provisions that if a lender were to escrow an account and if the structure were in the floodplain, then the lender must escrow for flood insurance. The revised legislation also included increased flood insurance limits and the elimination of the 1962 buy-out program. However, the legislation did initiate the Hazard Mitigation Fund as part of the flood insurance policy. This made it possible to cover the cost of elevating a continuously flood damaged home through the insurance policy. Also included in this legislation was the increase from a 5-day to a 30-day waiting period for a new policy to become effective. It also prohibits the waiver of flood insurance purchase requirements as a condition of receiving federal disaster assistance. If the flood insurance policy were not maintained, in the event of another disaster, no disaster assistance would be made available for that structure.

Executive Order 11988, Flood Plain Management

Executive Order 11988 requires the USACE to provide leadership and to take action to:

- Avoid development in an existing 100-year floodplain, unless such development is the only practicable alternative;
- Reduce the hazards and risk associated with floods;
- Minimize the impact of floods on human health, safety, and welfare; and,
- Restore and preserve the natural and beneficial values of current floodplains.

To comply with Executive Order 11988, the policy of USACE is to formulate projects, and to the extent possible, avoid or minimize adverse effects associated with use of a floodplain, and avoid inducing development in an existing floodplain unless there is no practicable alternative.

Federal Water Project Recreation Act of 1965 (Amended)

The Federal Water Project Recreation Act reestablished recreation as a full project purpose, directing that full consideration be given to the outdoor recreation opportunities, if any, of any federal navigation, flood control, reclamation, hydroelectric, or multipurpose water resource project. The act also placed additional requirements on recreation as a project purpose, defining the basis for sharing financial responsibilities in joint development, enhancement, and management of recreation and fish and wildlife resources of federal water projects.

State

Cobey-Alquist Flood Plain Management Act 8401

The Flood Plain Management Act states that a large portion of land resources in the State of California is subject to recurrent flooding. The public interest necessitates sound development of land use, as land is a limited, valuable, and irreplaceable resource, and the floodplains of the state are a land resource to be developed in a manner that, in conjunction with economically justified structural measures for flood control, will result in prevention of loss of life and of economic loss caused by excessive flooding. The primary responsibility for planning, adoption, and enforcement of land use regulations to accomplish floodplain management rests with local levels of government. It is the State of California's policy to encourage local levels of government to plan land use regulations to accomplish floodplain management and to provide state assistance and guidance.

Water Code Section 8100

The Water Code states that the boards of supervisors, in their respective counties, may appropriate and expend money from the general fund of a county for any of the following purposes in connection with streams or rivers in the county:

- The construction of works, improvements, levees, or check dams to prevent overflow and flooding;
- The protection and reforestation of watersheds;
- The conservation of the floodwaters;
- The making of all surveys, maps, and plans necessary to carry out any work, construction, or improvement authorized by this article; and,
- The carrying out of any work, construction, or improvement authorized by this article outside the county if the rivers or stream affect flow in or through more than one county.

Local

County

Since October 1990, the County has been a voluntary participant in NFIP of FEMA. As a participant, the County is responsible for the regulation of development in special hazard flood areas of the County and the planning for other floodplain management activities that will promote and encourage programs for the preservation and restoration of the natural state of the floodplain. As a compliance requirement of the

NFIP, the County enforces regulations of these developments to ensure that buildings are erected at a safe elevation to prevent potential damages to property.

The County provides information regarding flood zone designations from FEMA's Flood Insurance Rate Maps to property owners for use in resolving flood insurance issues with their respective insurance companies and lending institutions.

The Flood Maintenance Division of the Department of Public Works (DPW) is responsible for operating and maintaining flood control and water conservation facilities. These facilities include 15 major dams, 284 debris basins, 450 miles of storm drain channel, 2,500 miles of drains, 33 pump plants, 30 spreading grounds covering 1,989 acres, and 22 miles of barrier projects that prevent the intrusion of seawater into the fresh water supply. The Flood Maintenance Division is also responsible for implementing Best Management Practices (BMPs) to meet the permit requirements of the NPDES. These BMPs include the inspection of all storm drains for illegal connections and discharges. The following guidelines apply to projects that are located within a Flood Zone as indicated on the Flood Zone Map for the County of Los Angeles:

- No permanent structures shall be constructed, altered, modified, or enlarged within the boundaries of a flood zone, except those accessory structures that will not impede the flow of water and flood control structures approved by the County Flood Control District.
- Any development proposed within a flood zone area shall be reviewed by the County Engineer or Flood Control District who will define the area within which no permanent structures or improvements shall be permitted.
- The scale, design, and intensity of any approved project in a flood zone must minimize exposure of current and future community residents to flood related property damage and loss.
- Any proposed project in a flood zone must be consistent with density and use standards set forth in the Los Angeles County General Plan or applicable local-level plan, and must be compatible with the character of surrounding development.
- Any proposed project in a flood zone must be situated and designed so as to avoid isolation from essential services and facilities in the event of flooding.
- The costs associated with on and off-site hazard mitigation, including design, construction, and continued maintenance of necessary flood protection facilities will be assumed by the developer and/or future owners, occupants, or residents of the proposed development.

The County also conducts educational outreach programs to unincorporated communities on how to mitigate flooding impacts on their properties. The County seeks to reduce the flood insurance cost for residents who are required to purchase flood insurance by taking actions that lower the community

rating system number. The County restricts development within floodplains. Any development within the floodplain cannot increase the flood hazard to adjacent properties by increasing the capital flood water surface elevation, deflecting flows, or increasing velocity of the flow such that it causes bank erosion. Developments in the floodplain must make provisions to avoid these impacts and eliminate inundation hazards by providing adequate drainage facilities through protective walls, suitable fill, raising the floor level of the buildings, or a combination of these methods. The County also requires compliance with FEMA regulations, including a maximum 1-foot rise in water surface elevation of flood flows.

THRESHOLDS OF SIGNIFICANCE

In order to assist in determining whether a project will have a significant effect on the environment, the *California Environmental Quality Act (CEQA) Guidelines*, Appendix G, identify criteria for conditions that may be deemed to constitute a substantial or potentially adverse change in physical conditions.

Significant hydrology and water quality resource impacts will result if:

- The proposed project would create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
- If the proposed project would place housing within a 100-year flood hazard as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map or place structures within a 100-year flood hazard area, where the structures would impede or redirect flood flows.
- If the proposed project would 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 ANALYSIS

The following text discusses the potential impacts on hydrology and water quality resources with the County's Planning Area per the proposed Area Plan policies and the *State CEQA Guidelines* thresholds of significance criteria.

Impact 3.12-1 **The proposed project would 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.**

Policies S 2.2.1 and **S 2.2.2** require that the County prepare and maintain maps of floodways and floodplains based on information from FEMA and appropriate sources in order to qualify for FEMA's NFIP (**Policy S 2.2.1)** and that the County identify areas prone to localized, short-term flooding due to drainage deficiencies (**Policy S 2.2.2**). The County would be (1) required to plan for and construct adequate drainage and flood control infrastructure to ensure flood protection (**Policies S 2.3.1 and S 2.3.2)** and (2) provide for the maintenance of drainage structures and flood control facilities to avoid system malfunctions and overflows (**Policy S 2.5.2**). **Policies S 2.3.1 and S 2.3.2** require the County to implement drainage master plans designed to handle storm flows from the 100-year storm and to include funding for drainage and flood control improvements in the annual County budget. These policies would reduce surface water runoff by addressing and locating drainage problems that cause flooding within the County's Planning Area and putting responsibility on landowners, to make repairs for any type of issue that prevents proper drainage of excessive flooding and flood waters.

Buildout within presently vacant areas of the County's Planning Area would result in an increase in residential and non-residential structures and associated facilities, increasing the amount of impervious surface area. The addition of impermeable surfaces would increase the volume and rate of stormwater runoff and limit the amount of ground infiltration during storm events. Roads and buildings generate greater amounts of runoff than typical open space and landscaped areas. Fixed drainage channels in urban areas may be unable to contain the runoff generated by relatively small, but intense rainfall events.

Policies S 2.1.4, S 2.1.5, and S 2.5.1 encourage the County to cooperate with other agencies regarding flood control, watershed management, water quality and habitat protection and promote joint use of flood control facilities with other beneficial uses where feasible. **Policy S 2.1.2** would promote the use of LID standards throughout the County's Planning Area, in accordance with the LID ordinance adopted in 2008. The basic planning principals involved in LID construction include stormwater management, urban runoff reduction, and site design and circulation. In order to reduce urban runoff, achieve water quality and habitat objectives in addition to flood control, **Policy S 2.1.3** promotes the use of vegetated drainage courses and soft-bottom channels for flood control facilities to the extent feasible.

New development projects within the County's Planning Area can take such measures as utilizing building materials that allow infiltration, which in turn would reduce surface water runoff, recharge aquifers, and reduce impacts on water quality (**Policy S 2.1.2, Policy CO 4.3.1, Policy CO 4.3.4**). **Policies**

CO 4.3.1 and **4.3.3** would also encourage future projects to reduce impervious surfaces by reducing street widths, reducing parking; using porous materials in driveways and parking area, and using traffic calming measures that include stormwater capture components. Flexibility in design standards would provide the benefits of stormwater retention, groundwater infiltration, and reduction of heat islands (**Policy CO 4.3.3**). Additionally, design measures that could be implemented on a project-by-project basis include, but are not limited to detention and retention basins or ponds, and ephemeral swales (**Policy S 2.1.5, Policy CO 4.3.5**). On previously developed sites proposed for major alteration, provide stormwater management improvements to restore natural infiltration, as required by the reviewing authority (**Policy CO 4.3.2**).

With the increase in stormwater runoff that would occur with buildout of the County's Planning Area, the potential exists for an increase in pollutants conveyed to the groundwater basins and surface waters in creeks and rivers (such as the Santa Clara River and its tributaries). **Policy CO 4.3.7** requires the County to reduce the amount of pollutants entering the Santa Clara River and its tributaries by capturing and treating stormwater runoff at the source, to the extent possible. Implementation of **Policy CO 4.3.1** through **Policy CO 4.3.7** would provide specific guidance on how to reduce the possibility of pollution within water runoff that can penetrate into ground water beneath the County's Planning Area and that will possibly flow into the Santa Clara River and its tributaries. Landscaping and use of plant material as suggested in these policies would reduce the amount of pollution within surface water runoff that would increase due to buildout of the Area Plan (**Policy CO 4.3.6**). **Policy CO 4.4.3** discourages the use of chemical fertilizers, herbicides, and pesticides in landscaping to reduce water pollution**.**

Proposed Area Plan Policies

Policy S 2.1.2: Promote Low Impact Development standards on development sites, including but not limited to minimizing impervious surface area and promoting infiltration, in order to reduce the flow and velocity of stormwater runoff throughout the watershed.

Policy S 2.1.3: Promote the use of vegetated drainage courses and soft-bottom channels for flood control facilities to the extent feasible, in order to achieve water quality and habitat objectives in addition to flood control.

Policy S 2.1.4: Cooperate with other agencies, as appropriate, regarding the related issues of flood control, watershed management, water quality, and habitat protection.

Policy S 2.1.5: Promote the joint use of flood control facilities with other beneficial uses where feasible, such as by incorporating detention basins into parks and extending trails through floodplains.

Policy S 2.2.1: Prepare and maintain maps of floodways and floodplains based on information from the Federal Emergency Management Agency (FEMA) and other appropriate sources in order to qualify for FEMA's National Flood Insurance Program.

Policy S 2.2.2: Identify areas subject to localized short-term flooding due to drainage deficiencies.

Policy S 2.3.1: Implement drainage master plans designed to handle storm flows from the 100-year storm.

Policy S 2.3.2: Include funding for drainage and flood control improvements in the annual County Budget.

Policy S 2.5.1: Address drainage problems that cause flooding on prominent transportation corridors by working with multi-jurisdictional agencies and stakeholders to construct needed drainage improvements.

Policy S 2.5.2: Provide for the maintenance of drainage structures and flood control facilities to avoid system malfunctions and overflows.

Policy CO 4.3.1: On undeveloped sites proposed for development, promote on-site stormwater infiltration through design techniques such as pervious paving, draining runoff into bioswales or properly designed landscaped areas, preservation of natural soils and vegetation, and limiting impervious surfaces.

Policy CO 4.3.2: On previously developed sites proposed for major alteration, provide stormwater management improvements to restore natural infiltration, as required by the reviewing authority.

Policy CO 4.3.3: Provide flexibility for design standards for street width, sidewalk width, parking, and other impervious surfaces when it can be shown that such reductions will not have negative impacts and will provide the benefits of stormwater retention, groundwater infiltration, reduction of heat islands,

enhancement of habitat and biodiversity, saving of significant trees or planting of new trees, or other environmental benefit.

Policy CO 4.3.4: Encourage and promote the use of new materials and technology for improved stormwater management, such as pervious paving, green roofs, rain gardens, and vegetated swales.

Policy CO 4.3.5: Where detention and retention basins or ponds are required, seek methods to integrate these areas into the landscaping design of the site as amenity areas, such as a network of small ephemeral swales treated with attractive planting.

Policy CO 4.3.6: Discourage the use of mounded turf and lawn areas which drain onto adjacent sidewalks and parking lots, replacing these areas with landscape designs that retain runoff and allow infiltration.

Policy CO 4.3.7: Reduce the amount of pollutants entering the Santa Clara River and its tributaries by capturing and treating stormwater runoff at the source, to the extent possible.

Policy CO 4.4.3: Discourage the use of chemical fertilizers, herbicides and pesticides in landscaping to reduce water pollution by substances hazardous to human health and natural ecosystems.

Effectiveness of Proposed Area Plan Policies

The policies outlined above provide and promote the use of design and engineering techniques that would promote infiltration, reduce the volume and rate of stormwater runoff, and reduce the pollutants in stormwater runoff. However, the proposed policies would not solely reduce the impacts associated with exceeding the capacity of existing stormwater drainage systems or reduce the amount of polluted runoff that would occur from development. Implementation of mitigation measures **MM 3.12-1** and **3.12-2** would reduce potential impacts on surface water runoff to less than significant.

Plan to Plan Analysis

Both the existing and proposed Area Plans contain policies intended to minimize impacts to the flooding. However, the existing Area Plan does not solely address the impacts associated with the existing stormwater drainage systems or reduce the amount of polluted runoff to the extent of the proposed Area Plan, with mitigation. Consequently, impacts would be greater under the existing Area Plan.

Impact 3.12-2 **If the proposed project would place housing within a 100-year flood hazard as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map or place structures within a 100-year flood hazard area, where the structures would impede or redirect flood flows.**

The County's Planning Area contains areas that are designated as 100-year floodplain along the Santa Clara River and its tributaries, and along the Castaic Lake Reservoir system (**Policy S 2.2.1)**. Development within a flood plain would pose potential impacts associated with the inundation of residential and commercial units, if a 100-year type of flood would occur in these areas. In addition to an increase in industrial, commercial, and public facilities, the number of dwelling units in the County's Planning Area is expected to increase at buildout of the Area Plan. This large increase in demand for dwelling units may cause housing to encroach onto the 100-year flood plain and potentially place housing and structures in areas subject to flooding, from natural conditions, or dam inundation.

Policy S 2.4.1 requires that new development comply with floodplain management requirements adopted to implement FEMA programs. **Policy S 2.4.2** requires the land use and zoning maps, restrict the type and intensity of land use in flood prone areas, or require flood-proof construction, as deemed appropriate. Under the current **Land Use Map,** areas of land within the 100-year flood plain (**Figure 3.12-1)** are designated as land other than Open Space; along the northern fork of the Santa Clara River south of Castaic Lake where the land use is designated as Public-Semi Public Facility; and, along San Francisquito Canyon in the northern portion of the County's Planning area that is designated as Rural Land.

Policy S 2.1.1 requires the designation of appropriate areas within floodplains as open space for multi-purposes, including flood control, habitat preservation, and recreational open space. The current **Land Use Map** places urbanized land uses within the 100-year flood plain, which in turn, would cause potential inundation to areas developed as residential and commercial areas. **Policy S 2.2.1** would require the County to prepare and maintain floodway areas based on FEMA records. The County currently has maps depicting 100-year flood zones as shown above in **Figure 3.12-1**. **Policy S 2.3.1** and **Policy 2.4.1** would require that new development implement drainage master plans designed to handle storm flows from 100-year storm events and require that new development comply with floodplain management requirements adopted to implement programs of FEMA, respectively; however, this would occur on a project-by-project basis. These policies would also help implement flood-proof construction and development for areas within the County's Planning Area that are within the 100-year flood plain.

Proposed Area Plan Policies

Policy S 2.1.1: On the Land Use Map, designate appropriate areas within the floodplain as open space for multi-use purposes, including flood control, habitat preservation, and recreational open space. Development in the floodplain will require mitigation as deemed necessary by the reviewing authority.

Policy S 2.2.1: Prepare and maintain maps of floodways and floodplains based on information from the Federal Emergency Management Agency (FEMA) and other appropriate sources in order to qualify for FEMA's National Flood Insurance Program.

Policy S 2.3.1: Implement drainage master plans designed to handle storm flows from the 100-year storm.

Policy S 2.4.1: Require that new development comply with FEMA floodplain management requirements.

Policy S 2.4.2: On the Land Use Map, restrict the type and intensity of land use in flood-prone areas, or require flood-proof construction, as deemed appropriate.

Effectiveness of Proposed Area Plan Policies

The above policies would be implemented in order to provide protection to residential and commercial units that are proposed for areas within the County's Planning Area that are within 100-year flood plains. These policies would provide guidance on the measures that should be taken for any residential or commercial units planned for development within the 100-year floodplain. However, these policies do not implement specific requirements to protect residential and housing units that are planned for development within a 100-year flood plain. The **Land Use Map** is not consistent with **Policy S 2.1.1**, in that the **Land Use Map** identifies land uses other than Open Space in areas of the 100-year flood plain within the County's Planning Area. Therefore, mitigation measures **MM 3.12-3** through **3.12-5** are recommended to reduce potentially significant impacts from the 100-year flood hazard to a less than significant level.

Plan to Plan Analysis

The proposed Area Plan differs from the existing Plan in that it provides policy for open space uses in the floodplain. The existing Area Plan does not make a distinction as to allowed uses in the floodplain.

Mitigation is proposed that would mitigate impacts from any uses other than open space in the floodplain. Consequently impacts would be greater in the existing Plan.

Impact 3.12-3 **If the proposed project would 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 of dam.**

As discussed above, there is one main reservoir within the County's Planning Area that could cause flooding through the Planning Area if a breach in the dams supporting the water were to occur. The Bouquet Canyon Reservoir has two earth-filled dams, one on the west side overlooking Cherry Canyon and one on the south side above Bouquet Canyon (**Policy S 1.1.4)**. If the earth-filled dam on the Cherry Canyon side were to fail, the water behind the dam would flow west for approximately 2 miles through the Canyon into San Francisquito Canyon, and then south for approximately 11 miles into the Santa Clara River. The Bouquet Creek dam, if breached, would drain south through Bouquet Canyon for 17 miles, into the Santa Clara River, within the County's Planning Area. The possibility of the failure of these dams during a catastrophic event is considered unlikely due to their type of construction; however, a slight possibility still exists that these dams could fail (**Policy S 1.2.5)**. Therefore, impacts on land uses within the dam inundation zones within the County's Planning Area could be potentially significant.

The Castaic Dam holds back water from Castaic Lake, and is located on Lake Hughes Road, 1 mile northeast of Interstate 5. The inundation area, if this dam were to be breached, would flood areas of the County's Planning Area. Should a breach in the dam occur, water would flow south in Castaic Creek for approximately 5 miles to the Santa Clara River (**Policy S 1.1.4** and **Policy S 1.2.5)**. Castaic Creek within the County's Planning Area boundaries and the portion of the Santa Clara River, where the water would flow into, is located within the County's Planning Area. The potential for flooding to occur as a result of the breach of Castaic Dam, within the County's Planning Area would be possible.

As discussed under existing conditions for this section, the County has prepared maps of areas within its Planning Area that are subject to inundation from dam failure from the Castaic and Bouquet Dams (**Policy S 1.1.4** and **Policy S 1.2.5**). Dam inundation area maps will allow County decision makers to determine if development plans would be appropriate within potential dam inundation areas, protecting the public and property within the County's Planning Area, and providing protection if a geologic catastrophe were to damage the above-mentioned dams.

Proposed Area Plan Policies

Policy S 1.1.4: Maintain maps showing potential inundation areas from dam failure.

Policy S 1.2.5: Consider the potential for inundation from failure of the Castaic or Bouquet Canyon Reservoir dams when reviewing development proposals within potential inundation areas.

Effectiveness of Proposed Area Plan Policies

Implementation of the proposed Area Plan's policies related to dam inundation hazards would reduce potentially significant adverse impacts from dam inundation hazards to less than significant. No mitigation measures would be required.

Plan to Plan Analysis

Both the existing and proposed Area Plans contain policies intended to minimize impacts to the from dam inundation hazards. Impacts would be similar under both Plans.

MITIGATION FRAMEWORK

The following mitigation measures would be implemented to reduce potential impacts on hydrology and water quality to less than significant.

MM 3.12-1 The County shall prohibit alteration of floodways and channelization unless alternative methods of flood control are found to be technically, economically, and practicably infeasible.

MM 3.12-2 The County shall not require all land uses to withstand flooding. These may include land uses such as agricultural, golf courses, and trails. For these land uses, water flows shall not be obstructed, and upstream and downstream properties, shall not be adversely affected by increased velocities, erosion backwater effects, concentration of flows, and adverse impacts to water quality from point and nonpoint sources of pollution.

MM 3.12-3 The County shall require that all structures (residential, commercial, and industrial) be flood-proofed from the 100-year storm flows. All buildings constructed within a riverine floodplain, (i.e., Flood Zones A, AO, AH, AE, and A1 through A30 as delineated on the Flood Insurance Rate Maps for the City of Santa Clarita, Map revised September 29,

1989), must be elevated so that the lowest floor is at or above the Base Flood Elevation in accordance with the effective Flood Insurance Rate Map.

MM 3.12.-4 The County shall require that for agricultural, recreation, or other low-density uses, flows are not obstructed and that upstream and downstream properties are not adversely affected by increased velocities, erosion backwater effects, or concentration of flows.

MM 3.12-5 Any development that is located within a Regulatory Floodway as delineated on the Flood Insurance Rate Map for the County's Planning Area must not increase base flood elevations. (Development means any man-made change improved or unimproved real estate, including but not limited to buildings, other structures, mining, dredging, filling, grading, paving, excavation or drilling operations, and storage of equipment or materials). A hydrologic and hydraulic analysis shall be performed prior to the start of development, and must demonstrate that the development would not cause any rise in base flood levels and additionally would not allow any rise within regulatory floodways.

SIGNIFICANCE OF IMPACT WITH MITIGATION FRAMEWORK

Implementation of the above policies and mitigation measures would reduce potential impacts on hydrology and water quality to a less than significant level. Unless revisions are made to the Land Use Map to ensure consistency with Area Plan policies, impacts on developing in the 100-year flood plain would remain a significant impact.