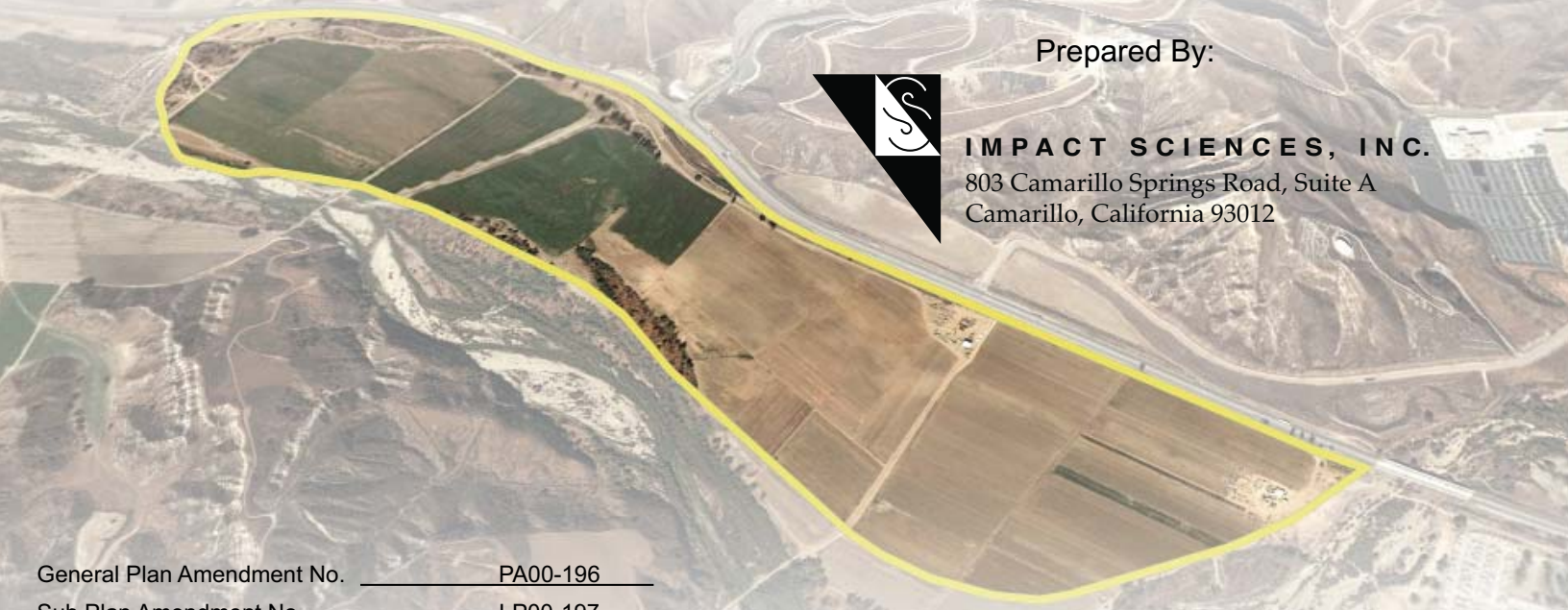
County of Los Angeles

Draft Environmental Impact Report

SCH No. 2004021002

Volume II — Section 4.5–Section 10.0

LANDMARK VILLAGE



Prepared By:

IMPACT SCIENCES, INC.
803 Camarillo Springs Road, Suite A
Camarillo, California 93012

General Plan Amendment No.	PA00-196
Sub Plan Amendment No.	LP00-197
Specific Plan Amendment No.	SP00-198
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SEA Conditional Use Permit No.	RCUP200500112
Oak Tree Permit No.	OTP00-196
Off-Site Materials Transport Approval No.	CUP00-196
Conditional Use Permit (Off-Site Grading)	CUP00-196

NEWHALL RANCH
Newhall Ranch Company

NOVEMBER 2006

DRAFT
ENVIRONMENTAL IMPACT REPORT

for
LANDMARK VILLAGE

SCH No. 2004021002

Volume II
Section 4.5–Section 10.0

Prepared for:

Los Angeles County
Department of Regional Planning
320 West Temple Street
Los Angeles, California 90012

Prepared by:

Impact Sciences, Inc.
803 Camarillo Springs Road, Suite A
Camarillo, California 93012
Phone: (805) 437-1900

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4.5 FLOODPLAIN MODIFICATIONS

1. SUMMARY

*The hydraulic impacts on sensitive aquatic/riparian resources in the Santa Clara River corridor due to floodplain modifications associated with construction and operation of the proposed Landmark Village project site would be localized, and not cause significant hydrological impacts adjacent to or downstream from the Landmark Village site. On that basis, and given the limited amount of riparian habitat permanently altered by Landmark Village site development, project construction and operation would not significantly impact the unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*), arroyo toad (*Bufo californicus*), California red-legged frog (*Rana aurora draytonii*), southwestern pond turtle (*Clemmys marmorata pallida*), or two-striped garter snake (*Thamnophis hammondii*). "Floodplain modifications" associated with the proposed project include the Long Canyon Road Bridge crossing over the river, bank stabilization along portions of the banks of the river, and importing soils from off-site grading areas to remove mostly agricultural land and non-native grasslands by raising these land areas from the floodplain to allow for development and placement of bank protection.*

*Three distinct habitat types are found in the river corridor including (1) aquatic habitats, consisting of flowing or ponded water; (2) wetland habitats, consisting of emergent herbs rooted in ponded water or saturated soils along the margins of the flowing water; and (3) riparian habitat, consisting of woody vegetation along the margins of the active channel and on the floodplain. Wildlife species associated with these habitats include (1) the Endangered unarmored threespine stickleback (known to be present adjacent to the Landmark Village project site); least Bell's vireo (*Vireo bellii pusillus*) (known to occur within Specific Plan), southwestern arroyo toad (known to occur upstream of the Landmark Village project site), southwestern willow flycatcher (*Empidonax traillii extimus*) (not known to be present on Landmark Village project site), and California red-legged frog (not known to be present on the Landmark Village project site); and (2) other sensitive, but not Endangered, species such as the arroyo chub (*Gila orcutti*), Santa Ana sucker (*Catastomus santaanae*), two-striped garter snake, western spadefoot toad (*spea hammondii*), and southwestern pond turtle (with the exception of the spadefoot toad, all are known to occur within the Specific Plan). The focus of this analysis is on five sensitive species: unarmored threespine stickleback, arroyo toad, California red-legged frog, southwestern pond turtle, and two-striped garter snake.*

2. BACKGROUND

a. Relationship of Project to Newhall Ranch Specific Plan Program EIR

Section 4.2 of the Newhall Ranch Specific Plan Program EIR identified and analyzed the existing conditions, potential impacts, and mitigation measures associated with the hydrology of the Santa Clara River for the entire Newhall Ranch Specific Plan. Subsequently, more detailed review of Specific Plan

impacts on the hydrology and hydraulics of the Santa Clara River was conducted in Section 2.3, Floodplain Modifications, of the Revised Additional Analysis (May 2003). The Revised Additional Analysis concluded that Specific Plan implementation would not significantly alter river hydrology or the mosaic of habitats because the effects associated with the proposed floodplain modifications would be infrequent and not substantially alter flows, water velocities, and water depths and that, under the Specific Plan, the river would retain sufficient width to allow natural fluvial processes to continue. All subsequent project-specific development plans and tentative subdivision maps must be consistent with the Newhall Ranch Specific Plan and the County of Los Angeles General Plan and Santa Clarita Valley Areawide Plan.

The Board of Supervisors' previously adopted Significant Ecological Area (SEA) Conditional Use Permit (CUP) No. 94-087-(5) authorized, among other things (1) boundary adjustments to the existing SEA 23, consistent with General Plan policies requiring protection of natural resources within SEAs; and (2) Specific Plan development within SEA boundaries including bridge crossings (i.e., Long Canyon Road Bridge, Commerce Center Drive Bridge and the Potrero Road Bridge), trails, bank stabilization, and other improvements. The approved SEA boundary adjustments and development were found to be consistent with the natural resources within SEAs. Given that the adopted SEA CUP No. 94-087-(5) adjusted the River Corridor Special Management Area (SMA)/SEA 23 boundaries, this section analyzes Landmark Village impacts on sensitive biological resources in and adjacent to the previously approved and revised River Corridor SMA/SEA 23 boundary.

This project-level EIR is tiering from the previously certified Newhall Ranch Additional Analysis. **Section 4.5, Floodplain Modifications**, assesses the Landmark Village project's existing conditions, the project's potential environmental impacts, and the applicable mitigation measures from the Newhall Ranch Specific Plan Program EIR and Additional Analysis, as well as any mitigation measures recommended by this EIR for the Landmark Village project.

As mentioned above, the Landmark Village project is subject to the mitigation measures contained in the Resource Management Plan (RMP) of the Specific Plan, the Newhall Ranch Specific Plan Program EIR (March 1999) and the Revised Additional Analysis (May 2003). These mitigation measures were approved by the Board of Supervisors in May 2003, in association with the Newhall Ranch Specific Plan and Water Reclamation Plant (WRP) project approvals. These measures are found in the adopted Mitigation Monitoring Plans for both the Specific Plan and WRP and the approved RMP (see, Specific Plan (May 27, 2003), Section 2.6). Each is briefly discussed below.

(1) Specific Plan Resource Management Plan

The Specific Plan RMP contains numerous mitigation measures designed to offset the loss of habitat due to implementation of the Specific Plan (see, Specific Plan RMP, Section 2.6, pp. 2-85–2-135). For example, the RMP contains a mitigation and habitat management program for the: (1) River Corridor SMA/SEA 23 (Section 2.6, pp. 2-92–2-107); (2) High Country SMA/SEA 20 (Section 2.6, pp. 2-108–2-116); and (3) Open Area (Section 2.6, pp. 2-117–2-118). The RMP permits the use of mitigation banking within the Specific Plan area (Section 2.6, p. 2-119). It also establishes a San Fernando Valley spineflower special study mitigation overlay and preserve program (Section 2.6, pp. 2-120–2-123), an oak resources replacement program (Section 2.6, pp. 2-124–2-126), a wildfire fuel modification plan (Section 2.6, pp. 2-127–2-130), and the hillside preservation and grading plan (Section 2.6, pp. 2-134–2-135).

Further, the RMP requires that a conservation easement be established over the River Corridor SMA/SEA 23 after development of areas adjoining the river are complete, and includes the eventual removal of cattle grazing. The RMP requires that a plan be prepared by the applicant and approved by Los Angeles County (County) for the permanent ownership and management of the adopted River Corridor SMA/SEA 23 as a "significant ecological area."

The RMP further requires that a conservation agreement be established over the High Country SMA/SEA 20 and that a detailed program be developed for its long-term management and ownership. All of the existing High Country SMA/SEA 20 will be retained in a natural state. Vegetative cover within the adopted High Country SMA/SEA 20 will be enhanced by the eventual removal of cattle grazing, with the exception of grazing for management purposes, as provided in the Newhall Ranch RMP. The High Country SMA/SEA 20 is identified as a primary location for oak resource planting to mitigate impacts that will occur within the development areas of the Specific Plan.

A critical component of the Open Area system to be established by the RMP is the connection between the High Country SMA/SEA 20 and the River Corridor SMA/SEA 23 along Salt Creek. As a condition of approval, the County has required the applicant to dedicate to the public in fee and/or by conservation easement the approximately 1,517 acres of land encompassing the Salt Creek watershed in Ventura County, adjacent to the Newhall Ranch Specific Plan. This additional land dedication will be managed in conjunction with the High Country SMA/SEA 20. The Salt Creek Corridor will provide continuity between the habitats and the wildlife populations within the Newhall Ranch Specific Plan area, and form a permanent regional linkage between the Santa Clara River and the Santa Susana Mountains. Salt Creek is the most appropriate location for such a wildlife corridor connection because of several distinguishing characteristics. These include provision of a direct link between the two major open areas; less disturbance than any of the other potential connections; it is bound through most of its length by open

area on the north side and, therefore, will not be surrounded by development in the future; it includes both upland and riparian vegetation through most of the corridor; and it is topographically isolated from development areas on Newhall Ranch.

(2) Newhall Ranch Specific Plan Program EIR Mitigation Measures

The Newhall Ranch Specific Plan Program EIR incorporates mitigation from the RMP and requires additional mitigation to address impacts to special-status plant and wildlife species, including San Fernando Valley spineflower, unarmored threespine stickleback, arroyo toad, southwestern pond turtle, southwestern willow flycatcher, least Bell's vireo, and other special-status species. Measures are also included that address impacts to sensitive plant communities (e.g., riparian habitat) and other resources under the jurisdiction of the Army Corps of Engineers (ACOE) and California Department of Fish and Game (CDFG).[1]

3. SUMMARY OF THE NEWHALL RANCH SPECIFIC PLAN PROGRAM EIR FINDINGS

The Newhall Ranch Revised Additional Analysis (Section 2.3) determined that the Specific Plan would modify the floodplain by placing soil cement along selected portions of the river, developing the floodplain areas behind the soil cement and installing three bridges across the river. However, it was further determined that the proposed improvements in the Specific Plan would maintain the key hydraulic characteristics that largely determine the overall mosaic of habitats in the river.

The prior analysis found that during more infrequent floods (20-year, 50-year and 100-year events), flows would spread out to the buried bank stabilization but not further. This condition would limit the area of the floodplain during these infrequent flood events, causing inundation over a smaller area because the bank protection would prevent flooding of formerly adjacent floodplain areas. However, the reduction in floodplain area caused by bank protection was found not to create a significant increase in overall velocities or water depth, because the volume of flow carried in these shallow, slow-moving areas along the margins of the river is small. Moreover, variations were determined to be localized and limited in scope, especially when viewed in the entirety of the river corridor within the Specific Plan site and downstream. Therefore, the prior analysis found that the overall mosaic of habitats in the river would be maintained because the key hydraulic characteristics would not be significantly different under the Specific Plan. Based on these results, the Board of Supervisors found that the proposed bridges and bank protection associated with the Specific Plan would not cause significant changes to key hydraulic

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1 For a complete description of all of the adopted biota-related mitigation measures, please refer to the Revised Mitigation Monitoring Plan for the Specific Plan, Mitigation Measures 4.6-1 through 4.6-80.

characteristics, and therefore, would not alter the amount and pattern of aquatic, wetland and riparian habitats in the river at the Specific Plan site and downstream in Ventura County.

4. INTRODUCTION

a. Study Scope and Methods

As illustrated in **Figure 4.5-1**, **Study Area Locations**, the study area includes the river corridor at the confluence with Castaic Creek and extends downstream approximately four miles into Ventura County. The scope of the assessment is focused on the potential effects of the project on aquatic, wetland, and riparian habitats and sensitive aquatic species.

The floodway engineering analysis used to prepare this section of the EIR was provided by Pacific Advanced Civil Engineering, Inc. (PACE) and the biological analysis was based, in part, on the biological studies and information described in **Section 4.4**, **Biota**, and on an additional analysis prepared by ENTRIX, Inc. (ENTRIX). Information from PACE is presented in its report entitled, *Flood Technical Report for Landmark Village,* August 2006 (**Appendix 4.2**), and information from ENTRIX is presented in its report entitled, *Sensitive Aquatic Species Assessment, Santa Clara River, Landmark Village Project, Santa Clarita, California, 2006* (see **Appendix 4.5**).

(1) Review of Existing Project Reports and Documentation

PACE characterized the hydrology and hydraulics of the river in a technical report (PACE 2006; **Appendix 4.2**). As explained in that report, hydraulic calculations and sediment transport potential assessments within the Santa Clara River were prepared using ACOE Hydraulic Engineering Center River Analysis System (HEC-RAS) and HEC-GEO-RAS (Global Positioning System [GPS] enabled HEC-RAS software) programs. These programs were used to determine floodplain limits, flow velocities and by extension scour/deposition potential for a range of flow frequencies within the river (2-year through 100-year flows). Existing Santa Clara River discharge rates for the 2-year, 5-year, 10-year, 20-year, 50-year, and 100-year return periods were obtained from an ACOE study entitled, *Santa Clara River Adopted Discharge Frequency Values* (ACOE, the Ventura County Flood Control Department and the Los Angeles County Department of Public Works, May 3, 1994). Santa Clara River flows in the proposed conditions were derived from the PACE *Flood Technical Report for Landmark Village* (PACE, 2006).

The modeling conducted for the river analysis was created by modifying existing cross-section geometrics of the river to simulate the hydraulic effects of the proposed project's use of soil cement (i.e., bank stabilization) for erosion protection, including the Long Canyon Road Bridge abutments and piers. This encroachment was conservatively approximated with levees in the hydraulic model (model levees set at equivalent elevation on slope of channel invert). The modeling of the proposed Long Canyon Road Bridge span, soil cement, pier spacing, and abutment locations are substantially consistent with the

Newhall Ranch Revised Additional Analysis, Volume VIII (May 2003). For modeling and impact analysis considerations, these conservative bridge configurations would have the greatest impact on river hydraulics.

In addition to review and incorporation of the information from the PACE report, the following technical reports and supporting documentation were reviewed by ENTRIX and considered in assessing the potential effects of the Landmark Village project on sensitive aquatic species inhabiting the Santa Clara River:

- *Biological Resources Assessment of the Proposed Santa Clara River Significant Ecological Area. Los Angeles County Department of Regional Planning*. PCR Services Corporation, Frank Hovore and Associates, FORMA Systems, November 2000.

- *Final EIS/EIR: 404 Permit and 1603 Streambed Alteration Agreement for Portions of the Santa Clara River and its Tributaries, Los Angeles County*. Valencia Company, August 1998.

- *Results of Focused Surveys for Arroyo Toad and Special-Status Aquatic Reptiles and Amphibians, Landmark Village Project; Newhall Ranch, Valencia, California*. Newhall Ranch Company, Compliance Biology, Inc., Camarillo, CA, October 2004.

- *Biological Resources of the Upland Areas of the West Ranch*. Newhall Land and Farming Company, Valencia, California, Dames and Moore, Santa Barbara, California, July 1993.

- *Natural River Management Plan: Permitted Projects and Activities*. Santa Clara River and tributaries. Valencia Company, November 1998.

- *Results of Focused Surveys for Arroyo Toad and Special-Status Aquatic Reptiles and Amphibians within the Natural River Management Plan Area, Valencia, California*. Impact Sciences, September 2001.

- *Aquatic Surveys Along the Santa Clara River Part I: Castaic Junction Project Area, Los Angeles County, California*. Aquatic Consulting Services, Inc., April 2002.

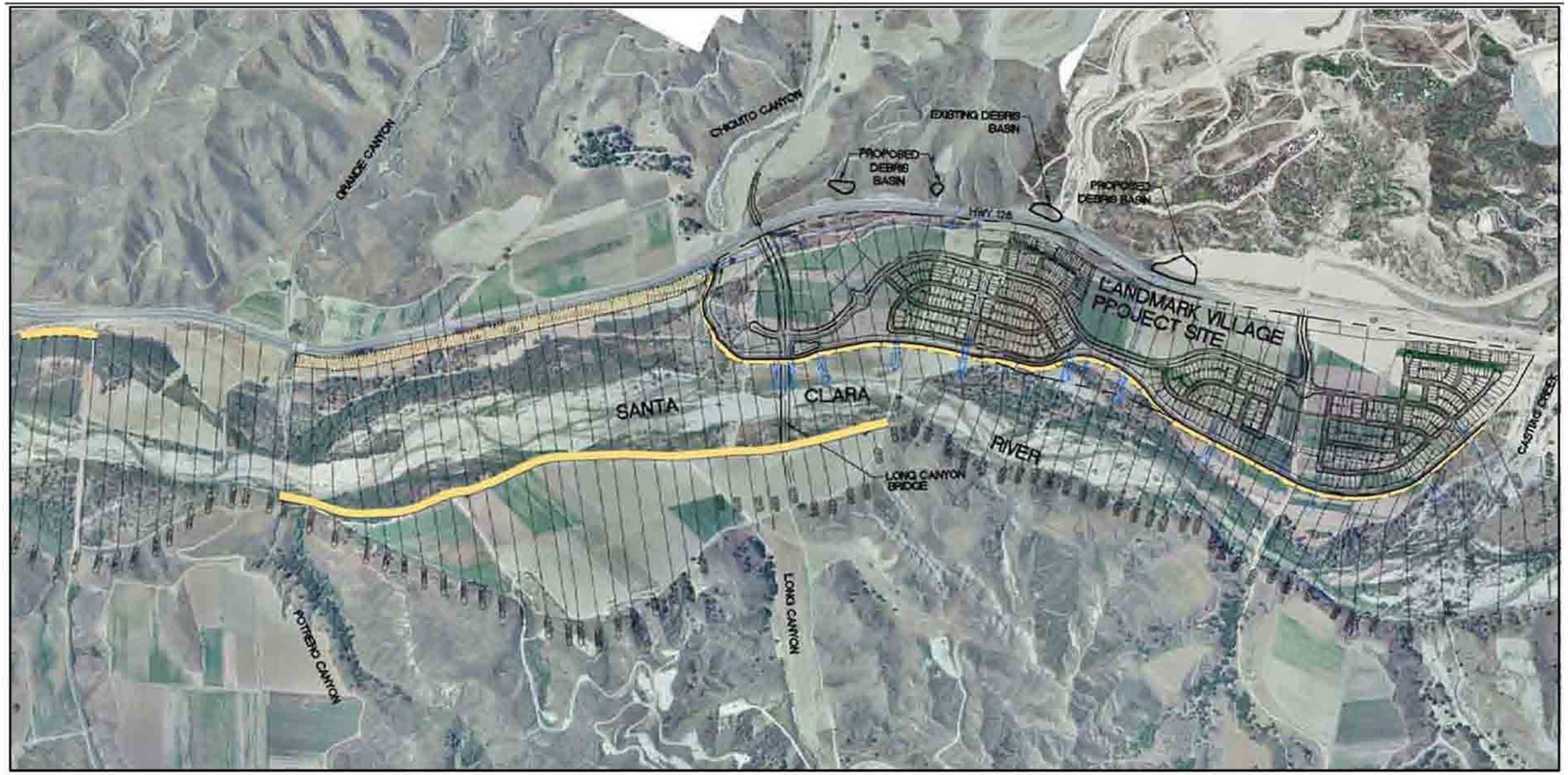
- *Aquatic Surveys Along the Santa Clara River Part III: West of Commerce Center Bridge to the Ventura County Line, California*. Aquatic Consulting Services, Inc., June 2002.

- *Biological Opinion for the Natural River Management Plan*, Santa Clarita, Los Angeles County, California (1-8-02-F-4R) (File No. 940050400-BAH). U.S. Fish and Wildlife Service, November 2002.

- *Results of Focused Surveys for Unarmored Threespine Stickleback and Other Special-Status Fish Species, Newhall Ranch, Valencia California*. Impact Sciences, January 2003.

- *Results of Focused Surveys for Arroyo Toad and Special-Status Aquatic Reptiles and Amphibians within the Newhall Ranch Area, Los Angeles County, California*. Newhall Land and Farming, Impact Sciences, September 19, 2001.

- Letter from Scott Cameron (Ecological Sciences, Oxnard, CA) to Rick Farris, U.S. Fish and Wildlife Service, Ventura, CA, Subject: Permit submittal requirements, TE 808242, arroyo toad surveys, Los Angeles County, California, August 2, 2001.

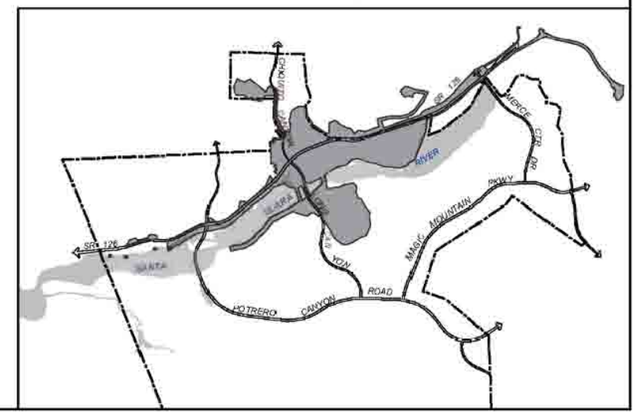


Legend:

- Treated Runoff and Storm Water Discharge Points for Project Area
- Storm Water Discharge for Project Area
- On-Site Storm Drain
- Proposed Soil Cement Bank Protection
- Proposed Utility Corridor Bank Protection
- Residential Project Boundary

1200 600 0 1200

APPROXIMATE SCALE IN FEET



SOURCE: PACE – August 2005

FIGURE **4.5-1**

Study Area Locations

32-92•10/06

- Letter from Scott Cameron (Ecological Sciences, Oxnard, CA) to Mark Subbotin, Newhall Ranch Co, Valencia, CA, Subject: Results of focused arroyo toad surveys, Auto Center Expansion Project and Hart Baseball and Softball Complex (Hart Complex Area), Santa Clarita, California.

- Letter from David Crawford (Impact Science, Inc, Agoura Hills, CA) to Mark Subbotin, Newhall Land and Farming, Subject: Brief summary of arroyo toad survey results in NRMP area, June 18, 2001.

- *Biota Report*, Newhall Ranch Specific Plan, Los Angeles County Department of Regional Planning, Los Angeles, California, September 7, 1995, July 1996 revision.

- SEATAC Biota Report, Combined San Francisquito Canyon Projects (West Creek (VTTM 52455) and East Creek (VTTM 44831, 52667), Newhall Land and Farming Company, Significant Ecological Area 19, San Francisquito Canyon, Los Angeles County, California, Los Angeles County Department of Regional Planning, Frank Hovore & Associates, San Marino Environmental Associates, Planning Consultants Research, August 19, 1998.

- Amended 404 Permit (No. 940050400-BAH) for Natural River Management Plan. U.S. Army Corps of Engineers, June 2003.

- Proposed Designation of Critical Habitat for the California Red-Legged Frog (*Rana aurora draytonii*), U.S. Fish and Wildlife Service, April 13, 2004, 69 FR 19620-19642.

- Proposed Designation of Critical Habitat for the Arroyo Toad, U.S. Fish and Wildlife Service, April 28, 2004, 69 FR 23254-23328.

- Final Designation of Critical Habitat for the Arroyo Toad, Final Rule. U.S. Fish and Wildlife Service, April 13, 2005, 50 CFR Part 17 (RIN 1018-AT42).

- Revised Additional Analysis to the Newhall Ranch Specific Plan and Water Reclamation Plant Final Program EIR, Volume VIII (May 2003), Section 2.3, Floodplain Modifications.

- EIR Technical Study – *Landmark Village (Flood Technical Report) (August 2006)*. Pacific Advanced Civil Engineering, Inc. (PACE)

- *Landmark Village Water Quality Technical Report* (GeoSyntec Consultants 2006).

In addition, applicable information referenced in **Section 4.4, Biota**, of this EIR was also referenced in order to prepare the information presented below.

(2) Review of Records and Literature

Information on the special-status wildlife of the project area was obtained by ENTRIX through a search of the California Natural Diversity Data Base (CNDDB; CDFG, 2004); the U.S. Fish and Wildlife Service (USFWS), Ventura Office, Endangered Species Division's species list (USFWS, 2003); and other biological studies completed in the project vicinity. Preliminary identification of potential habitat for sensitive

aquatic species within the project site was determined by reviewing aerial photography. Subsequent site visits on March 31, 2004 and November 10, 2004 identified other potential habitat.

To evaluate the effects of the project's bank stabilization and bridge components on potential populations of unarmored threespine stickleback, arroyo toads, California red-legged frogs, and other sensitive aquatic species, ENTRIX biologists queried the CNDDB (CDFG, 2004), the collection catalogue of the Los Angeles County Museum of Natural History, and the online collection databases of the Museum of Vertebrate Zoology, University of California, Berkeley (UC Berkeley, 2004) and the California Academy of Sciences (CAS, 2004) to determine the historical distribution of these species in the project area. Various literature sources (especially Jennings & Hayes, 1994) were also used.[2] The ENTRIX biologists also examined maps, aerial photographs, and ground photographs taken by ENTRIX biologists during the site visits to locate potential aquatic habitat within and near the banks of the Santa Clara River within the study area.

Potential aquatic habitat suitability for any of the five studied species was determined by comparison with previously published assessments (e.g., Holland, 1991; Jennings & Hayes, 1994; USFWS 1999, 2002), as well as by the ENTRIX biologists' extensive experience with the three species in various parts of California, including the Santa Clara River region (see **Appendix 4.5**).

ENTRIX biologists also consulted the USFWS Biological Opinion for the Natural River Management Plan (NRMP), Santa Clarita, Los Angeles County, California (1-8-02-F-4R), dated November 15, 2002, the Environmental Assessment 404(b)(1) Evaluation Public Interest Review for Permit Application Number 940050400-BAH, Valencia Company Natural River Management Plan, dated June 18, 2003, the PACE *Flood Technical Report for Landmark Village* (August 2006), the GeoSyntec *Water Quality Report* (2006), and various natural history accounts for these species (e.g., Jennings & Hayes, 1994; Holland, 1991; Sweet, 1992; Swift et al., 1993; Stebbins, 1951); and the Newhall Ranch Revised Additional Analysis, Volume VIII (May 2003), Section 2.3, Floodplain Modifications.

(3) Field Reconnaissance Surveys

In addition to the focused sensitive aquatic species surveys conducted by others and summarized in the **Biota** section of this EIR, ENTRIX biologists, Dr. Camm Swift, Steve Howard, Sean Barry, and Matt Carpenter, conducted reconnaissance-level field surveys, focusing on the following sensitive aquatic vertebrate species and their associated habitat within the Santa Clara River floodplain: (1) unarmored

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2 Unless otherwise noted, neither the CNDDB nor the museum database records are verified independently. Experts usually identify museum specimens during accession, but taxonomic changes and misidentifications are always possible. Further, unless otherwise noted, the absence of CNDDB or museum species records from any site does not indicate that the species is absent from that site.

threespine stickleback; (2) arroyo toad; (3) California red-legged frog; (4) southwestern pond turtle, and; (5) two-striped garter snake. The purpose of the field survey was to analyze the project's potential effects on these species and their habitat. These species were targeted, as their life history and habitat preferences are representative of those aquatic species dependent upon riparian habitat in the River Corridor SMA/SEA 23.

The herpetological surveys were conducted on March 31 and November 10, 2004 in and along the Santa Clara River, within the boundaries of the Landmark Village project site. The project site was examined for potential aquatic habitat, such as flowing or standing water, emergent vegetation, and associated sensitive aquatic species. During the November survey, the river channel was photographed within the project area every 100 to 200 feet, and in areas of potential aquatic habitat. Species observed were recorded, along with water temperature, depth and width of wetted area. Field survey data is included in **Appendix 4.5**.

Potential habitat for arroyo toads, California red-legged frogs, western pond turtles, and two-striped garter snakes was noted, along with other features relevant to life history, such as the presence of prey or predators. Habitat factors noted for arroyo toads included the presence of clear, standing water (required for egg deposition), sandy banks, and the presence of willows, cottonwood, and sycamore trees. Habitat factors noted for California red-legged frogs included relatively deep and vegetated sunlit pools. Habitat factors noted for southwestern pond turtles included permanent or nearly permanent water, depth of water, basking sites such as partially submerged logs, rocks, mats of floating vegetation or open mud banks, and suitable terrestrial sites for egg-laying. Habitat factors noted for two-striped garter snakes included isolated stream channels with adjacent shallow and deep moving water with bordering vegetative (including root masses) or rocky cover, in-stream cover, and evidence of fish.

The entire reach of the Santa Clara River from the mouth of Salt Creek to the Castaic Junction was surveyed on March 31 and April 1, 2004 focusing on the unarmored threespine stickleback fish. An additional survey was conducted on November 8, 2004 in the Santa Clara River and Castaic Creek from the mouth to the State Route 126 (SR-126) bridge within the Landmark Village project area. The surveys focused mainly on evaluating habitat conditions within these reaches and in establishing the relative proximity from the streamside project boundary to in-stream habitats. Most of these efforts were visual habitat assessments documented by field photographs with special reference to unarmored threespine stickleback and other fish. Some collecting was conducted with a small seine (1.8 X 1.2 meters, 3 millimeters (mm) mesh/6 X 3 feet, 0.125 inch mesh) and aquarium dip nets in habitats that could potentially contain stickleback. Further upstream, the Santa Clara River at the Commerce Center Drive Bridge area, and Castaic Creek near the Interstate 5 (I-5) bridge, was examined on December 16, 2004.

Camm Swift and Sean Barry conducted an additional survey within the Landmark Village project reach of the Santa Clara River on February 1, 2005 to document and evaluate habitat changes due to the recent large storm flows that disturbed much of the habitat that was previously examined.

5. EXISTING CONDITIONS

a. Existing Hydrology and Hydraulic Conditions Along the River

The Santa Clara River traverses the southern portion of the site, which is located within a contributing drainage of 996 acres (Psomas, *Landmark Village Drainage Concept Report*) out of the 1,634 square mile Santa Clara River watershed basin. This area represents less than 1 percent of the Santa Clara River basin and consists primarily of undeveloped property. Rainfall in the tributary area is an annual average of 17 inches and generally occurs in the winter months. Runoff flows to and through six contributing drainage areas on the site via sheet flows and natural concentrated flows. Each is described in greater detail below.

(1) Flows, Velocity, Depth

(a) Santa Clara River

The reach of the Santa Clara River adjacent to, and downstream of, the project site has perennial surface flows primarily created by tertiary treated effluent discharges from two upstream water reclamation plants operated by the County Sanitation Districts of Los Angeles County, and by urban runoff. Natural flows in the river only occur in the winter due to storm runoff. The flows vary significantly from year-to-year. The flow line of the river is currently along the southerly bank.

The reach of the river within and adjacent to the project site has multiple channels (braided). High sediment loads, high bank erodibility, and intense, intermittent runoff conditions characterize this kind of system. Combined with the relatively flat gradient of the river at this point (less than one percent), the river has a high potential to aggrade (deposit sediment) at low flow velocities.

The peak discharge rates, or flows (i.e., volume of water for a given time frame), for floods of different return periods (2-year, 5-year, 10-year, 20-year, 50-year,[3] 100-year) at the downstream end of the project site under existing conditions are shown in **Table 4.5-1, Discharge, Velocity, and Flow Area Changes by Cross-Section – 2- and 100-Year Interval Storm Events**. A 2-year event has a probability of occurring

[3] Note this is not the 50-year capital flood (Qcap), which is based on a theoretical 4-day storm event occurring right after the watershed has been burned with the resulting flow rate being increased again by a bulking factor. For purposes of comparison, the predicted flow during the 100-year FEMA flood event at the Castaic Creek confluence is 31,300 cfs, while the County Qcap at this same location is 163,000 cfs.

once every two years, while a 50-year flood event has a probability of occurring once every 50 years. The 2-year flood event would have modest flows, while the latter event would have much higher flows.

As shown, velocities and water surface elevations in the river vary from section-to-section based on various hydraulic and hydrologic parameters. In general, velocity and depth along the river will increase with higher discharge. An example of these relationships is provided in **Table 4.5-1**. These data indicate that velocities measured in feet per second (fps), more than double, on average, from the 2-year to the 100-year event, while depth increases approximately 10.25 times, on average. In contrast, discharge increases almost 24 times from the 2-year to the 100- year event. Velocity and water depth percent increases do not correspond to the percent discharge increases because the wide river channel allows flood flows to spread out with increasing discharge.

Table 4.5-1
Discharge, Velocity, and Flow Area Changes by Cross-Section
2- and 100-Year Interval Storm Events

Station	Event	Q (CFS)	Velocity (FPS)	Flow Area (FT2)	Q100/Q2	A100/A2
33310	Q2	1720	4.6	374.6		
	Q100	40300	9.7	4146.7	2.1	11.1
33115	Q2	1720	2.9	602.9		
	Q100	40300	10.4	3874.9	3.6	6.4
32795	Q2	1720	4.9	348.2		
	Q100	40300	8.4	4787.8	1.7	13.7
32605	Q2	1720	4.0	432.0		
	Q100	40300	7.4	5413.7	1.9	12.5
32265	Q2	2527	5.4	468.3		
	Q100	58207	10.9	5362.5	2.0	11.5
31875	Q2	2527	3.7	688.4		
	Q100	58207	8.4	6961.4	2.3	10.1
31585	Q2	2527	2.7	950.1		
	Q100	58207	5.7	10229.1	2.1	10.8
31360	Q2	2527	4.3	592.5		
	Q100	58207	7.2	8074.1	1.7	13.6
31060	Q2	2527	5.4	464.8		
	Q100	58207	5.2	11250.0	1.0	24.2
30720	Q2	2527	3.8	668.1		
	Q100	58207	4.0	14526.6	1.1	21.7
30445	Q2	2527	5.7	446.6		
	Q100	58207	3.6	16362.6	0.6	36.6
30095	Q2	2527	2.3	1119.8		
	Q100	58207	3.6	16071.5	1.6	14.4
29815	Q2	2527	1.7	1461.3		
	Q100	58207	4.2	13861.0	2.4	9.5
29565	Q2	2527	1.3	2017.5		

Station	Event	Q (CFS)	Velocity (FPS)	Flow Area (FT2)	Q100/Q2	A100/A2
	Q100	58207	4.2	13770.7	3.4	6.8
29385	Q2	2527	1.5	1654.8		
	Q100	58207	5.2	11200.7	3.4	6.8
29140	Q2	2527	3.5	727.8		
	Q100	58207	8.5	6820.6	2.5	9.4
28895	Q2	2527	7.8	325.8		
	Q100	58207	15.7	3712.6	2.0	11.4
28695	Q2	2527	5.2	483/1		
	Q100	58207	25.1	2315.0	4.8	4.8
28500	Q2	2527	6.7	379.0		
	Q100	58207	22.5	2588.7	3.4	6.8
28280	Q2	2527	3.8	670.9		
	Q100	58207	16.5	3528.9	4.4	5.3
28080	Q2	2527	4.6	545.7		
	Q100	58207	16.3	3566.8	3.5	6.5
27925	Q2	2527	6.0	422.4		
	Q100	58207	14.6	4000.1	2.4	9.5
27725	Q2	2527	3.4	745.9		
	Q100	58207	16.5	3535.9	4.9	4.7
27545	Q2	2527	6.1	413.5		
	Q100	58207	16.9	3438.7	2.8	8.3
27335	Q2	2527	3.6	703.4		
	Q100	58207	18.2	3207.5	5.1	4.6
27155	Q2	2527	3.9	654.1		
	Q100	58207	14.9	3906.9	3.9	6.0
26990	Q2	2527	5.6	451.4		
	Q100	58207	15.2	3841.5	2.7	8.5
26780	Q2	2527	5.4	465.3		
	Q100	58207	18	3240.4	3.3	7.0
26575	Q2	2527	3.3	756.7		
	Q100	58207	11.7	4958.9	3.5	6.6
26355	Q2	2527	6.4	392.2		
	Q100	58207	12.5	4675.8	1.9	11.9
26170	Q2	2527	4.6	550.6		
	Q100	58207	9.9	5861.5	2.2	10.6
25965	Q2	2527	3.6	707.6		
	Q100	58207	8.9	6512.3	2.5	9.2
25785	Q2	2527	2.7	945.2		
	Q100	58207	8.5	6860.9	3.2	7.3
25600	Q2	2527	5.7	447.0		
	Q100	58207	10.4	5578.0	1.8	12.5
25425	Q2	2527	3.9	645.6		
	Q100	58207	8.8	6640.0	2.2	10.3
25215	Q2	2527	6.6	383.6		
	Q100	58207	10.8	5394.3	1.6	14.1
25000	Q2	2527	5.1	493.4		
	Q100	58207	13.8	4209.4	2.7	8.5
24795	Q2	2527	6.1	414.4		
	Q100	58207	13.7	4242.0	2.2	10.2

Station	Event	Q (CFS)	Velocity (FPS)	Flow Area (FT2)	Q100/Q2	A100/A2
24550	Q2	2527	4.0	639.3		
	Q100	58207	14.9	3907.6	3.8	6.1
24335	Q2	2527	5.3	474.0		
	Q100	58207	9.8	5955.9	1.8	12.6
24115	Q2	2527	5.8	435.7		
	Q100	58207	11.0	5298.9	1.9	12.2
23975	Q2	2527	4.5	557.9		
	Q100	58207	10.7	5438.6	2.4	9.7
23755	Q2	2527	6.7	376.1		
	Q100	58207	8.5	6831.8	1.3	18.2
23565	Q2	2527	5.2	486.8		
	Q100	58207	9.9	5902.0	1.9	12.1
23365	Q2	2527	6.7	378.5		
	Q100	58207	11.7	4997.7	1.7	13.2
23180	Q2	2527	4.4	571.4		
	Q100	58207	12.9	4511.1	2.9	7.9
23000	Q2	2527	5.6	452.1		
	Q100	58207	7.4	7918.4	1.3	17.5
22790	Q2	2527	4.6	549.3		
	Q100	58207	8.7	6684.7	1.9	12.2
22600	Q2	2527	4.4	578.2		
	Q100	58207	8.6	6807.8	2.0	1.8
22415	Q2	2527	5.9	430.4		
	Q100	58207	8.2	7100.3	1.4	16.5
22195	Q2	2558	6.8	378.8		
	Q100	58922	12.3	4789.4	1.8	12.6
22010	Q2	2558	4.7	550.2		
	Q100	58922	15.2	3886.9	3.3	7.1
21790	Q2	2558	4.2	608.4		
	Q100	58922	11.3	5194.9	2.7	8.5
21615	Q2	2558	5.4	476.7		
	Q100	58922	9.9	5982.6	1.8	12.5
21440	Q2	2558	3.7	699.2		
	Q100	58922	12.6	4688.1	3.4	6.7
21225	Q2	2558	6.7	381.5		
	Q100	58922	10.7	5493.6	1.6	14.4
21020	Q2	2558	2.3	1113.5		
	Q100	58922	16.1	3657.5	7.0	3.3
20845	Q2	2558	5.4	473.9		
	Q100	58922	9.8	6020.3	1.8	12.7
20595	Q2	2558	3.6	705.3		
	Q100	58922	7.7	7689.4	2.1	10.9
20435	Q2	2558	2.7	962.3		
	Q100	58922	6.9	8499.8	2.6	8.8
20280	Q2	2558	5.6	460.5		
	Q100	58922	10.5	5630.4	1.9	12.2
20070	Q2	2558	5.5	465.8		
	Q100	58922	15.5	3791.2	2.8	8.1
19855	Q2	2558	4.9	526.5		

Station	Event	Q (CFS)	Velocity (FPS)	Flow Area (FT2)	Q100/Q2	A100/A2
	Q100	58922	11.2	5248.7	2.3	10.0
19630	Q2	2558	5.6	460.6		
	Q100	58922	12.2	4828.3	2.2	10.5
19440	Q2	2558	3.7	684.7		
	Q100	58922	7.7	7618.7	2.1	11.1
19240	Q2	2558	5.0	512.0		
	Q100	58922	8.9	6637.4	1.8	13.0
19050	Q2	2558	4.7	550.4		
	Q100	58922	6.9	8605.3	1.5	15.6
18830	Q2	2558	6.2	414.7		
	Q100	58922	6.5	9013.4	1.1	21.7
18650	Q2	2558	5.5	461.9		
	Q100	58922	5.7	10437.5	1.0	22.6
18475	Q2	2558	4.5	565.8		
	Q100	58922	4.9	12129.1	1.1	21.4
18290	Q2	2558	6.5	394.0		
	Q100	58922	5.0	11680.0	0.8	29.6
18025	Q2	2558	3.1	825.2		
	Q100	58922	4.4	13528.9	1.4	16.4
17785	Q2	2558	3.4	747.3		
	Q100	58922	4.9	12068.3	1.4	16.2
17510	Q2	2558	3.6	711.3		
	Q100	58922	8.1	7301.5	2.2	10.3
17360	Q2	2581	4.3	600.4		
	Q100	59457	9.6	6222.2	2.2	10.4
17110	Q2	2581	4.8	536.8		
	Q100	59457	9.0	6576.4	1.9	12.3
16970	Q2	2581	3.9	667.8		
	Q100	59457	13.4	4448.7	3.5	6.7
16720	Q2	2581	5.7	450.2		
	Q100	59457	12.0	4967.5	2.1	11.0
16515	Q2	2581	6.7	383.6		
	Q100	59457	11.2	5304.4	1.7	13.8
				Max	7.0	36.6
				Min	0.6	3.3
				Avg	2.4	11.7

Source: PACE, 2006.
cfs = cubic feet per second

(b) On-Site (Tract Map) Drainages

Flows discharge from the tract map site to the Santa Clara River from six on-site areas (18 sub-basins). The acreage for each of the sub-basins is provided in **Table 4.5-2, Existing On-Site Drainage**. There are currently no existing drainage or erosion/sedimentation control improvements located within the site other than minor agricultural drainage ditches and an insignificant amount of earthen riverbank

protection. The Chiquita Landfill drains through the site, and this man-made, open drainage would be placed in a pipe upon completion of the project. However, the project is not proposing to drain into this channel, and, therefore, it would remain a separate, unmodified discharge.

Table 4.5-2
Existing On-Site Drainages

Subbasins	Area (Ac)	Capital Storm Event		
		Time of Conc. (min)	Qbb (cfs)	Q/A (cfs/Ac)
100A	32.7	22	54	1.65
110A	49.6	20	87	1.75
200A	17.3	17	34	1.97
210A	35.8	25	55	1.54
400B	18.4	24	29	1.58
405B	38.9	29	54	1.39
408C	15.3	8	46	3.01
410C	44.3	19	81	1.83
415B	35.3	11	89	2.52
420A	34.4	25	53	1.54
425A	39.9	21	69	1.73
500A	26.5	20	47	1.77
510A	40.0	25	61	1.53
CTQ-1A	6.1	8	18	2.95
CTQ-2A	3.6	6	13	3.61
CTQ-3A	1.8	5	7	3.89
CTQ-4A	12.3	10	33	2.68
CTQ-5A	4.4	5	17	3.86
CTQ-6A	24.9	15	52	2.09
CTQ-7A	2.1	5	8	3.81
CTQ-8A	2.8	5	11	3.93
CTQ-9A	31.8	14	70	2.2
CTQ-10A	15.6	11	39	2.5
CTQ-11A	10.2	17	27	2.65
CTQ-12A	11.7	10	40	3.42
620A	12.4	23	20	1.61
∑	568.1			

Source: PACE, 2006.
Notes:
A Burned and bulked flow
B This was calculated by Sikand in the Newhall Ranch Specific Plan Master Hydrology and Drainage Concept, dated 6/29/99.

Project site runoff quantities for the capital flood for each of the six existing drainages defined by Psomas are also provided in **Table 4.5-2**. Combined flows from the project site to the river total 1,823 cfs under existing conditions. Existing flow rates from observed data at the project site during the 2-, 5-, 10-, 20-, 50- and 100-year interval storm events are compiled in **Table 4.5-3**, Existing Conditions River Discharge Stations 32265 to 22195 Downstream of Castaic Creek Confluence. Also please see **Figures 4.5-2a** through **4.5-2f**.

Table 4.5-3
Existing Conditions River Discharge Stations
32265 to 22195 Downstream of Castaic Creek Confluence[4]

Recurrence Interval	Flow (Discharge) Rate (cfs)
2-Year[1]	2,527
5-Year[1]	8,232
10-Year[1]	14,942
20-Year[1]	24,157
50-Year[1]	41,141
100-Year[1]	58,207
Capital Flood[2]	163,000
Capital Flood[3]	140,776

Source: PACE, 2006.

[1] *Existing flows from United States Army Corps of Engineers, Santa Clara River Adopted Discharge Frequency Values. Adopted May 3, 1994, by the United States Army Corps of Engineers and the Ventura County Flood Control Department.*

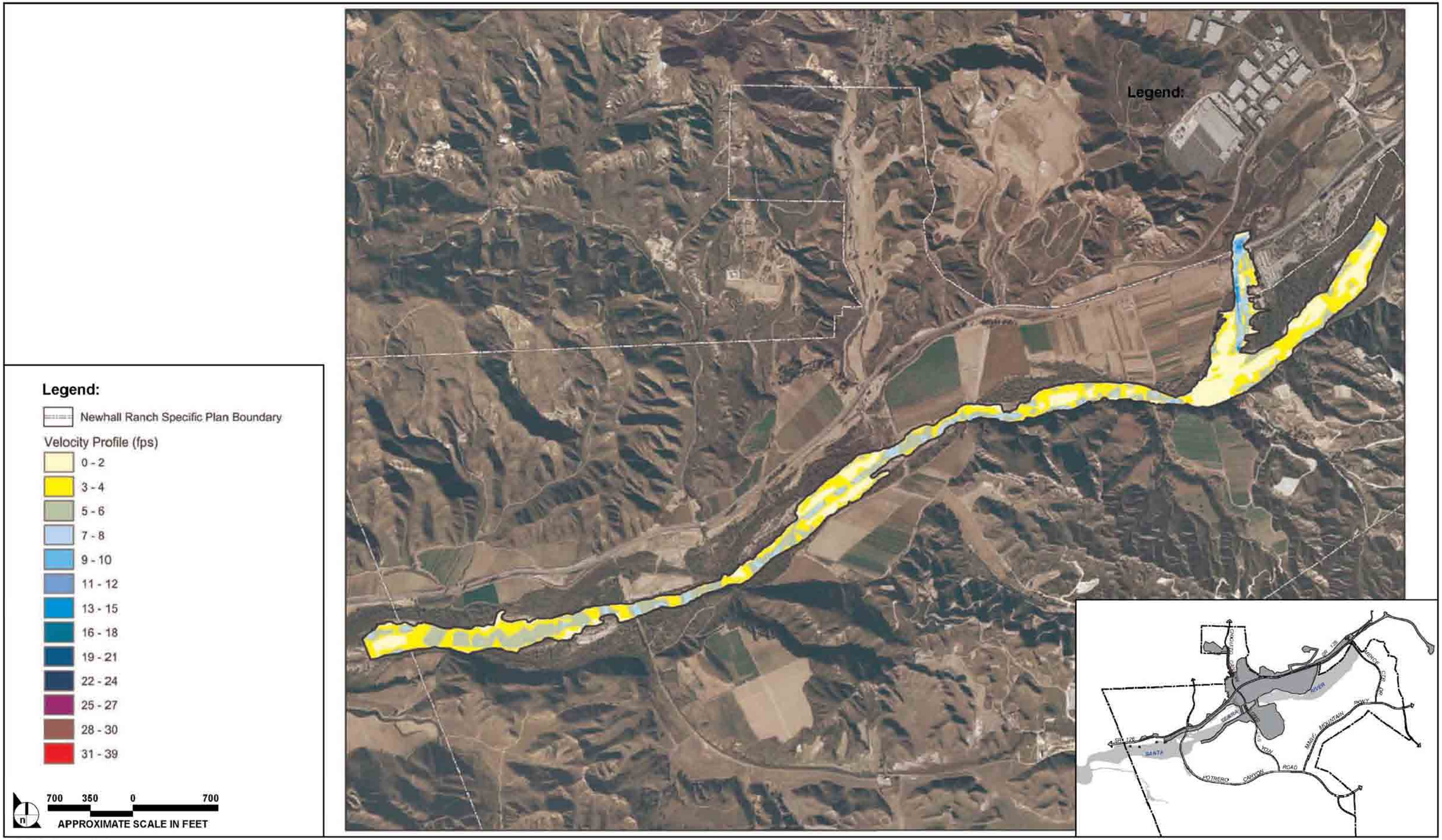
[2] *LACDPW published Capital Design Flows.*

[3] *Q_{CAP} used in the SPEIR.*

(c) Off-Site Drainages

The total contributing drainage area that drains through the project site is approximately 996 acres. This runoff flows to and through the project site via sheet flows and natural concentrated flows. The capital flood on the river is approximately 163,000 cfs at the Castaic Creek confluence. The project site peak existing (burned and bulked) flow rate is approximately 1,660 cubic feet per second (cfs). Therefore, capital flood flows from the project site are approximately one percent of the river capital flood discharge rate.

4 Flows from the U.S. Army Corps of Engineers, Santa Clara River Adopted Discharge Frequency Values. Adopted May 3, 1994, by the U.S. Army Corps of Engineers, the Ventura County Flood Control Department & DPW Published Capital Flood Design Flows.

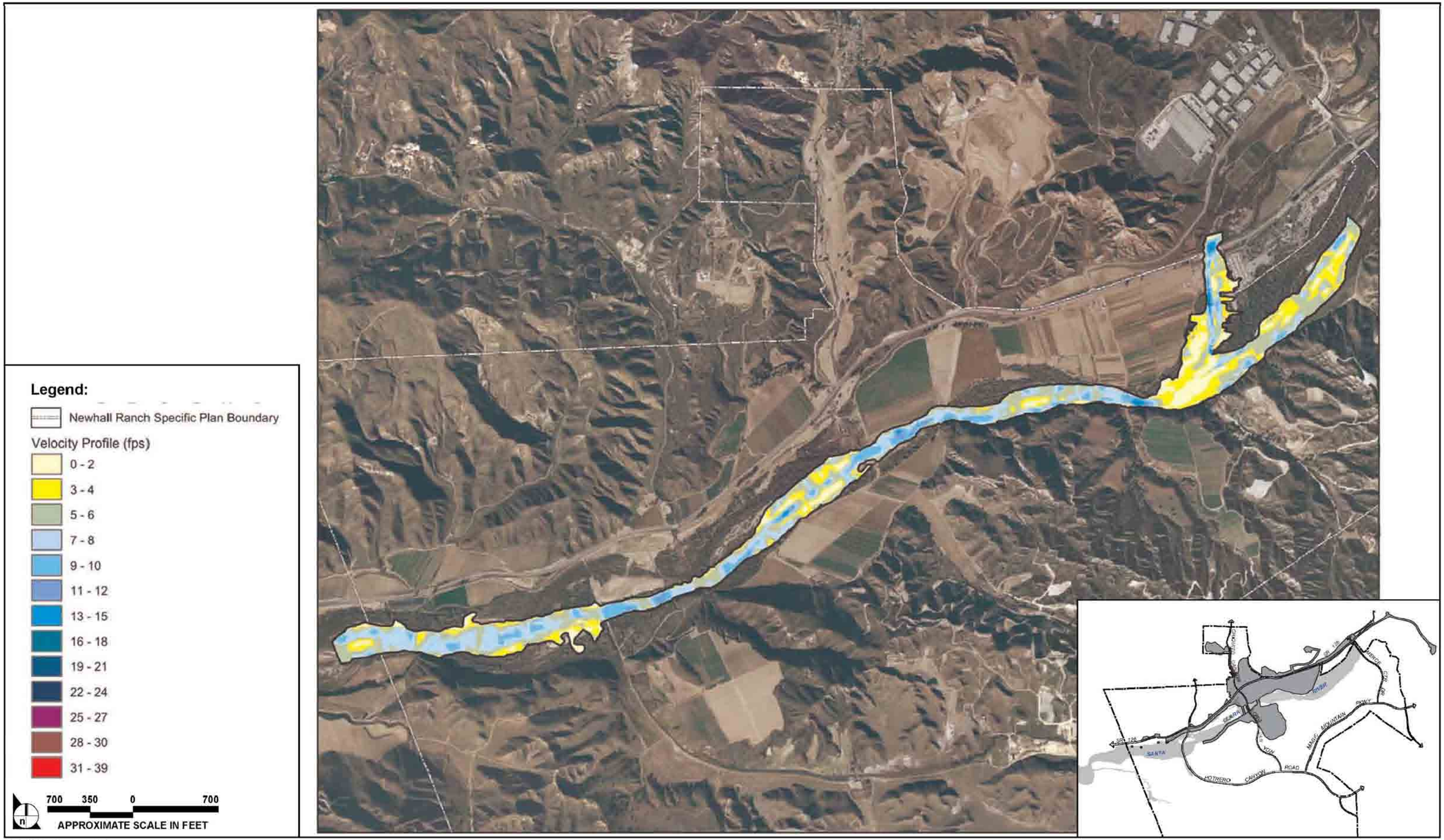


SOURCE: PACE – August 2006

FIGURE **4.5-2a**

Existing Conditions – Santa Clara River 2-Year Flood Event

32-92•10/06



SOURCE: PACE – August 2006

FIGURE **4.5-2b**

Existing Conditions – Santa Clara River 5-Year Flood Event

32-92•10/06

Legend:

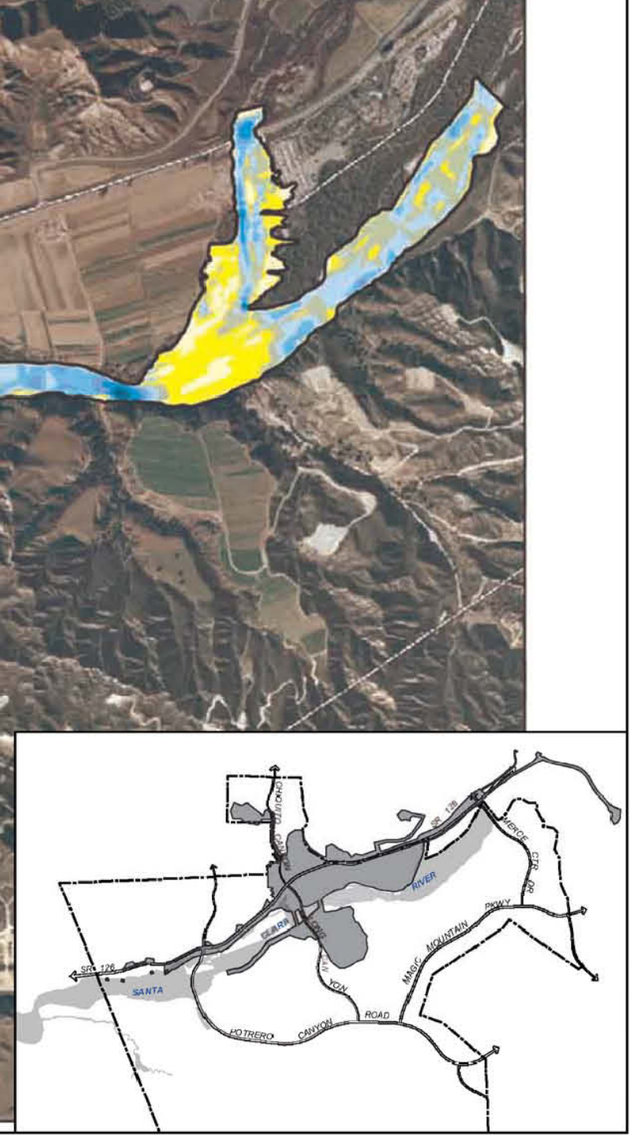
Newhall Ranch Specific Plan Boundary

Velocity Profile (fps)

- 0 - 2
- 3 - 4
- 5 - 6
- 7 - 8
- 9 - 10
- 11 - 12
- 13 - 15
- 16 - 18
- 19 - 21
- 22 - 24
- 25 - 27
- 28 - 30
- 31 - 39

700 350 0 700

APPROXIMATE SCALE IN FEET

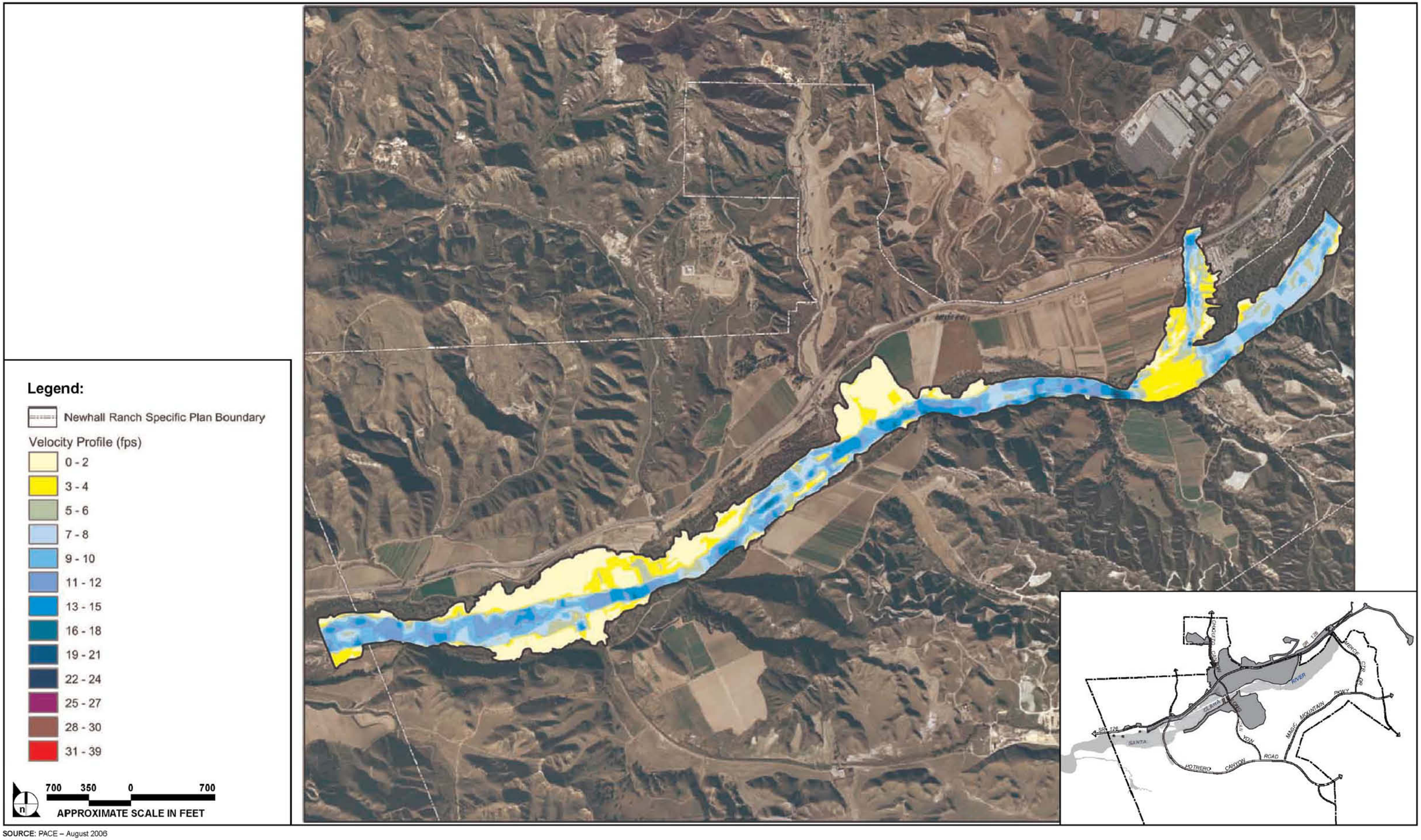


SOURCE: PACE – August 2006

FIGURE **4.5-2c**

Existing Conditions – Santa Clara River 10-Year Flood Event

32-92•10/06



SOURCE: PACE – August 2006

FIGURE **4.5-2d**

Existing Conditions – Santa Clara River 20-Year Flood Event

32-92•10/06

Legend:

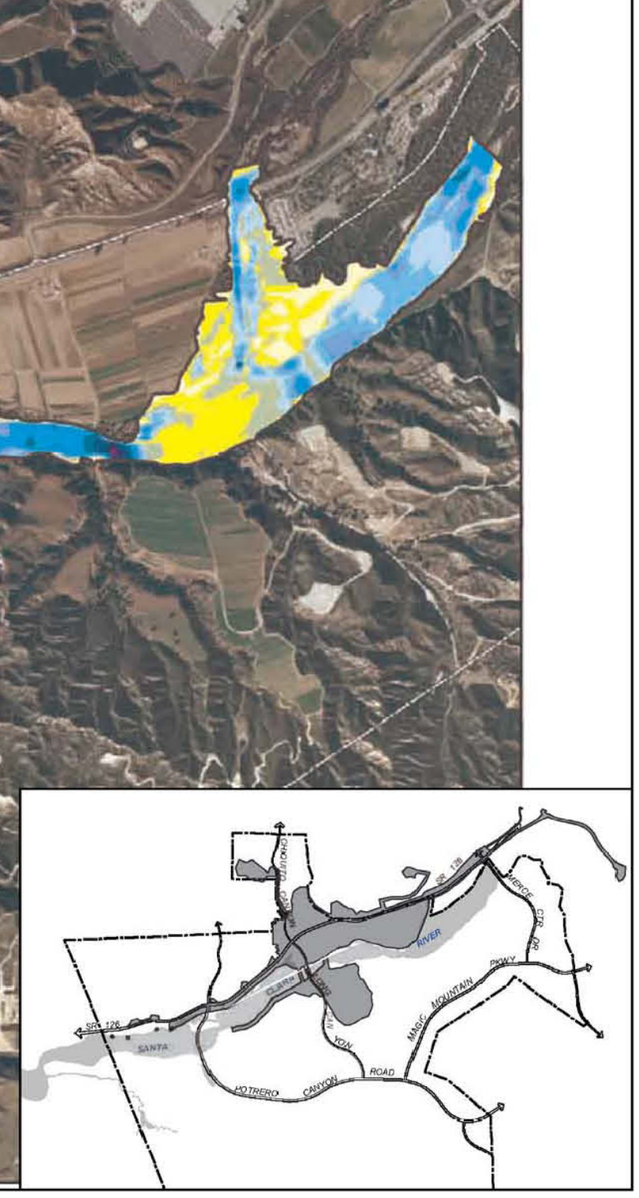
Newhall Ranch Specific Plan Boundary

Velocity Profile (fps)

- 0 - 2
- 3 - 4
- 5 - 6
- 7 - 8
- 9 - 10
- 11 - 12
- 13 - 15
- 16 - 18
- 19 - 21
- 22 - 24
- 25 - 27
- 28 - 30
- 31 - 39

700 350 0 700

APPROXIMATE SCALE IN FEET

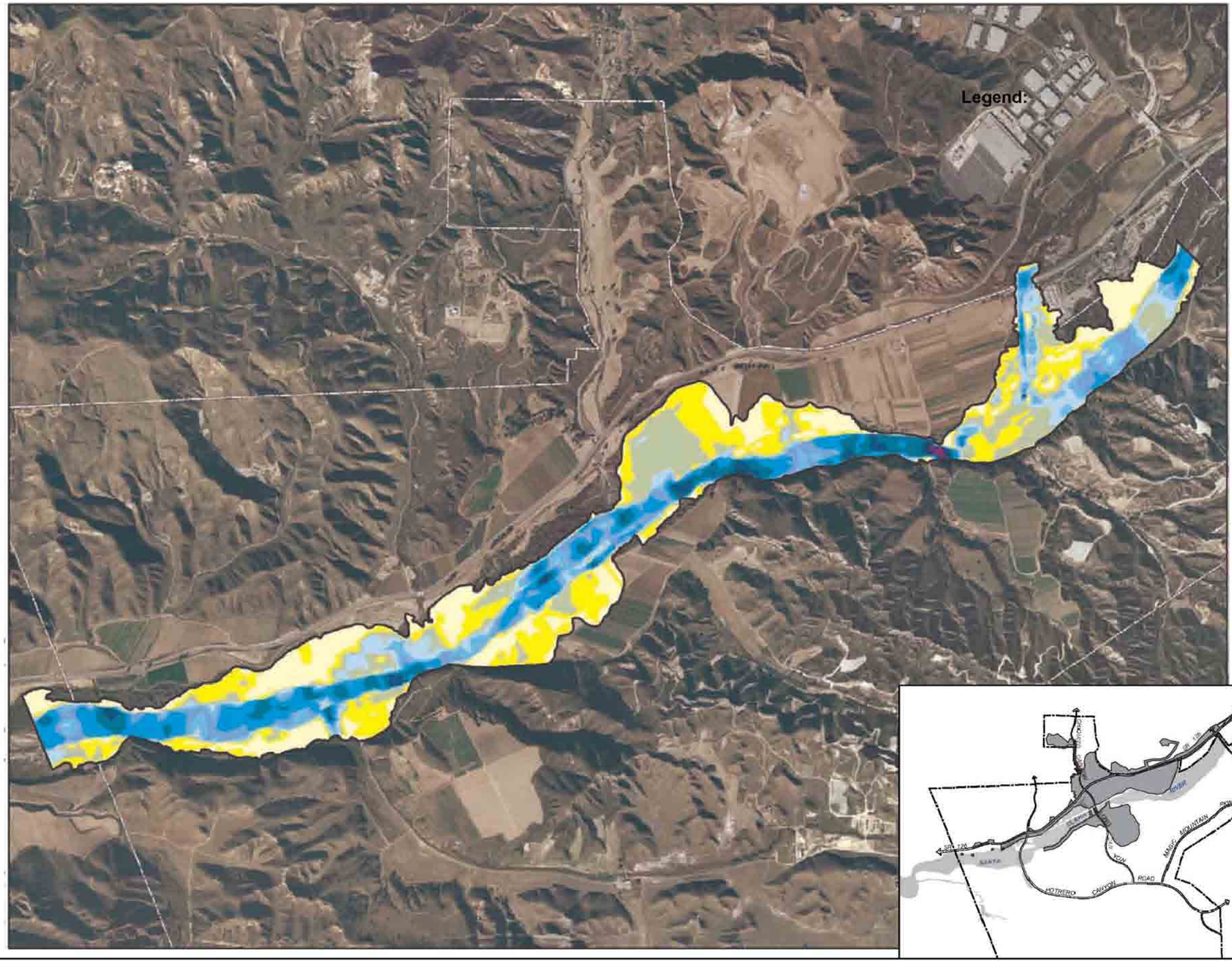


SOURCE: PACE – August 2006

FIGURE **4.5-2e**

Existing Conditions – Santa Clara River 50-Year Flood Event

32-92•10/06



SOURCE: PACE – August 2006

FIGURE **4.5-2f**

Existing Conditions – Santa Clara River 100-Year Flood Event

32-92•10/06

In addition to the 996-acre drainage area, there are four jurisdictional drainages located in the vicinity of the project, excluding the Santa Clara River. These include Castaic Creek, Chiquito Canyon Creek, San Martinez Grande Canyon Creek, and Potrero Canyon Creek.

(2) Channel and Floodplain Conditions

The difference in elevation between the active channel bottom and the 100-year floodplain along the margins of the river varies greatly at the project site. This difference ranges from approximately 4.3 to 16.3 feet and is dependent upon the width of the river channel at a particular location. For example, in wider portions of the river channel where flows widen with corresponding low velocities, there is only a small elevation difference between the channel bottom and the adjacent floodplain boundary. In contrast, the channel is often deep where it is narrower, creating a large elevation difference between the channel bottom and the floodplain boundary.

The existing river channel contains a variety of vegetation types. The active river channel is mostly barren due to annual scouring. However, vegetation types on the adjacent terraces vary based on elevation relative to the active channel bottom and the frequency of flooding. Vegetation types are described below.

The substrate of the river channel (i.e., top layer of the river bottom) is primarily sand, which is actively eroded and deposited in flood events. Previous studies by the Los Angeles County Flood Control District have demonstrated that sediment deposition and scouring along the upper Santa Clara River are generally in equilibrium, and that there are no major trends of channel degradation or aggradation.[5] However, some localized areas may experience either greater scouring or deposition.

b. Existing Aquatic, Wetland, and Riparian Habitats Along the River

The Santa Clara River corridor supports three general categories of habitat: (1) aquatic habitats, consisting of flowing or ponded water; (2) wetland habitats, consisting of emergent herbs rooted in ponded water or saturated soils along the margins of the flowing water; and (3) riparian habitat, consisting of woody vegetation along the margins of the active channel and on the floodplain. The key characteristics of the dominant aquatic, wetland, and riparian habitats in the river corridor at the project site are summarized in **Table 4.5-4, Summary of Dominant Wetland and Riparian Habitat Types in the River at the Specific Plan Site**.

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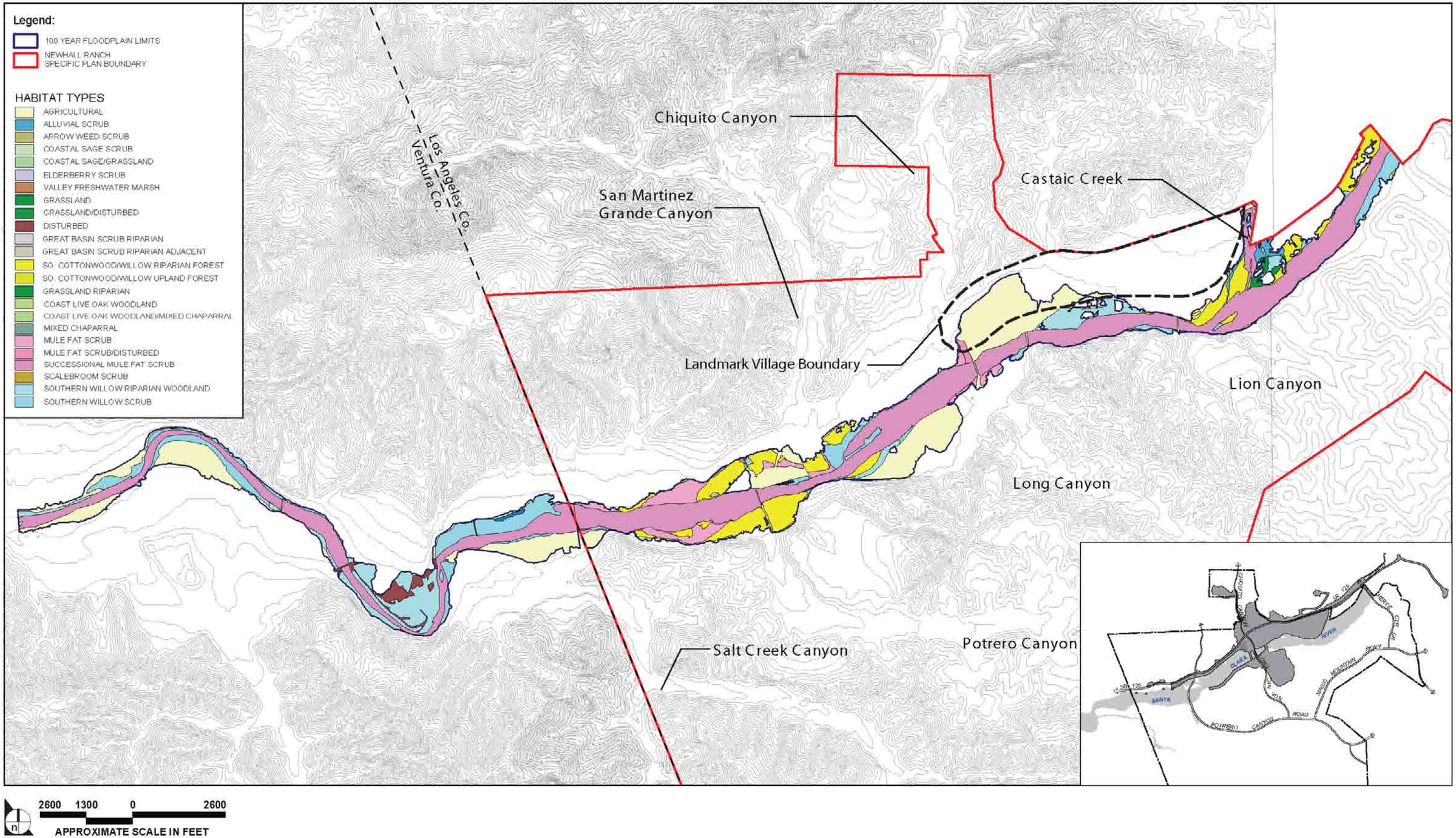
5 Simons, Li & Associates. 1990. *Fluvial Study of Santa Clara River and the Tributaries Summary Report*. Prepared for Los Angeles County Department of Public Works.

Table 4.5-4
Summary of Dominant Wetland and Riparian Habitat Types in the River at the Specific Plan Site

Habitat	Dominant Species	Structure	Location in the Floodplain	Height Above Channel Bottom (ft)
Alluvial Scrub	Sagebrush and scalebroom	Open, sparse mixture of shrubs.	Upper dry terraces; old braided channels.	8
Arrow weed scrub	Arrow weed	Dense monoculture.	Upper terraces.	8
Cottonwood willow forest	Fremont cottonwood and red willow	Mature woodland with large overstory trees and dense understory.	Upper terraces, near or at upland boundary.	9.5
Riverwash	Mule fat, sandbar willow, tamarisk, scalebroom, sandwash groundsel, big saltbush and Great Basin sagebrush	Highly variable because of the dynamic nature of vegetation growth within the river channel. The plant composition within the river channel can change from year to year.	River channel.	0–2
Mule fat scrub; contains some wetland areas	Mule fat, giant reed, arrow weed, and tamarisk	Moderately dense shrubs, 6 to 10 feet in height; patches of emergent wetlands.	Terrace adjacent to active channel.	5.5
Successional mule fat scrub (includes aquatic and wetland habitat)	Mule fat, giant reed, narrow-leaf willow	Mostly barren with scattered small shrubs; flowing water; pools; emergent wetlands.	Active channel that is continually disturbed by flows.	1.5
Willow woodland	Red and arroyo willow, Freemont cottonwood	Mature woodland with large overstory trees and dense understory.	Upper terraces, near or at upland boundary.	9
Willow scrub	Arroyo willow	Dense willow plants, 10 to 12 feet in height.	Mid-level terraces.	6.5

Source: Impact Sciences.

Figure 4.5-3, Habitats in the Santa Clara River, illustrates the location of different types of vegetation found in and adjacent to the river along the study corridor. The density, biomass, and location of the vegetation in relation to the channel bottom are directly dependent upon the frequency of disturbance by flood flows. A summary of the frequency of disturbance is provided in **Table 4.5-5, Summary of Flood Disturbance Frequencies for Dominant Wetland and Riparian Habitat Types in the River**. Successional mule fat scrub occupies the active channel and is disturbed annually by flows. This habitat also includes all aquatic features such as infrequent pools and flowing water, as well as most of the emergent wetlands in the river corridor because of the occasional presence of water. In contrast, Cottonwood willow forest is located above the active river channel and is only flooded during infrequent events, which allows large shrubs to become established between disturbance events.



SOURCE: FORMA/Impact Sciences, Inc. – June 2005

FIGURE **4.5-3**

Habitats in the Santa Clara River

32-92•05/06

Table 4.5-5
Summary of Flood Disturbance Frequencies for
Dominant Wetland and Riparian Habitat Types in the River

Habitat	Frequency of Inundation and Disturbance by Flood Flows (years)
Alluvial scrub	20–50
Arroweed scrub	15–20
Cottonwood willow forest	15–20
Mule fat scrub	10–15
Successional mule fat scrub	Annually
Willow woodland	20–30
Willow scrub	10–15

Source: Impact Sciences, Inc.

The Santa Clara River provides year-round and seasonal aquatic habitats that are described in **Table 4.5-6, Summary of Aquatic Habitats in the Santa Clara River**. All aquatic habitats are subject to periodic disturbances from winter flood flows. These flows inundate areas that are dry most of the year. They also carry and deposit sediments, seeds, and organic debris (e.g., stems, downed trees). New sandbars are formed and old ones are destroyed. Stands of vegetation are eroded by high flows, and new areas are created where vegetation becomes established by seeds or buried stems. Flows can change the alignment of the low flow channel, the number and location of pools, and the depth of pools when flows are present. In years with low winter flows, there may be very little change in the aquatic habitats of the river. In such years, wetland vegetation along the margins of the low flow channel would increase. In high flow years, this vegetation would be removed, but would become re-established during the spring and summer due to natural colonization processes. As can be seen, the aquatic habitats of the river are in a constant state of creation, development, disturbance, and destruction. The diversity of habitat conditions in the river at any one time supports a variety of aquatic invertebrates, aquatic plants, and fish when flows are present.

Table 4.5-6
Summary of Aquatic Habitats in the Santa Clara River

Habitat Type	Description	Source of Water	Frequency of Disturbance
Low-flow channel	Highly variable depth, dimensions, and locations. Emergent wetlands form along edges each spring and summer. Mostly sandy substrate with unstable banks. Mostly exposed runs and scattered riffles. Shallow depth (<1 foot [ft]).	Year-round treated effluent and winter runoff.	Annual disturbance from flood-related flows. Daily changes in water depth and flow due to variable effluent flows.
On-channel pools	Small, scattered pools (less than 20 ft long) that form in the main channel in response to debris dams or sandbars. Emergent wetlands and young woody willows along margins. Shallow depths (<1 ft).	Year-round treated effluent and winter runoff.	Annual disturbance from flood-related flows. Daily changes in water depth and flow due to variable effluent flows.
Off-channel pools	Highly variable size. Generally < 2-ft depth. Vegetation along the margin may be dense emergent or riparian shrubs, or in some areas, absent.	Groundwater seepage.	Inundation by flood flows every 1–2 years.
Road crossing ponds and plunge pools	Six at-grade river crossings create upstream ponds and downstream plunge pools with depths of 3 feet. Aquatic vegetation along the margins.	Year-round treated effluent and winter runoff.	Annual disturbance from flood-related flows. Crossings are re-built every year.
Winter secondary channels and overflow areas	Highly variable areas where winter flood flows occur when the low-flow channel is full. Ranging from discrete channels to sheet flow areas. Usually containing young mule fat scrub.	Winter flood-related flows. Ephemeral aquatic features. May only persist for several days to weeks after a flood.	Inundation and scouring every 1–2 years.
Tributary channels	Highly variable channels that convey water from tributaries to the river channel. Usually small channels with slow moving water, except during the winter. Often densely vegetated with wetlands.	Winter flows, and occasional seepage flow from side canyons. Ephemeral flows.	Disturbance each year from flood flows in the tributaries.

Source: Impact Sciences, Inc.

The year-round effluent-dominated flows in the river have enhanced the aquatic habitats and species in the river. Under natural conditions, there would be very little, if any, open water in the river during the summer. The presence of a year-round source of water provides more habitat for aquatic species and fish, and thereby supports greater populations than would occur under natural conditions. Larger

populations in the project area enhance the probability of these species persisting during or after adverse events, such as significant droughts or catastrophic flooding.

(1) Sensitive Species and their Habitats

When there are or have been flows in the river, sensitive aquatic species known to occur along this stretch of the river include unarmored threespine stickleback, arroyo chub, and Santa Ana sucker. The stickleback occurs in quiet water areas along the low flow channel, on- and off-channel ponds. They prefer herbaceous and backwater areas with cool and clear water conditions. Stickleback are weak swimmers and many are washed away in winter floods. The arroyo chub and Santa Ana sucker occur in all aquatic habitats of the river. Chubs prefer slow moving water with muddy bottoms, while suckers occur in narrow channels with a range of flow conditions. All three are within the portions of the river adjacent to the project.

The least Bell's vireo nests in willow woodlands west of the site on lower to middle stream terraces, and forages throughout the riparian corridor for insects. Nesting pairs have been sighted regularly both upstream and downstream of the tract map site, most recently during 2004 bird surveys (Guthrie, 2004). The site provides suitable habitat for the vireo.

Sensitive reptile species that are known to occur on the site include Southwestern pond turtle and two-striped garter snake. The Southwestern pond turtle requires streams, ponds, freshwater marshes or lakes with growth of aquatic vegetation. This species is found in perennial and intermittent streams having rocky or sandy beds and artificially created aquatic habitats containing dense vegetation. This species was observed in the reach of the Santa Clara River adjacent to the tract map site and river and riparian habitats bordering the project provide suitable habitat (Compliance Biology, 2004).

Other sensitive aquatic species that are not known to occur at the project site, but could potentially colonize the river habitats in the greater region where more favorable conditions exist include the arroyo toad and California red-legged frog. These species have been identified as potentially occurring on the project site. Focused surveys conducted on the site failed to detect the presence of the arroyo toad on the project site. Technical reports documenting the methods and results of focused surveys are included within **Appendix 4.5**.

The abundance and variety of riparian and wetland habitats that support the foregoing sensitive species are due largely to the natural dynamic riverine processes that occur unimpeded in the Santa Clara River corridor. The continual creation and destruction of habitats due to flooding and drought periods provides a mosaic of different types and ages of habitats. This mosaic is a key element in sustaining the habitat of the sensitive species.

The wide floodplain of the river at the project site facilitates the deposition of debris and meandering of the channel. Additional descriptions of the stickleback, arroyo toad, red-legged frog, southwestern pond turtle and two-striped garter snake and their habitats are presented below.

(a) Unarmored Threespine Stickleback

The unarmored threespine stickleback was designated a federally Endangered species in 1970 (USFWS, 1985) and a state Endangered species in 1971. Populations are restricted to three sections of the upper Santa Clara River including the Newhall Ranch reach, which represents the downstream demarcation of the unarmored species. Currently, critical habitat for unarmored threespine stickleback has not been formally designated under the Endangered Species Act.

The fish is a small, largely annual fish that requires shallow, slow, marginal stream flows with abundant aquatic vegetation for cover. The male guards territories and builds a small nest of decaying vegetation where he guards the eggs until they hatch. Large numbers of stickleback can exist in the summer and fall with the long breeding season in Southern California, and breeding can occur almost all year in dry years when a stream is minimally disrupted by storm flows. Up to a few hundred stickleback per 10 meters of stream can exist under optimum conditions. Strong storm flows usually severely decimate the population until the streams stabilize in spring and the numbers can build up again.

Other populations within the Santa Clara River water shed occur upstream of the project both in Soledad Canyon above Lang Station (about 12 miles upstream) and in San Francisquito Canyon from just below Drinkwater Reservoir upstream to the vicinity of the old St. Francis Dam location (about 11.5 miles upstream of the river). San Francisquito Creek actually enters the Santa Clara River approximately 3 miles upstream of the project near the upper end of the downstream unarmored population. Recently, a population was discovered in upper Bouquet Canyon (Jonathan Baskin, personal communication) about 11 miles above its mouth at the Santa Clara River. Perennial flows occur in the Santa Clara River downstream of the Saugus and Valencia Water Reclamation Plants, which discharges tertiary treated effluent immediately downstream of the Bouquet Canyon Road Bridge over the Santa Clara River. These populations are located upstream of the project and the hydrology and habitat where these populations are situated are clearly not affected by the project.

ENTRIX Survey Results

The entire reach of the Santa Clara River from the mouth of Salt Creek to the Castaic Junction was surveyed on March 31 and April 1, 2004. An additional survey was conducted on November 8, 2004 in the Santa Clara River and Castaic Creek from the mouth to the SR-126 bridge along the tract map site. The surveys focused mainly on evaluating habitat conditions within these reaches and in establishing the

relative proximity from the stream side project boundary to in-stream habitats. This work consisted of visual habitat assessments documented by field photographs with special reference to unarmored threespine stickleback and other fish. Collecting was conducted with a small seine (1.8 X 1.2 meters, 3 mm mesh/6 X 3 feet, 0.125 inch mesh) and aquarium dip nets in habitats that could potentially contain stickleback. Further upstream, below the approved Commerce Center Drive Bridge crossing of the Santa Clara River and Castaic Creek near the I-5 bridge, additional surveys were conducted on December 16, 2004. One last survey was conducted for the reach of the river adjacent to the Landmark Village tract map site on February 1, 2005 to document and evaluate habitat changes associated with the large storm flows associated with recent heavy rains.

The March 31/April 1 survey took place during relatively high spring flows so the river had recently been scoured and fresh sediments were present. Also, virtually all marginal herbaceous vegetation and other cover had been washed out along much of the river. Due to an unusual set of strong October rainstorms, the river was also scoured out during the visits in November and December. Typically, the November and December collections would precede any high flows, marginal herbaceous vegetation would be well developed, and fish would be abundant. Due to the early storms, the habitat conditions noted during the ENTRIX surveys were comparable to those normally associated with early spring conditions. In some drought years, the river goes without being substantially scoured out and fish can remain abundant all year. For the ENTRIX surveys, the habitat was more or less in early spring scoured conditions.

During the March 31/April 1 survey, the river was running a visually estimated 30–40 cfs and was turbid with visibility to about 50 centimeters (cm). Some small spring tributaries and isolated pools were clear. The water temperature ranged from 22–26 degrees Celcius (°C) and at least four areas of upwelling with water at 18–20 °C. The substrate was variously sand, gravel, and cobble and 10–40 percent of the margins of the river had some vegetative cover such as herbaceous vegetation, debris, or overhanging trees or bushes. This marginal vegetation was just beginning to develop, as was green algae in the water. About 30–40 percent of the habitat was low to high gradient riffles with the remaining being runs. Eight to ten deeper, standing or backwater pools, more than 1 meter deep, were seen near large obstructions. In the area of the mouth or delta of Castaic Creek in the Santa Clara River, a small flow entered the main river with a few associated pools and backwaters. However, it was emerging from the streambed a few hundred meters upstream since the main Castaic Creek was dry farther upstream. In about 30 seine hauls and 140 dips with aquarium dip nets, throughout the stretch examined over the two days, no stickleback were taken or seen. Arroyo chubs were abundant, and one Santa Ana sucker was taken. Larval arroyo chubs were commonly seen and up to about 15 sucker larvae were observed. Some backwater areas had clawed frogs and about 25 were taken. In addition, several clawed frog larvae were seen in isolated floodplain pools.

The survey on November 8 was restricted specifically to the Landmark Village project area and the well-scoured channel with an estimated 25–30 cfs of flow and sand was about 75 percent of the substrate and gravel, cobble, and rock the other 25 percent in the main river. Visibility was about 50 cm in the main river and some isolated ponds were clearer. Several isolated or spring-fed pools existed in the riparian areas on the north side of the floodplain and were choked with cattails, willows, and arundo. The shores of the main river channel where almost entirely scoured off by the October storms. Ten seine hauls took six half-grown to adult unarmored threespine stickleback in backwater areas of the main river that serve as small refuges during scouring flows. Arroyo chubs were common in the river with over 150 taken, and in the oxbow ponds crayfish (about 20 taken) were common. One large arroyo chub was taken in the oxbow ponds, along with one small-clawed frog. A few mosquito fish were collected and others seen in the protected oxbows. Even though some fish were common or very locally abundant, these were in occasional oxbow and marginal areas with most areas of faster flow devoid of fish.

On the December 18th visit, Castaic Creek was dry all the way to the SR-126 bridge and the only wetted areas were near storm drains that were surveyed earlier in the year and found to be fishless. The Commerce Center Drive Bridge area was similar to the river downstream examined by Swift and Howard, but no fish collections were made and no fish were seen. The Commerce Center Drive Bridge is upstream of the Landmark Village project.

Following a severe flood event in January 2005, ENTRIX biologists conducted a one-day reconnaissance survey of the project reach to evaluate the response of habitat conditions. Generally, plant and animal life had been flushed from the active stream channel. Riparian and aquatic vegetation along the stream margins had been scoured. Few or no aquatic insects were observed during numerous spot inspections. The streambed also aggraded in many areas, particularly in backwater pools where significant shallowing or complete filling had occurred. Significant deposition of sand and gravel was observed in the forms of lateral and mid-channel bars. Most exotic aquatic species appeared to have been flushed out by the flooding events.

(b) Arroyo Toad

Arroyo toads occupy the margins of permanent and seasonal streams in coastal foothill canyons and valleys and to a limited extent in the desert, but they require extremely specialized and limited microhabitat within that general habitat type. Most spawning occurs in shallow overflow pools adjacent to inflow channels of third and higher-order streams, and during the remainder of the year adults occupy adjacent sand bars and sandy terraces, nearly always within 100 meters of suitable spawning pools. Suitable spawning pools lack suspended silt, aquatic predators, and dense woody bordering vegetation (Sweet, 1993). Suitable bordering sandbars are usually dampened by capillarity and include some

emergent vegetation. The moist substratum keeps metamorphosing juveniles from desiccating during warm weather (Sweet, 1993; Jennings & Hayes, 1994). Suitable terrace habitat includes at least some dense overgrowth, such as California sycamore (*Platanus racemosa*), Fremont cottonwood (*Populus fremontii*), and willows (*Salix* sp.), but the understory is usually barren except for layers of dead leaves (Sweet, 1993). Adult and metamorphosed juvenile arroyo toads are known to forage for various invertebrates around the drip line of large oaks (*Quercus*) and also to forage extensively on ants (Sweet, 1992, 1993). Little is known of arroyo toad winter hibernaculum requirements (USFWS, 1999).

Neither of the museum database queries (CAS, 2004, UC Berkeley, 2004) yielded records of the arroyo toad from the main channel of the Santa Clara River. However, mainstem Santa Clara River CNDDB records for the arroyo toad exist from the "Santa Clara River, just east of Interstate 5" (1994), which is about 2 miles east of the Landmark Village tract map site, and from "Bear Canyon at the Santa Clara River, 6 miles upstream of Solemint," which is about 11 miles east of the project. Arroyo toads were also found recently at the confluence of San Francisquito Creek and the Santa Clara River, about 2.3 miles east of the Landmark Village project (Impact Sciences, 2001). Further, the Aquatic Consulting surveys (2002a) reported arroyo toad tadpoles from pools adjacent to the Valencia WRP and from a pool just upstream of the Landmark Village project area. Among north tributaries to the Santa Clara River, arroyo toads are well-known from the Blue Point area along Piru Creek (CNDDB, LACM, and CAS records); from several sites along Sespe Creek (Ventura County) (CNDDB and LACM records and Sweet [1992]); and from at least one location along Castaic Creek north of Castaic Lake (CNDDB 2004; Compliance Biology, 2004; USFWS 2004). The recent origin of many of the records indicates that the arroyo toad still inhabits suitable habitat within the Santa Clara River basin, including the main channel.

However, although standardized USFWS "protocol" surveys conducted recently within the Landmark Village project site (Impact Sciences 2001; Compliance Biology 2004) showed that all of the components of arroyo toad habitat exist within the Landmark Village project boundaries, these studies did not document the occurrence of arroyo toads within such boundaries. Non-protocol surveys by Aquatic Consulting Services (2002b) identified arroyo toad habitat in the Santa Clara River from the Landmark Village project downstream to the Ventura County line.

ENTRIX Survey Results

The March 31 ENTRIX survey was conducted during daylight hours from just northwest of the Travel Village trailer park along Castaic Creek downstream to the Wolcott Road crossing, with particular attention to the braided Castaic Creek channel complex just upstream of the confluence with the Santa Clara River. A spot survey was also conducted at the Long Canyon crossing downstream of Wolcott Road. Potential arroyo toad spawning habitat in the form of overflow pools with stable gravel or sandbars and nearby terrace vegetation was noted throughout the braided channel, and in the main stem

of the Santa Clara River just downstream of the Wolcott Road crossing on the north and in places on the south sides of the river. Although the water level was fairly high because of winter storm runoff, overflow pools were visible but submerged upstream of the Long Canyon crossing, on the north bank of the river mainstem. No arroyo toads were observed during this reconnaissance surveys, but none would be expected because of the early season and the time of day of the survey.

The November 10 survey was conducted during daylight hours from the junction of Chiquito Creek and SR-126 downstream to the Santa Clara River, then upstream along the mainstem Santa Clara River to the confluence with Castaic Creek, then upstream along Castaic Creek nearly to SR-126. Flows in the mainstem river were lower than they had been the previous March, although they were undoubtedly recently augmented by heavy autumn rains. However, Chiquito Creek was dry between SR-126 and the Santa Clara River, and the Chiquito Creek channel was not incised or otherwise well defined close to the confluence. This suggests that Chiquito Creek flows downstream of SR-126 tend to be very episodic, short term, and sediment-loaded. A long overflow channel was visible along the north side of the Santa Clara River between the Long Canyon crossing and Wolcott Road, but this channel was choked with several generations of emergent vegetation (especially cattails [*Typha*]) and may not be suited to arroyo toad spawning. This is probably the same channel that was submerged but visible during the March 31 survey. The braided complex at the Castaic Creek confluence was mostly dry, but the main channel of Castaic Creek where it parallels and eventually flows into the Santa Clara River just upstream of the Wolcott Road crossing still held substantial water (to about 18 inches depth). How much of this had resulted from the recent rains was not clear. Castaic Creek itself from the braided complex upstream to SR-126 was essentially dry, and overflow channels of the type preferred by arroyo toads as spawning habitat were not evident upstream of the braided complex. However, bordering terrace habitat on the south side of the Santa Clara River and along much of Castaic Creek was clearly well suited to arroyo toads. No arroyo toads were observed during this survey, but none would be expected because of the lateness of the season, the time of day of the survey, and the prevailing cool weather.

Overall, the surveys confirmed that limited potential arroyo toad spawning and foraging habitat exists along the Santa Clara River and possibly Castaic Creek within the Landmark Village project area boundaries. However, the results of the focused USFWS protocol surveys cited above indicate that arroyo toads are very scarce or absent along these reaches, and along the Santa Clara River downstream to the Los Angeles-Ventura County line (Aquatic Consulting Services, 2002).

Following a severe flood event in January 2005, ENTRIX biologists conducted a brief one-day reconnaissance survey of the project reach to evaluate the response of habitat conditions. Generally, plant and animal life had been flushed from the active stream channel. Riparian and aquatic vegetation along the stream margins had been scoured. Few or no aquatic insects were observed during numerous spot

inspections. The streambed also aggraded in many areas, particularly in backwater pools where significant shallowing or complete filling had occurred. Significant deposition of sand and gravel was also observed in the forms of lateral and mid-channel bars. Most exotic aquatic species appeared to have been flushed out by the flooding events.

On April 13, 2005, the USFWS issued its Final Designation of Critical Habitat for the arroyo toad. Unit 6, covering a portion of the Newhall Ranch reach of the Santa Clara River and once considered for inclusion in the critical habitat Area, has been removed from the Final Designation of Critical Habitat. The acreage was reduced because the USFWS eliminated the areas of marginal quality in the critical habitat that USFWS did not expect the toad to use, including developed areas, roads and busy thoroughfares, areas with too high of an altitude, and inaccessible streams. Also, USFWS modified the distance away from a stream that is necessary to the toad as critical habitat, from 4,921 feet to 1,640 feet, which drastically reduced the amount of acreage necessary for critical habitat. Lastly, USFWS identified some areas previously considered to be essential to the critical habitat of the toad as no longer essential.

(c) California Red-Legged Frog

California red-legged frog habitat components include spawning pools and their terrestrial borders, spring/summer refuges, and subterranean hibernation sites. These may be combined at single sites or they may be separated by aquatic or terrestrial "dispersal corridors" (Hayes & Jennings, 1989; Jennings & Hayes, 1994). Spawning pools are the ecologically central components of California red-legged frog habitat, because they support all elements of the species' reproductive biology and also provide forage for all red-legged frog life stages. Spawning pools are typically permanent or extended seasonal (through August) ponds or stream/spring pools of 0.7–1.2 meters in depth, with dense bordering, emergent, and surface vegetation. Such pools may be as small as one square meter in surface area, with no known upper area limit. Always present at spawning habitat is a large complex invertebrate fauna for juvenile forage, extensive submerged herbaceous and algal vegetation for tadpole forage, and small terrestrial mammals such as voles (Microtus) that are an important component of adult frog forage (Jennings & Hayes, 1994). Most suitable ponds are also partially to fully sunlit with mud or silt substrata, environmental factors essential to promote dense floating and emergent vegetation. Large populations of exotic predators such as bullfrogs and exotic centrarchid fish are usually absent from California red-legged frog spawning pools.

Newly constructed or impounded ponds rarely support California red-legged frog populations—most spawning sites have existed in stable, relatively undisturbed form for decades (Barry, unpublished; Hayes & Jennings, 1989). Likewise, red-legged frog spawning habitat is usually absent from river bottomland, presumably because high springtime flows would disrupt spawning success by scouring spawning pools

and discouraging long-term aquatic vegetative growth. California red-legged frogs are vulnerable to early season floods because they spawn in early to mid-winter.

Adult California red-legged frogs may move in late spring and summer to shaded pools along streams where undercut banks and exposed root masses offer secure refuges. However, an isolated summer refuge component appears not to be critical to population survival because many adult frogs may be found throughout the summer at spawning pools. Hibernaculum preferences probably include lentic substrata (pond bottoms) or any secure subterranean site near spawning or summer refuge habitat, such as rodent burrows, vegetation mats, and root channels.

There are no CNDDB records for the California red-legged frog from the Santa Clara River watershed, Los Angeles and Ventura Counties. However, the Museum of Vertebrate Zoology (UC Berkeley, 2003) lists 17 specimens from Soledad Canyon (Santa Clara River channel) in its collection, from as recently as 1953. More precise locality data are unavailable. The California Academy of Sciences (CAS 2003) also lists a Soledad Canyon specimen, from 1950. The nearest specific locality to the project site is some 15 miles upstream near the confluence with Agua Dulce Creek. Jennings & Hayes (1994) and the CNDDB indicate that this species still occurs in the Santa Clara River watershed, in sites along San Francisquito Creek 5–10 miles northeast of the project site, and in tributaries to the Santa Clara River in Ventura County. The closest documented Ventura County occurrence is in Piru Creek 4.5 miles north of Piru, about 10 miles west to north-west of the project site. (USFWS, 2002) Potential spawning habitat for California red-legged frogs also exists in some of the small tributaries that flow north into the Santa Clara River, within and near the project boundaries. Further, the verified records upstream and downstream of the project site place the project site within the distribution of the California red-legged frog along the Santa Clara River.

ENTRIX Survey Results

The ENTRIX field evaluations indicate that potential spawning or summer habitat for the California red-legged frog is absent from the main channel of the Santa Clara River within the project site. Further, the various USFWS protocol surveys for arroyo toads conducted along the Santa Clara River from Santa Clarita to the Ventura County line during the past few years would probably have found California red-legged frogs if they occurred in the mainstem of the Santa Clara River, but none were reported during these surveys. California red-legged frogs generally avoid large river channels with widely fluctuating flows, because such habitat usually does not permit reproductive activity (Jennings & Hayes 1989). For example, episodic winter flooding (typical of the Santa Clara River stream channel) may dislodge egg masses, and subsequent desiccation before the summer (also typical of the Santa Clara River) would kill tadpoles before they could metamorphose. Conversely, during the late winter and autumn, when California red-legged frogs may be most likely to move randomly (USFWS 2002), the mainstem Santa

Clara River channel can be considered potential "dispersal habitat," primarily because adult frogs can survive in the main channel during that season. Potential sources for such frogs are some of the tributary streams and associated marshlands south of the mainstem Santa Clara River.

Following a severe flood event in January 2005, ENTRIX biologists conducted a one-day reconnaissance survey of the project reach to evaluate the response of habitat conditions. Generally, plant and animal life had been flushed from the active stream channel. Riparian and aquatic vegetation along the stream margins had been scoured. Few or no aquatic insects were observed during numerous spot inspections. The streambed also aggraded in many areas, particularly in backwater pools where significant shallowing or complete filling had occurred. Significant deposition of sand and gravel was also observed in the forms of lateral and mid-channel bars. Most exotic aquatic species appeared to have been flushed out by the flooding events.

The 2001 critical habitat designation for the California red-legged frog was vacated by court order, but the USFWS (2004a) re-proposed critical habitat with substantially the same boundaries on April 13, 2004. Neither critical habitat designation included any part of the Santa Clara River or tributaries in the Landmark Village project area.

(d) Southwestern Pond Turtle

Southwestern pond turtles, a California Species of Concern, require exposed permanent or extended seasonal (through August) slow or still water, bordered by or in the vicinity of suitable upland oviposition (egg deposition) habitat. Suitable oviposition areas are usually gently sloping treeless hillsides well above floodplains, with southern or southwestern exposure and clay or possibly sandy soil (Holland, 1991). Eggs are deposited in flask-shaped vertical excavations from late spring through summer, and hatchlings apparently remain in the nest until the following spring (Holland, 1991). All life history stages of post-emergent pond turtles are highly aquatic. Suitable aquatic habitat for adult pond turtles usually includes relatively deep water (at least 0.5 meter) with secure basking sites (logs, exposed banks, etc) within reach of secure subsurface concealment. The aquatic substratum may be silty, muddy, or rocky. Juveniles are generally more secretive than adults and may favor more secure basking habitat such as densely vegetated sections of ponds and stream pools (Barry, unpbl. obs.). A complex invertebrate fauna and relatively high primary productivity typically also characterize southwestern pond turtle aquatic habitat (Jennings & Hayes, 1994). The most important forage for hatchlings is nektonic plankton, but adults utilize a variety of plant and animal forage sources (Bury, 1986).

Southwestern pond turtles are probably distributed throughout the Santa Clara River watershed, wherever there is sufficient permanent or near-permanent water and oviposition sites to support populations. However, the CNDDB includes only two Santa Clara River records of southwestern pond

turtles, from near Castaic Junction (2000) and from downstream near the Ventura County line (1998). Neither of the museum databases includes any Santa Clara River watershed southwestern pond turtle records. Conversely, the Impact Sciences (2001) report states that during those surveys pond turtles were observed numerous times at unspecified sites within the NRMP reaches, presumably where sufficient water existed to satisfy the aquatic habitat requirements discussed previously.

ENTRIX Survey Results

During the March 31, 2004 field reconnaissance survey, ENTRIX biologists observed pond turtles at the confluence of Castaic Creek and the Santa Clara River and at the Long Canyon crossing. The November survey revealed that suitable aquatic habitat remains in the mainstem late in the year (presumably augmented by autumn rains). Neither survey identified specific terrestrial oviposition habitat, but moderate west- and south- facing meadowland slopes in the canyon openings appear to supply oviposition habitat requirements. Some potentially suitable oviposition habitat may also occur along the Castaic Creek embankment between the confluence with the Santa Clara River and I-5. However, firm clay-like soils, a possible oviposition site requirement (Holland, 1991), seem to be absent from the mainstem channel, including the terrace on the north river bank.

Following a severe flood event in January 2005, ENTRIX biologists conducted a one-day reconnaissance survey of the project reach to evaluate the response of habitat conditions. **Figure 4.5-4**, **Channel Conditions Following Severe Flooding**, depicts the state of the channel conditions following this storm. Generally, plant and animal life had been flushed from the active stream channel. Riparian and aquatic vegetation along the stream margins had been scoured. Few or no aquatic insects were observed during numerous spot inspections. The streambed also aggraded in many areas, particularly in backwater pools where significant shallowing or complete filling had occurred. Significant deposition of sand and gravel was also observed in the forms of lateral and mid-channel bars. Most exotic aquatic species appeared to have been flushed out by the flooding events. Based on this survey, the observed flood event would have flushed out most aquatic species due to its size and severity.

(e) Two-Striped Garter Snake

The two-striped garter snake occurs from southern Baja California north to central Monterey and western Fresno Counties (Rossman and Stewart, 1987). These snakes are found most frequently along the margins of rocky and sandy streams with fairly fast water, and they were formerly ubiquitous and abundant in association with such habitat throughout coastal southern California (Jennings & Hayes, 1994). The two-striped garter snake is a California Species of Concern because most of its characteristic habitat in the lowlands of Southern California has been severely degraded and consequently this species has

Castaic Creek/santa Clara River
Confluence Photographed in
November 2004
Prior to Winter 2005 Floods

Castaic Creek Upstream of Confluence
Following January 2005 Flood
(Note Vegetation Scoured Throughout)

SOURCE: ENTRIX – 2004, 2005

FIGURE **4.5-4**

Channel Conditions Following Severe Flooding

disappeared from substantial portions of its range (Stewart 1968, Jennings & Hayes, 1994). Two-striped garter snakes are believed to feed almost exclusively on fish and tadpoles, which they catch in shallow water by stalking, ambushing, or by cornering against submerged rocks or root masses (Jennings & Hayes, 1994; Barry, unpbl. obs). Thus, although fundamentally terrestrial, they depend entirely on aquatic habitat for forage.

Although the preferred microhabitat for this species is poorly understood, the greatest numbers seemingly occur in areas along stream courses where the combination of in-stream rocky or other cover, terrestrial vegetative or other cover, and easy access to aquatic forage species of the appropriate size range exists (Barry unpbl obs.). For example, along relatively undisturbed reaches of the San Gabriel River in the San Gabriel Mountains these snakes are frequently found along relatively shallow rocky pools that laterally border somewhat deeper reaches, and they also frequent exposed root masses associated with pools created by the fallen trees. Smaller fish and tadpoles are typically abundant and easy for the snakes to capture in the shallow sections and the root mass pools, and larger fish occur in the adjacent deeper sections (Barry, unpbl. obs.). Shoreline rocks, burrows, and dense vegetation (including root masses) offer excellent terrestrial cover, and submerged rocky aggregations offer aquatic refugia. Thus, although these wary snakes are often abundant and easily observed in such habitat, they are difficult to capture because they rarely stray far from secure cover and they flee rapidly into the water when approached (Barry, unpbl. obs.).

Two-striped garter snakes are active nearly year-round in the Southern California lowlands, but in higher elevations they hibernate for a variable time span during the winter, and emerge as early as February. They usually mate soon after emergence, but females of this species can become gravid with sperm stored from matings that occurred as long as two years previously (Stewart, 1972). Two-striped garter snakes bear live young in litters that average 8–10, usually in late July (Rossman and Stewart, 1987). Mortality in newborns is probably fairly high, in particular because newborns may have difficulty securing small amphibian or fish prey in disturbed waterways (Jennings & Hayes, 1994; Barry unpbl. obs.).

Santa Clara River records for the two-striped garter snake in the Newhall Ranch region are absent from the CNDDB and the museum collections. However, the various reports reviewed for this document and personal communications with local biologists indicate that this species occurs somewhat commonly along this reach of the river.

ENTRIX Survey Results

During the March 31, 2004 survey, the ENTRIX biologists observed one two-striped garter snake near an exposed root mass along the braided confluence of Castaic Creek and the Santa Clara River. Exposed root masses are particularly favored by these snakes because they offer secure shelter and they tend to

form small shallow backwater pools where small fish congregate and are easy for the snakes to capture (Barry, unpbl. obs.). The November 10, 2004 survey revealed that such isolated complex refugia are very limited along the reach from Castaic Creek to Chiquito Creek, but the survey also revealed that low dense bankside vegetation, another type of favored retreat, occurs almost continuously along the north side of the river from Chiquito Creek upstream nearly to the Wolcott Road crossing. Much of this vegetation is associated with overflow pools that entrap fish during the late spring and early summer, which undoubtedly attracts two-striped garter snakes in greater than typical numbers to exploit this resource. However, subsequent pool drying eliminates this resource and garter snakes consequently disperse, to return during the following spring when the forage resource is renewed (Barry, unpbl. obs.).

Following a severe flood event in January 2005, ENTRIX biologists conducted a one-day reconnaissance survey of the project reach to evaluate the response of habitat conditions. Generally, plant and animal life had been flushed from the active stream channel. Riparian and aquatic vegetation along the stream margins had been scoured. Few or no aquatic insects were observed during numerous spot inspections. The streambed also aggraded in many areas, particularly in backwater pools where significant shallowing or complete filling had occurred. Significant deposition of sand and gravel was also observed in the forms of lateral and mid-channel bars. Most exotic aquatic species appeared to have been flushed out by the flooding events. Based on this survey, the observed flood event would have flushed out most aquatic species due to its size and severity.

6. PROPOSED PROJECT IMPROVEMENTS

a. Flood Protection

The proposed project would provide flood, erosion control and drainage improvements that would occur in and adjacent to the River Corridor SMA/SEA 23, including bank stabilization and various storm water drainage outlet structures. The project also includes construction of Long Canyon Road Bridge across the river, which would involve bridge abutments and piers. The project utilizes innovative techniques to meet the requirements of flood control while maintaining the natural resources within the Santa Clara River. Traditional flood control techniques in use within Los Angeles County rely upon reinforced concrete or grouted rock rip-rap to minimize erosion while maximizing the volume of flood flows carried by the drainage. While exceedingly efficient as a flood control technique, this approach retains none of the natural resource value.

In contrast, the drainage plan for the project provides drainage and flood control protection to developed uses while preserving the river as a natural resource. **Figure 4.5-5**, **Bank Stabilization – Typical Cross Section**, depicts typical cross sections for the buried bank stabilization concept. As shown, this approach uses soil cement that is buried beneath the existing banks of the river. Disturbed areas are then revegetated with native plant species maintaining the natural habitat presently found along the river.

A total of approximately 11,000 LF of bank stabilization will be constructed on the north side of the river plus an additional 6,400 LF of stabilization would be constructed on the south side. In total approximately 18,600 LF would be provided with bank stabilization. Refer to **Figure 4.5-6, Location of Long Canyon Road Bridge and Proposed Bank Stabilization Locations**, for a graphic depiction of the location of buried bank stabilization. Soil cement is used to protect residential and commercial development and the Long Canyon Road Bridge. The soil cement is primarily necessary to protect the proposed residential and commercial development on the project site, the Long Canyon Road Bridge, and the property immediately downstream of the project site from potential erosion due to project implementation. In addition 6,600 linear feet of TRMs (or other non-hardened bank protection methods) would be installed downstream of the project site along the northern edge of the river corridor to protect the utility corridor from Chiquito Canyon to San Martinez Grande Canyon. An additional approximately 1,200 LF of soil cement bank stabilization is located downstream of the project site, and is designed to protect the WRP. The bank stabilization related to the WRP was approved and analyzed at a project-level in the Newhall Ranch Specific Plan Program EIR. Locations where grouted rip-rap or reinforced concrete would be used are limited to outlet structures, access ramps, or bridge abutments.

The drainage plan utilizes several criteria that are to be implemented by projects that develop within the Specific Plan area. The primary criteria used to design the Landmark Village Drainage Concept and the discussion of how the Landmark Village Drainage Concept compares to these criteria is provided below:

- **Flood corridor must allow for the passage of Los Angeles County capital flood flow without the permanent removal of natural river vegetation (except at bridge crossings).** The Landmark Village EIR **Section 4.4, Biota**, discusses impacts to riparian plant communities in detail.

- **The banks of the river will generally be established outside of the "waters of the United States" as defined by federal laws and regulations and as determined by the delineation completed by the ACOE in August 1993.** As illustrated on **Figure 4.5-6**, the proposed bank stabilization locations along the main stem of the Santa Clara River are predominantly located outside of the ACOE jurisdiction. The entire Landmark Village project, inclusive of the utility corridor and borrow site, would permanently impact approximately 0.78 acres of land under ACOE jurisdiction within the Santa Clara River, as well as 0.60 acres of tributaries to the Santa Clara River. The Newhall Ranch Specific Plan Program EIR contemplated this impact.

- Where the ACOE delineation width is insufficient to contain the capital flood flow, the flood corridor will be widened by an amount sufficient to carry the capital flood flow without the necessity of

permanently removing vegetation or significantly increasing velocity. The Landmark Village Drainage Concept proposes soil cement on the north side of the river near the confluence with Castaic Creek on agricultural land, north of the existing riparian river corridor. The land located between the existing river corridor and the newly created stabilized bank would be excavated to widen the existing channel, which would increase the area available within the channel and increase the capacity of the river to convey the passage of flood flows.

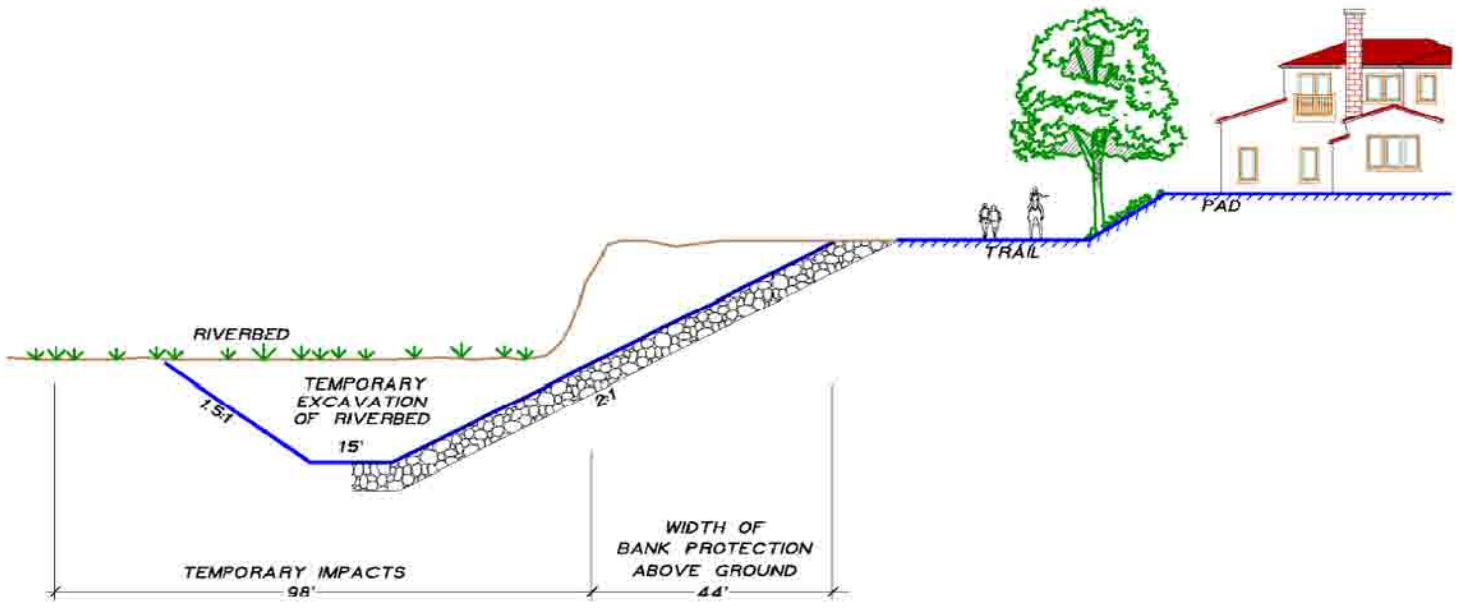
- **Soil cement would occur only where necessary to protect against erosion adjacent to the proposed development. Where existing bluffs are determined to be stable and there is no adjacent proposed development, no bank protection will be built.** In total, approximately 63 percent of the river corridor would be protected with flood protection improvements, while 37 percent of the corridor would remain in a natural state. Approximately 76 percent of the area proposed for flood control protection improvements would consist of buried bank protection. Approximately 20 percent would consist of TRMs, while roughly 4 percent would consist of rip-rap or reinforced concrete.

Installation of soil cement in the vicinity of the approved Newhall Ranch WRP would likely be installed prior to implementation of the project, and impacts of this action were previously evaluated at the project level in the certified Newhall Ranch Specific Plan Program EIR.

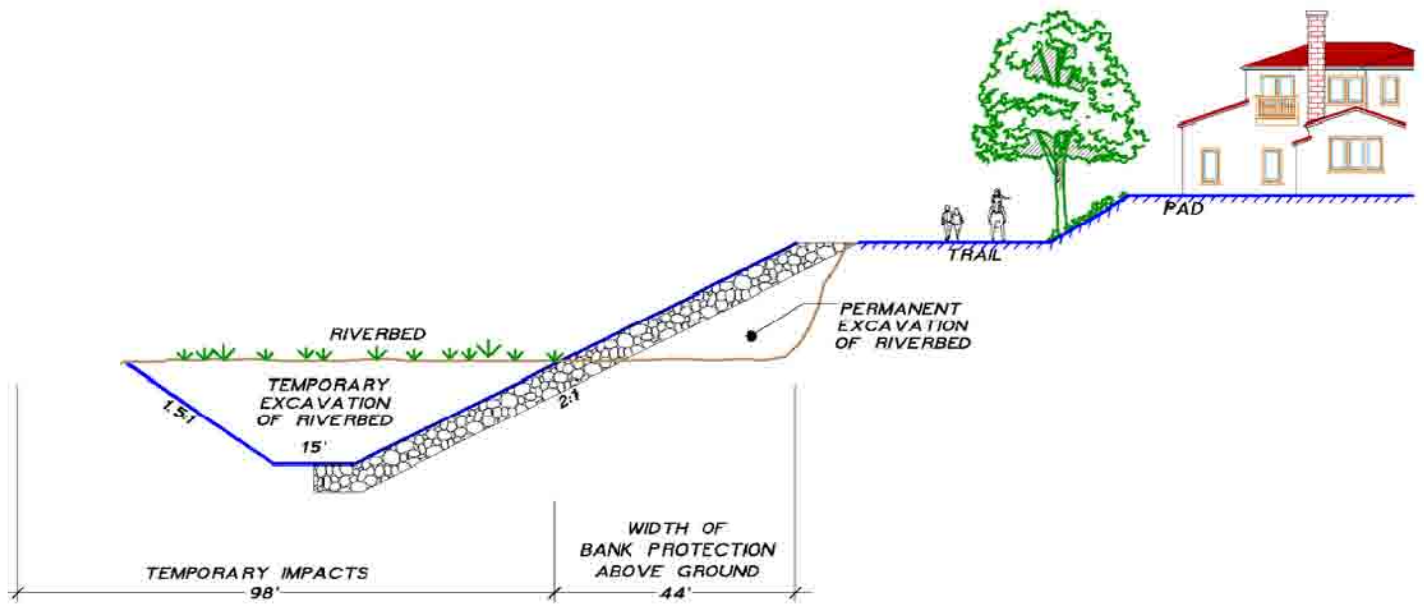
b. On-Site Drainage Control

At project buildout, runoff from the six drainage areas that drain through or onto the project site, as defined by the Psomas *Landmark Village Drainage Concept Report* (March 14, 2005), would continue to flow through the project site to the river. Runoff from the developed portions of the project would be channeled through the proposed storm water conveyance system and discharged to the river after passing through various debris and water quality basins. As required in the Los Angeles County Department of Public Works memorandum entitled, "Level of Flood Protection and Drainage Protection Standards," all on-site drainage systems carrying runoff from developed areas are to be designed for the 25-year design storm (urban flood), while storm drains under major and secondary highways, open channels (main channels), debris carrying systems, and sumps are to be designed for the capital flood.

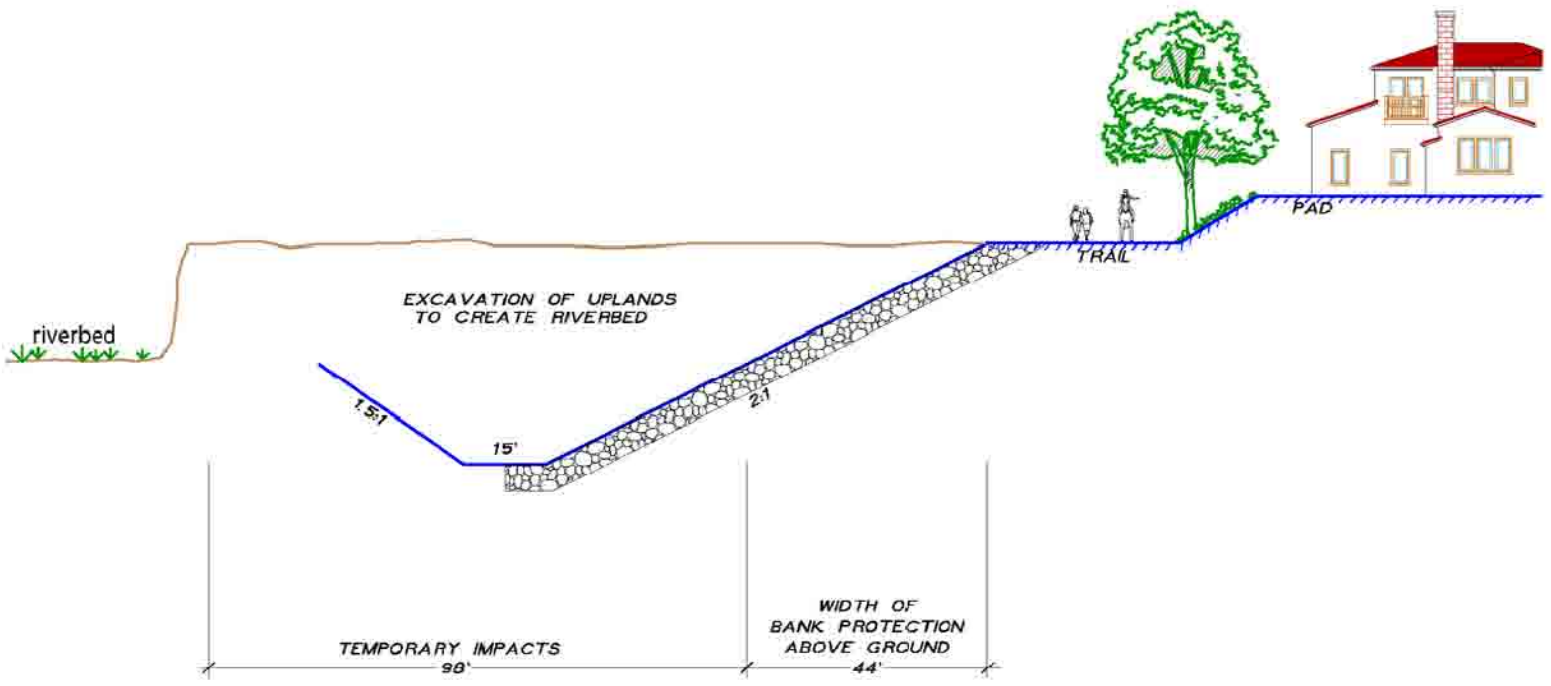
Runoff from the developed portions of the project would be conveyed through the project site using a combination of storm drains, vegetated swales, catch basins, retention/detention basins, water quality basins, outlet structures, and debris basins.



Section A
No Permanent Loss of Riverbed, Only Temporary Impacts



Section B
Permanent Loss of Riverbed and Temporary Impacts



Section C
No Permanent Loss of Riverbed and No Temporary Impacts

35.0 17.5 0 35
APPROXIMATE SCALE IN FEET

SOURCE: FORMA – March 2002

FIGURE **4.5-5**

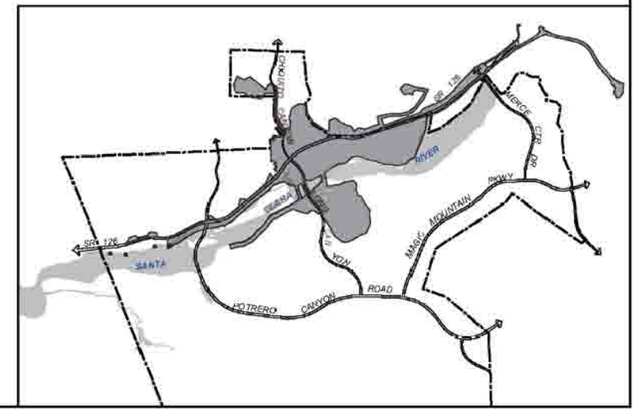
Bank Stabilization – Typical Cross Section

Legend:

- Residential Project Boundary
- ACOE Jurisdiction Limits
- Proposed Soil Cement Bank Protection
- Proposed Utility Corridor Bank Protection

1200 600 0 1200

APPROXIMATE SCALE IN FEET



SOURCE: PACE Engineering – August 2006

FIGURE **4.5-6**

Location of Long Canyon Road Bridge and Proposed Bank Stabilization Locations

32-92•10/06

7. PROJECT IMPACTS

a. Significance Threshold Criteria

Based on the thresholds of significance identified in Appendix G of the 2005 *California Environmental Quality Act (CEQA) Guidelines*, the proposed project would result in a significant impact due to floodplain modifications if the project would:

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

- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on or off-site.

The above criteria are subjective and difficult to apply, but they will be considered in the context of modifications to the floodplain that would cause a significant impact to biological resources if changes in hydraulic conditions in the Santa Clara River would: (1) cause widespread and chronic scouring due to increased velocities in the channel bed that removes a significant amount of aquatic, wetland, and riparian habitats from the river channel; (2) substantially modify the relative amounts of these different habitats in the river, essentially altering the nature and quality of the riverine environment; (3) directly remove sensitive habitat by channelization; and/or (4) substantially effect Rare, Endangered, Threatened or sensitive species (collectively, sensitive species).

b. Construction-Related Impacts

The construction-related biological impacts of the proposed project on river corridor habitats and sensitive species are addressed in **Section 4.4, Biota**, of this EIR. Given that construction along the river corridor would likely occur during low or no flow periods, when aquatic special-status species would not be present, any impacts due to changes in river hydraulics is expected to be temporary and not significant.

c. Operation-Related Impacts

The focus of the impact analysis is on the biological consequences of the project-related post-development changes in hydraulic conditions along the river. Key hydraulic impacts that may occur include effects on floodplain boundary and areas, discharge (i.e., river flow amount), flow velocities, and sediment transport and deposition patterns. Changes in these conditions can affect the nature, location, and amount of aquatic, wetland, and riparian habitats along the river, and the sensitive species that use these habitats.

(1) Predicted Hydraulic Conditions

(a) Impact on Flows

Implementation of the project would affect the previously described on-site natural tributary drainage channels. While existing storm water discharges from the project site are not concentrated into centralized outlet structures (as proposed by the project), surface water flows naturally form paths of least resistance and concentrate at existing topographic depressions or cut channels that serve as concentrated discharge locations. Therefore, while the project includes development of a storm drain system with predefined outlets, this condition will not significantly alter existing drainage patterns. The project also includes the use of energy dissipaters at the storm drain outlets to the river. Installation of these improvements would reduce the energy that can cause erosion at the outlets.

Creation of impervious surfaces associated with project development would increase the amount of clear flow runoff from the site. Burned and bulked runoff and debris volumes, however, would be reduced because the developed portions of the project site would be covered with impervious surfaces and non-erodible vegetation, and because debris basins are proposed just upstream of the project site that would reduce the amount of debris and sediment in the runoff. The post-development runoff quantities are provided in **Table 4.2-6** found in **Section 4.2**, **Hydrology**, of this Draft EIR. This information indicates that post-development discharge is predicted to total 795 cfs for the project site during a 50-year storm, which is a 36 cfs reduction in 50-year flows when compared to pre-development conditions. This reduction in discharge is largely due to project debris basins that would capture upstream bulk flows and allow debris to settle out from the runoff before it enters the storm system through the developed portion of the site. This small change (<1 percent) shows that existing and proposed project conditions are substantially consistent.

(b) Impact on Velocity

Proposed project improvements will encroach upon portions of the river corridor with placement of buried soil cement, TRMs, bridge abutments and piers, storm drain outlets and energy dissipaters. These improvements have the potential to increase water velocities during storm events. Streambed modification is a result of erosion or sediment deposition and can be evaluated as a function of in-stream velocities, which are indicators for potential riverbed scouring.

Because the Santa Clara riverbed is composed of alluvial materials, the non-erodible velocities (velocities below which no erosion would occur) range from 2.5 feet per second (fine gravels under clear flow conditions) to 5.0 feet per second (alluvial silts transporting colloidal materials) (Chow, 1959). Therefore,

a representative velocity of 4.0 feet per second was determined to be the appropriate indicator for potential erosion.

The proposed Long Canyon Road Bridge would be constructed across the river, and would include piers, abutments, and bank protection within the river corridor. In addition, segments of the utility corridor parallel the river and would require protection at certain locations. However, **Figures 4.5-7a** through **4.5-7f** indicate that while localized increases in velocity would occur, particularly at and immediately downstream of the Long Canyon Road Bridge, the project improvements would not cause a significant increase in areas of the river that would be subject to velocities over 4 feet/second during a 2- and 5-year storm event, because flows during these events would be completely spanned by the bridge and bank improvements so they remain unaffected. Additionally, there would be areas of the river where decreases in velocity are experienced during a 10-year through 100-year storm event.

Localized increases at the Long Canyon Road Bridge causes the need for the buried soil cement bank stabilization to extend west of the tract map site along the southern boundary of the river corridor, which is consistent with the bank stabilization improvements described in the certified Newhall Ranch Specific Plan Program EIR. All of these changes are localized within the study area, and no impacts to velocities will occur upstream or downstream of the project.

(c) Impact on Water Surface Elevations

The results of the PACE study indicate that project-related improvements would result in 31 locations where water surface elevation (WSE) changes occur (10 of which exceed 1 foot) and 21 locations where there is a decrease in water surface elevations (1 of which exceeds 1 foot). All of these changes are localized within the study area, and no WSE impacts would occur upstream or downstream of the project. Refer to **Figure 4.5-8a** through **Figure 4.5-8f** which illustrate the locations where the WSE exceeds 1 foot in the post-developed condition for each storm interval.

(d) Impact to River Corridor SMA/SEA 23

As described above, the Newhall Ranch Specific Plan project approvals authorized an adjustment to the existing SEA 23 boundary and permitted Specific Plan development within the revised and approved River Corridor SMA/SEA 23 boundary, including bridge crossings, trails, bank stabilization, development and other improvements. The approved River Corridor SMA/SEA 23 boundary adjustments were intended, in part, to more accurately reflect the location of the sensitive biological resources located within the existing SEA 23.

The effects on flows in the river caused by the introduction of these improvements into the River Corridor SMA/SEA 23 are illustrated above on **Figures 4.5-7a** and **4.5-7b**, which depict areas inundated by flows during high frequency floods (2 and 5 year) and river velocities. As shown, under these conditions, the proposed floodplain modifications would not hinder flows. Instead, these flows would spread across the river channel, unaffected by the bank protection because the river would have sufficient width to allow these flows to meander and spread out as under pre-project conditions. During more infrequent floods (10-, 20-, 50- and 100-year events), river flows would be confined within the river corridor now defined by the bank stabilization (**Figure 4.5-7c** through **4.5-7f**).

Consistent with the findings of the Newhall Ranch Revised Additional Analysis, implementation of the Landmark Village project would not significantly alter river hydrology in the river corridor because the effects associated with the floodplain modifications would be infrequent and would not substantially alter flows, water velocities and depths. Under the project, the river would retain sufficient width to allow natural fluvial processes to continue.

(2) Biological Impacts of Hydraulic Changes

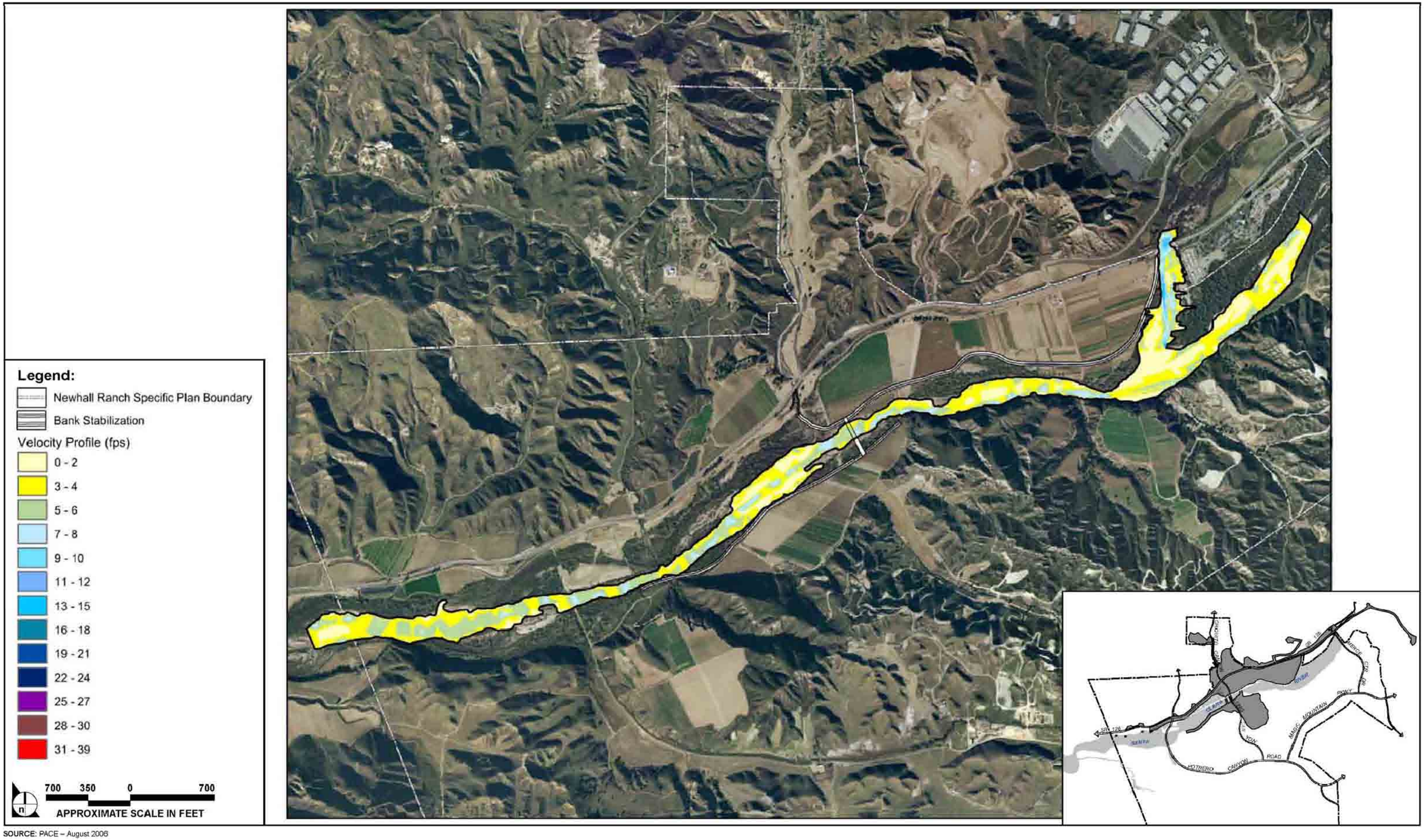
An increase in velocities in the river could result in significant biological impacts if the increase caused (1) widespread and chronic scouring of the channel bed that removes a significant amount of aquatic, wetland, and riparian habitats from the river channel; and/or (2) substantial modification of the relative amounts of these different habitats in the river, essentially altering the nature and quality of the riverine environment; and/or (3) substantial effects to Rare, Endangered, Threatened or sensitive species.

(a) Impact on Flows

The hydraulic analysis above indicates that implementation of the project would increase clear flows, but decrease burned and bulked flows since project debris basins would capture upstream bulk flows and allow debris to settle out before entering into the river during a given return event. These hydraulic effects would be minor in magnitude and extent (<1 percent), and would not be sufficient to alter the amount, location, and nature of aquatic and riparian habitats in the project area and downstream. Therefore, no significant impacts would occur due to river flows.

(b) Impact on Velocities

The results of the hydraulic analysis indicate that the overall velocities in the river would not change during the frequent storm intervals (i.e., 2- and 5-year events) due to the floodplain modifications associated with the project. Overall, velocities for all return events are not significantly different between existing and proposed conditions at and downstream of the project site.

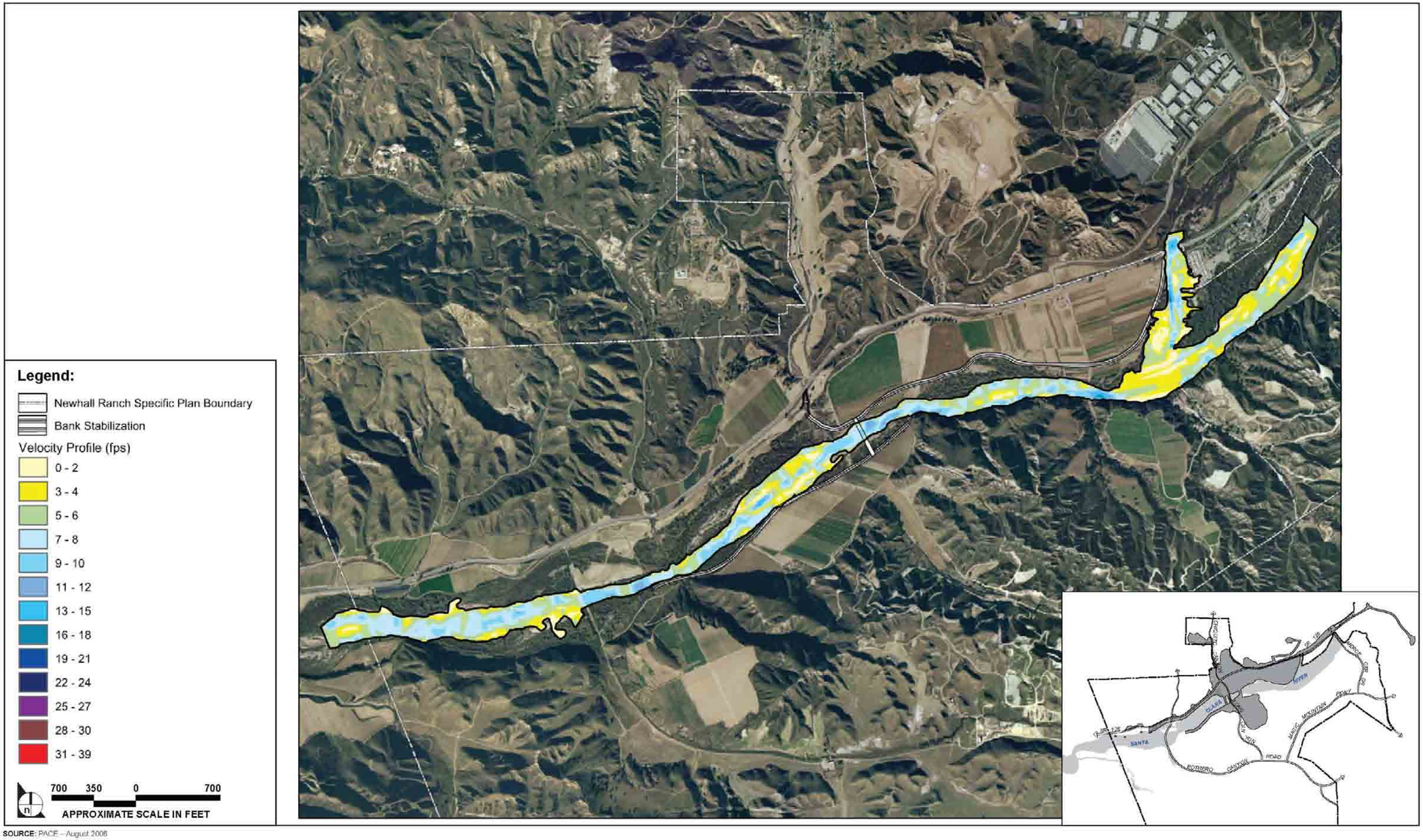


SOURCE: PACE – August 2006

FIGURE **4.5-7a**

Proposed Conditions – Area Inundated by 2-Year Storm Event

32-92•10/06



SOURCE: PACE – August 2006

FIGURE **4.5-7b**

Proposed Conditions – Area Inundated by 5-Year Storm Event

32-92•10/06

Legend:

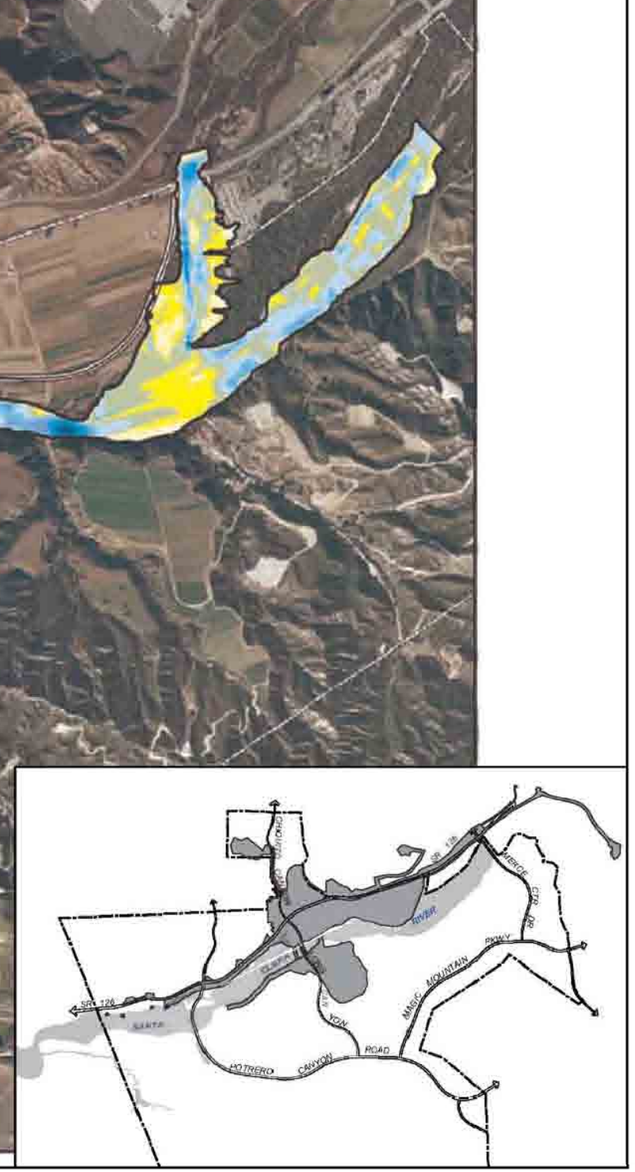
- Newhall Ranch Specific Plan Boundary
- Bank Stabilization

Velocity Profile (fps)

- 0 - 2
- 3 - 4
- 5 - 6
- 7 - 8
- 9 - 10
- 11 - 12
- 13 - 15
- 16 - 18
- 19 - 21
- 22 - 24
- 25 - 27
- 28 - 30
- 31 - 39

700 350 0 700

APPROXIMATE SCALE IN FEET

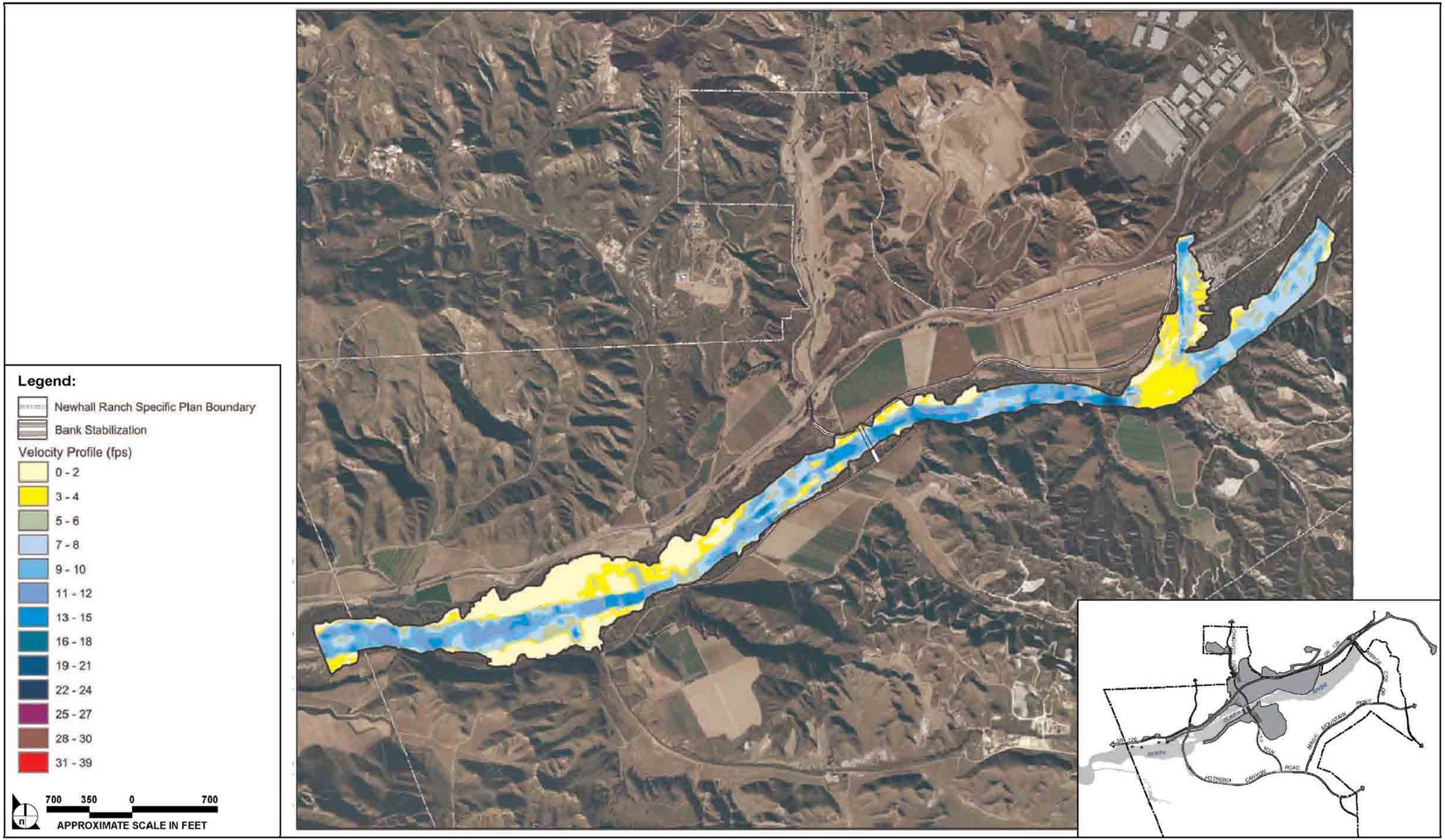


SOURCE: PACE – August 2006

FIGURE **4.5-7c**

Proposed Conditions – Area Inundated by 10-Year Storm Event

32-92•10/06



SOURCE: PACE – August 2006

FIGURE **4.5-7d**

Proposed Conditions – Area Inundated by 20-Year Storm Event

32-92•10/06

Legend:

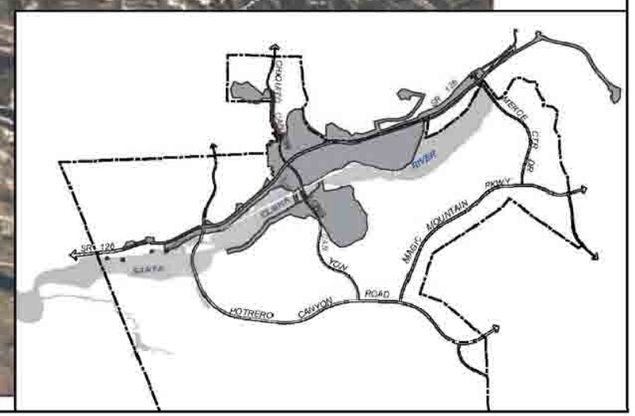
- Newhall Ranch Specific Plan Boundary
- Bank Stabilization

Velocity Profile (fps)

- 0 - 2
- 3 - 4
- 5 - 6
- 7 - 8
- 9 - 10
- 11 - 12
- 13 - 15
- 16 - 18
- 19 - 21
- 22 - 24
- 25 - 27
- 28 - 30
- 31 - 39

700 350 0 700

APPROXIMATE SCALE IN FEET

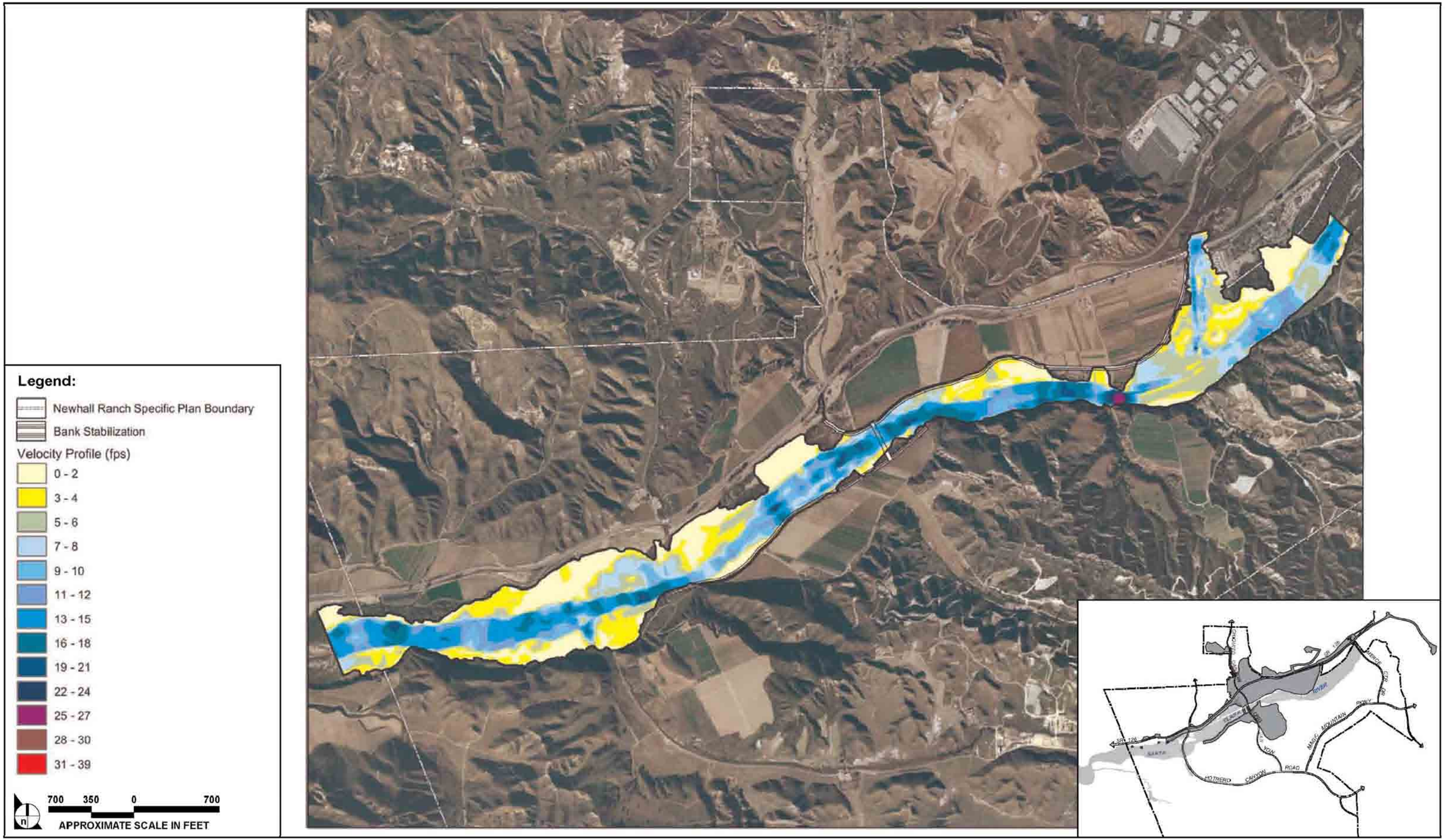


SOURCE: PACE – August 2006

FIGURE **4.5-7e**

Proposed Conditions – Area Inundated by 50-Year Storm Event

32-92•10/06

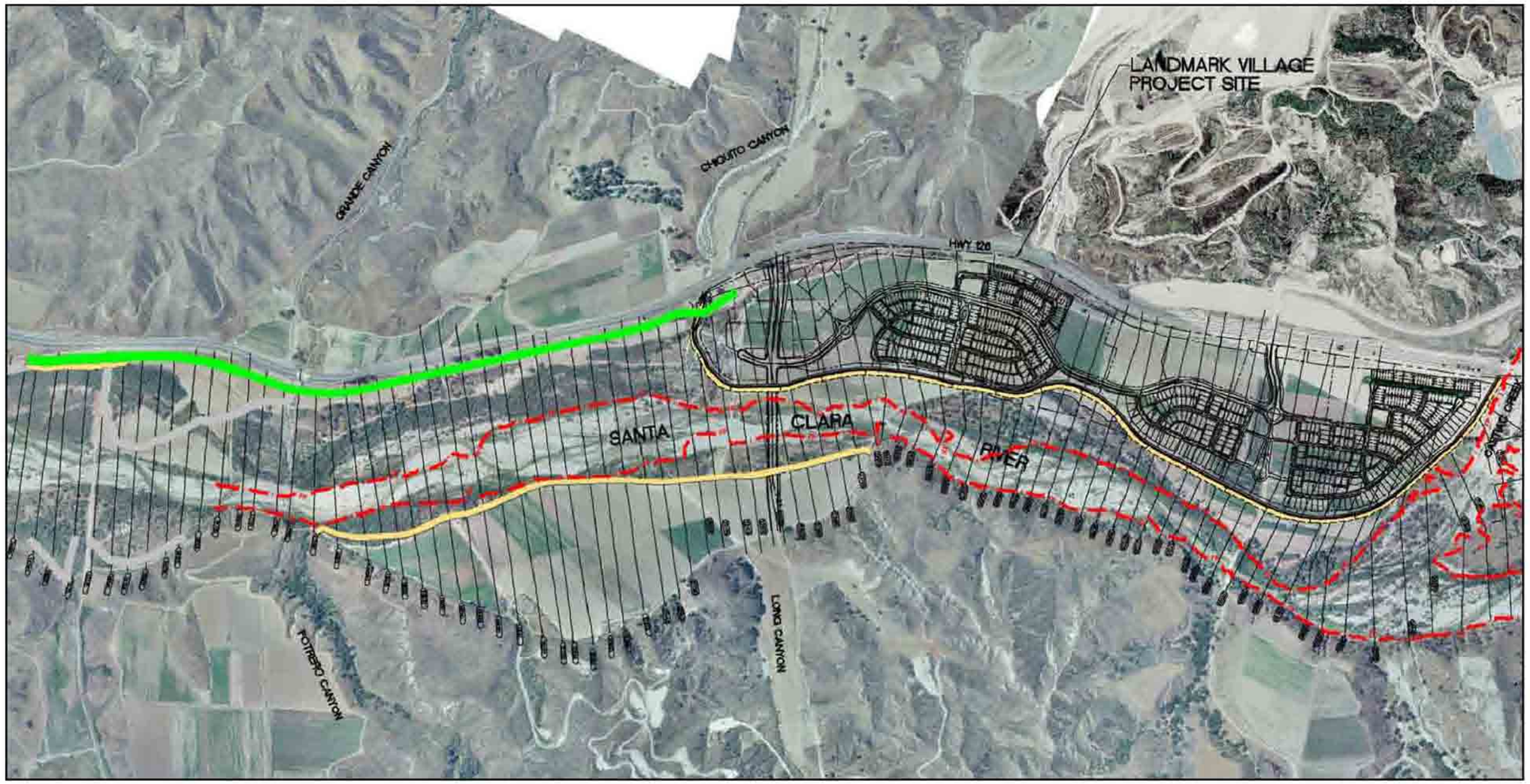


SOURCE: PACE – August 2006

FIGURE **4.5-7f**

Proposed Conditions – Area Inundated by 100-Year Storm Event

32-92•10/06

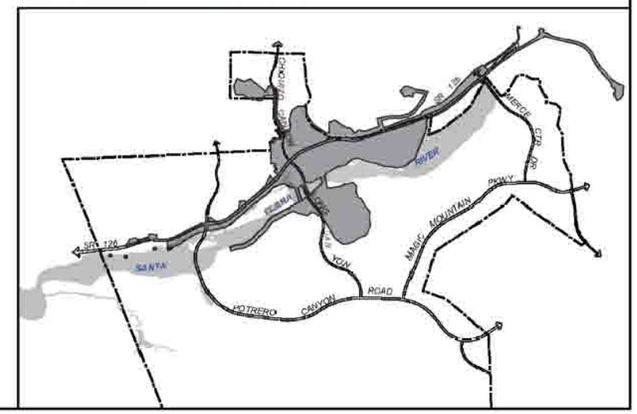


Legend:

- 2-Year Proposed Flood Plain
- Proposed Soil Cement Bank Protection
- Proposed Utility Corridor
- Locations of WSE Change Greater than +1 Ft.

1200 600 0 1200

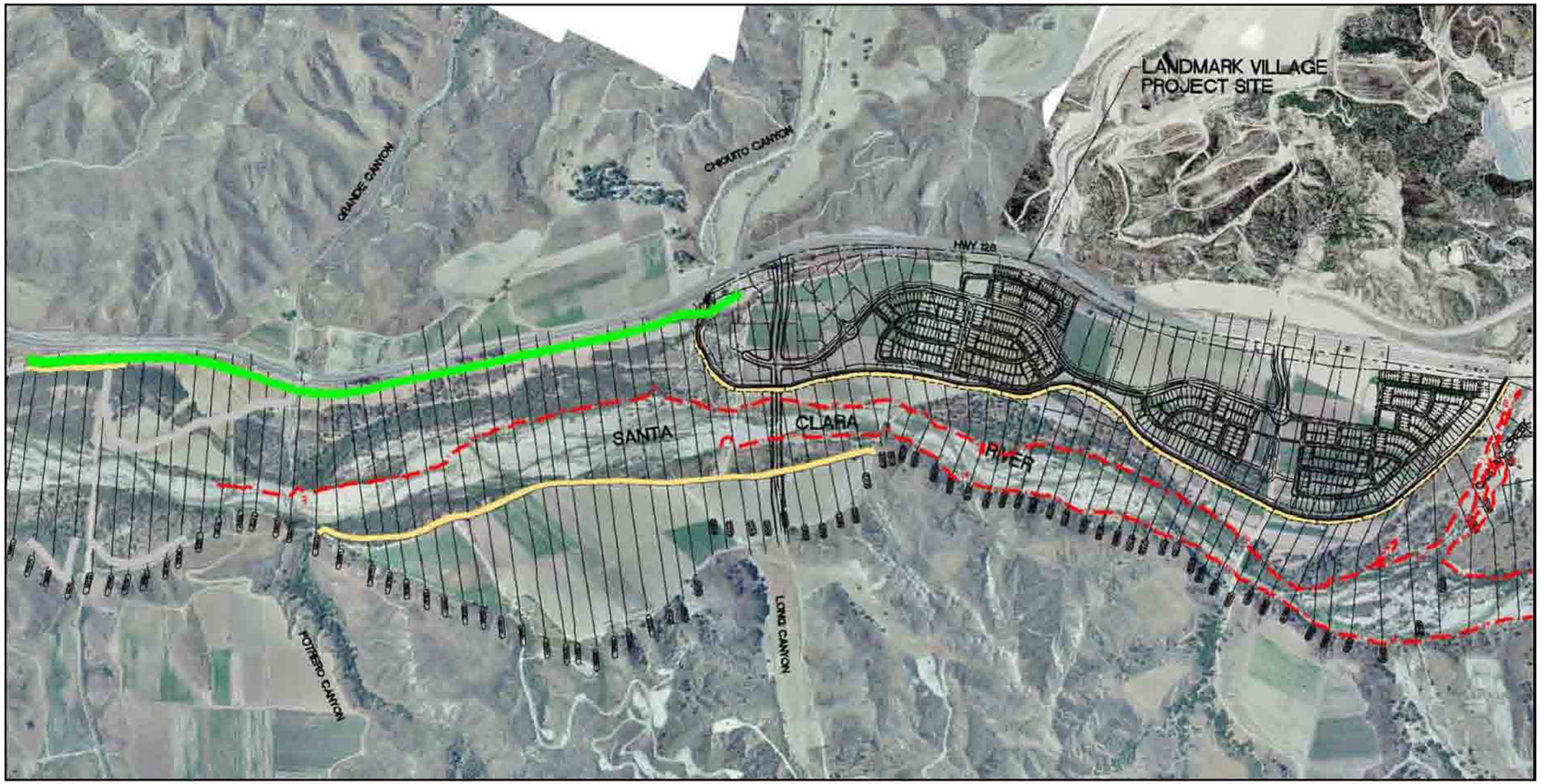
APPROXIMATE SCALE IN FEET



SOURCE: PACE – August 2006

FIGURE **4.5-8a**

Proposed 2-Year Flood Plain Locations with WSE Greater than 1 Ft.

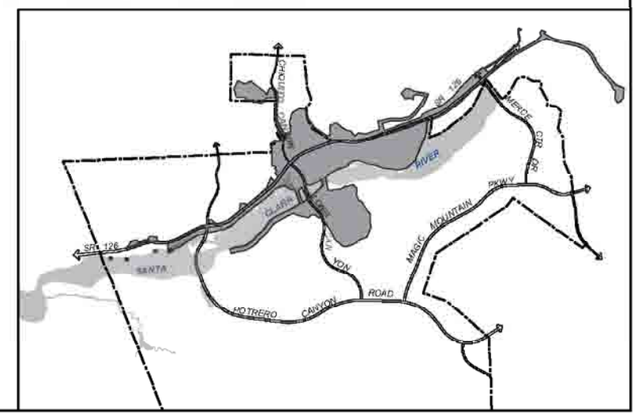


Legend:

- 5-Year Proposed Flood Plain
- Proposed Soil Cement Bank Protection
- Proposed Utility Corridor
- Locations of WSE Change Greater than +1 Ft.

1200 600 0 1200

APPROXIMATE SCALE IN FEET

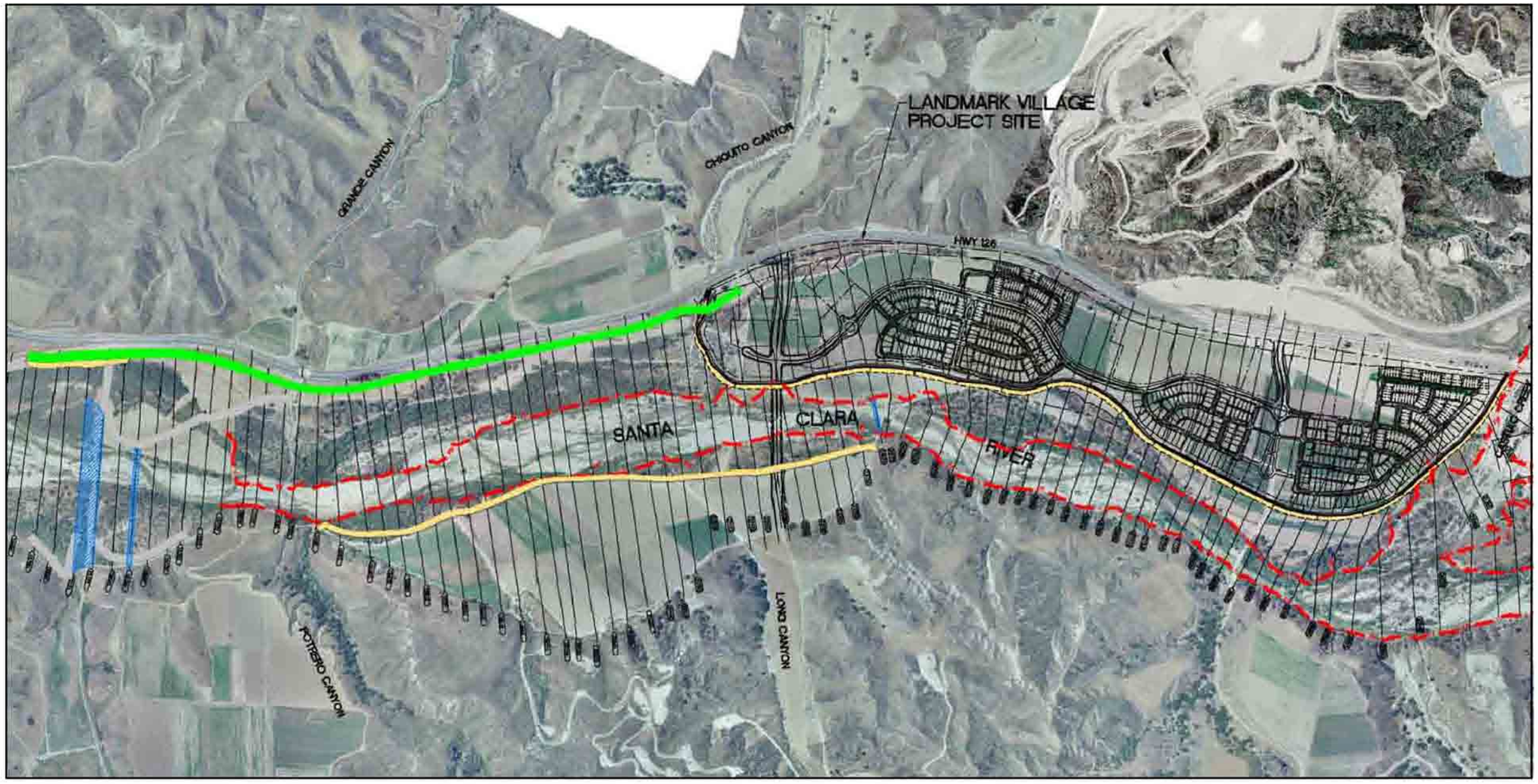


SOURCE: PACE – August 2006

FIGURE **4.5-8b**

Proposed 5-Year Flood Plain Locations with WSE Greater than 1 Ft.

32-92•10/06

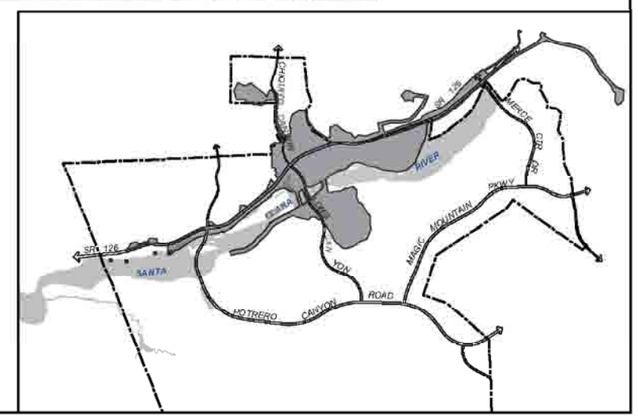


Legend:

- 10-Year Proposed Flood Plain
- Proposed Soil Cement Bank Protection
- Proposed Utility Corridor
- Locations of WSE Change Greater than +1 Ft.

1200 600 0 1200

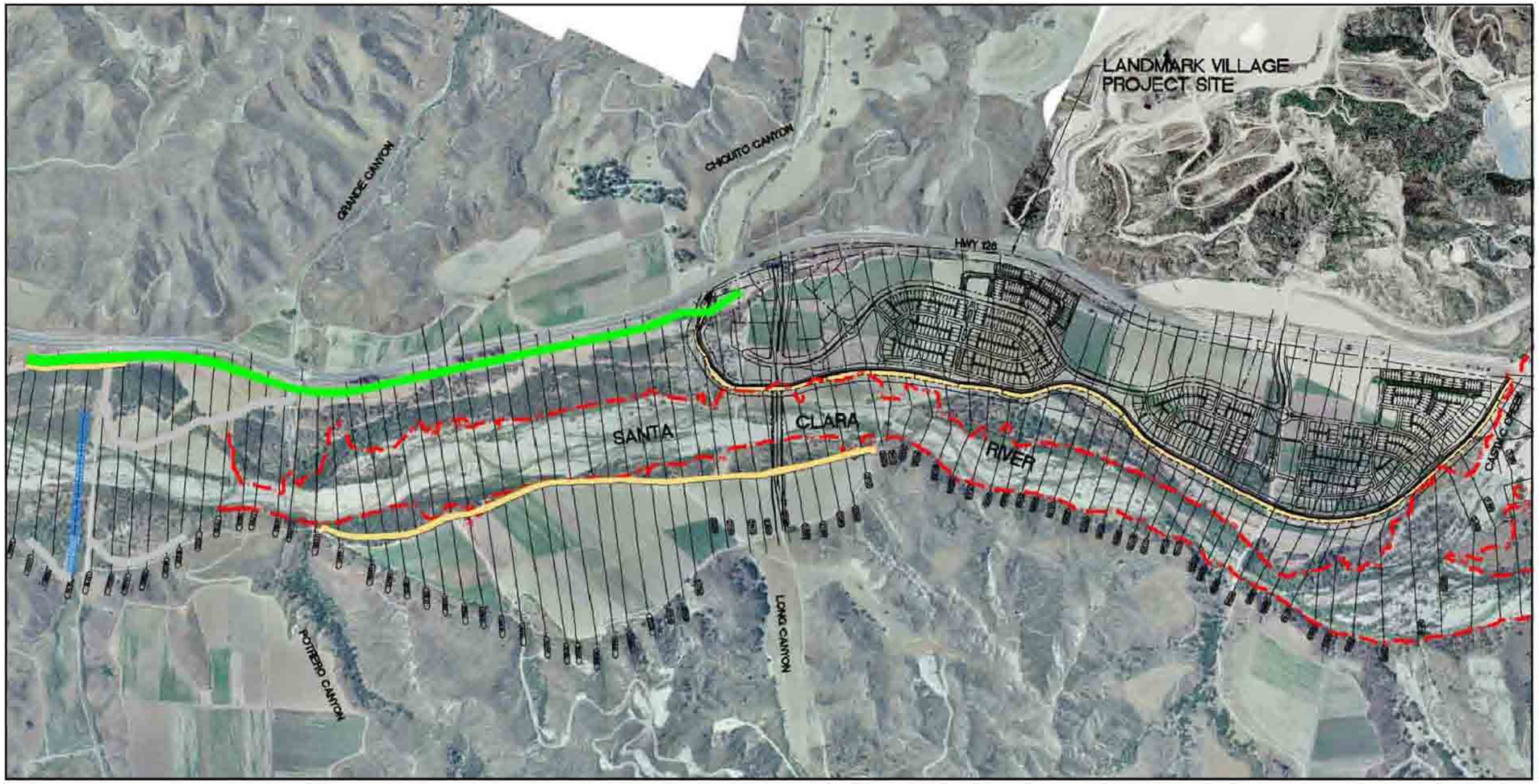
APPROXIMATE SCALE IN FEET



SOURCE: PACE – August 2006

FIGURE **4.5-8c**

Proposed 10-Year Flood Plain Locations with WSE Greater than 1 Ft.

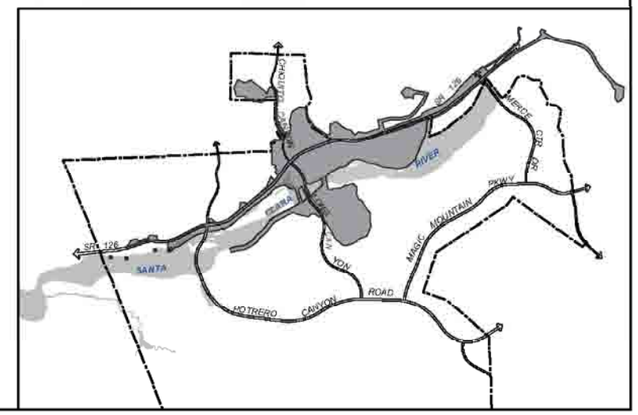


Legend:

- 20-Year Proposed Flood Plain
- Proposed Soil Cement Bank Protection
- Proposed Utility Corridor
- Locations of WSE Change Greater than +1 Ft.

1200 600 0 1200

APPROXIMATE SCALE IN FEET

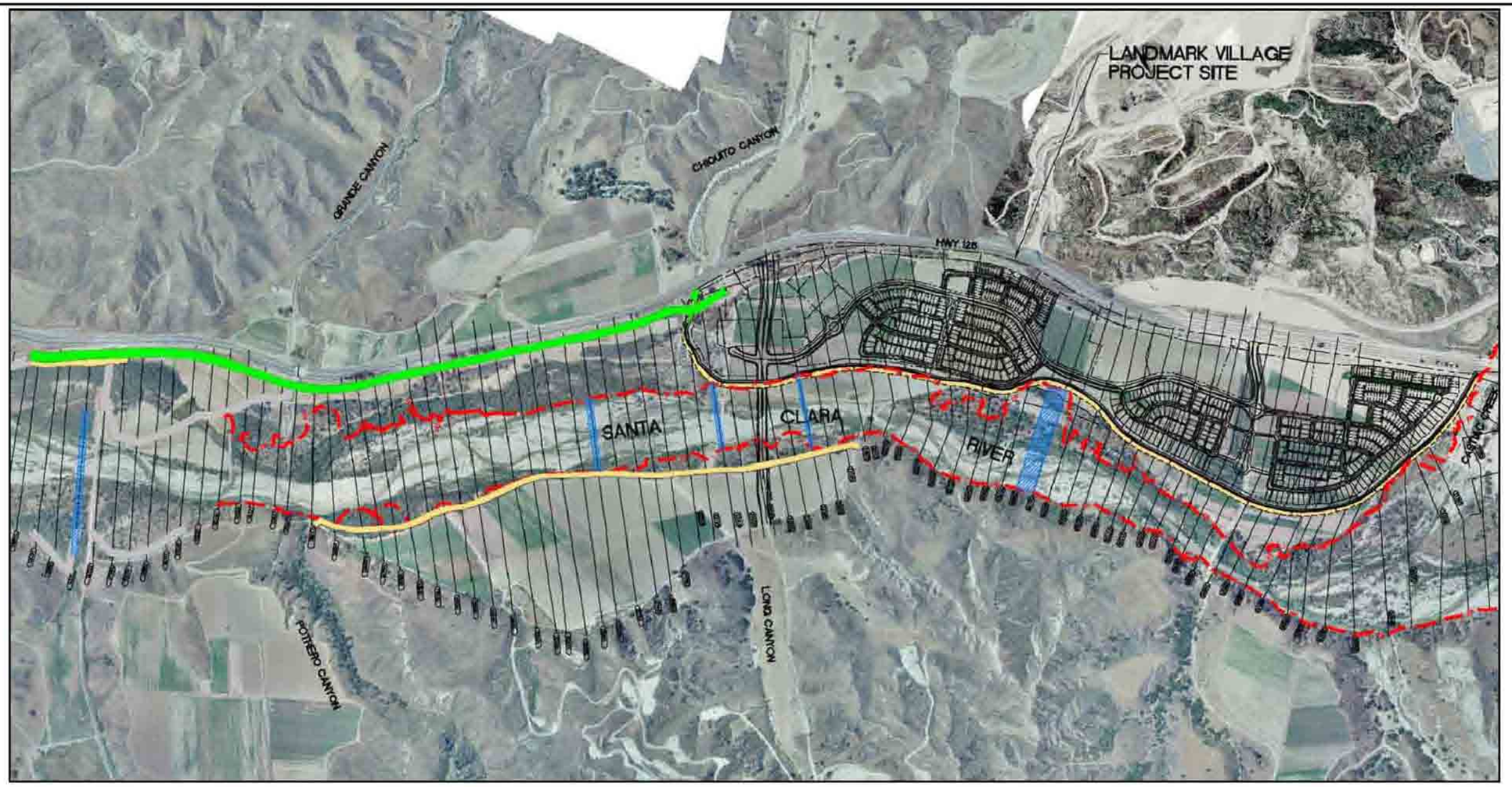


SOURCE: PACE – August 2006

FIGURE **4.5-8d**

Proposed 20-Year Flood Plain Locations with WSE Greater than 1 Ft.

32-92•10/06

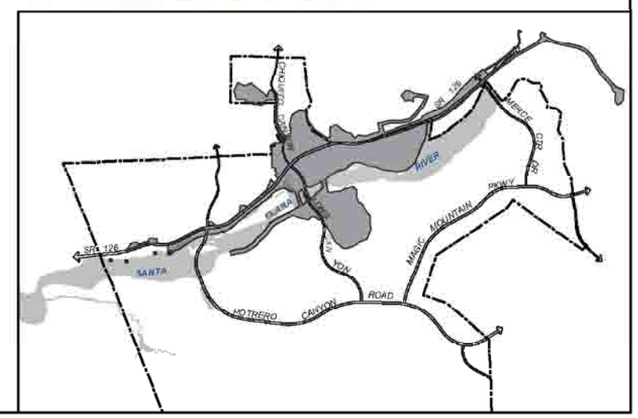


Legend:

- 50-Year Proposed Flood Plain
- Proposed Soil Cement Bank Protection
- Proposed Utility Corridor
- Locations of WSE Change Greater than +1 Ft.

1200 600 0 1200

APPROXIMATE SCALE IN FEET

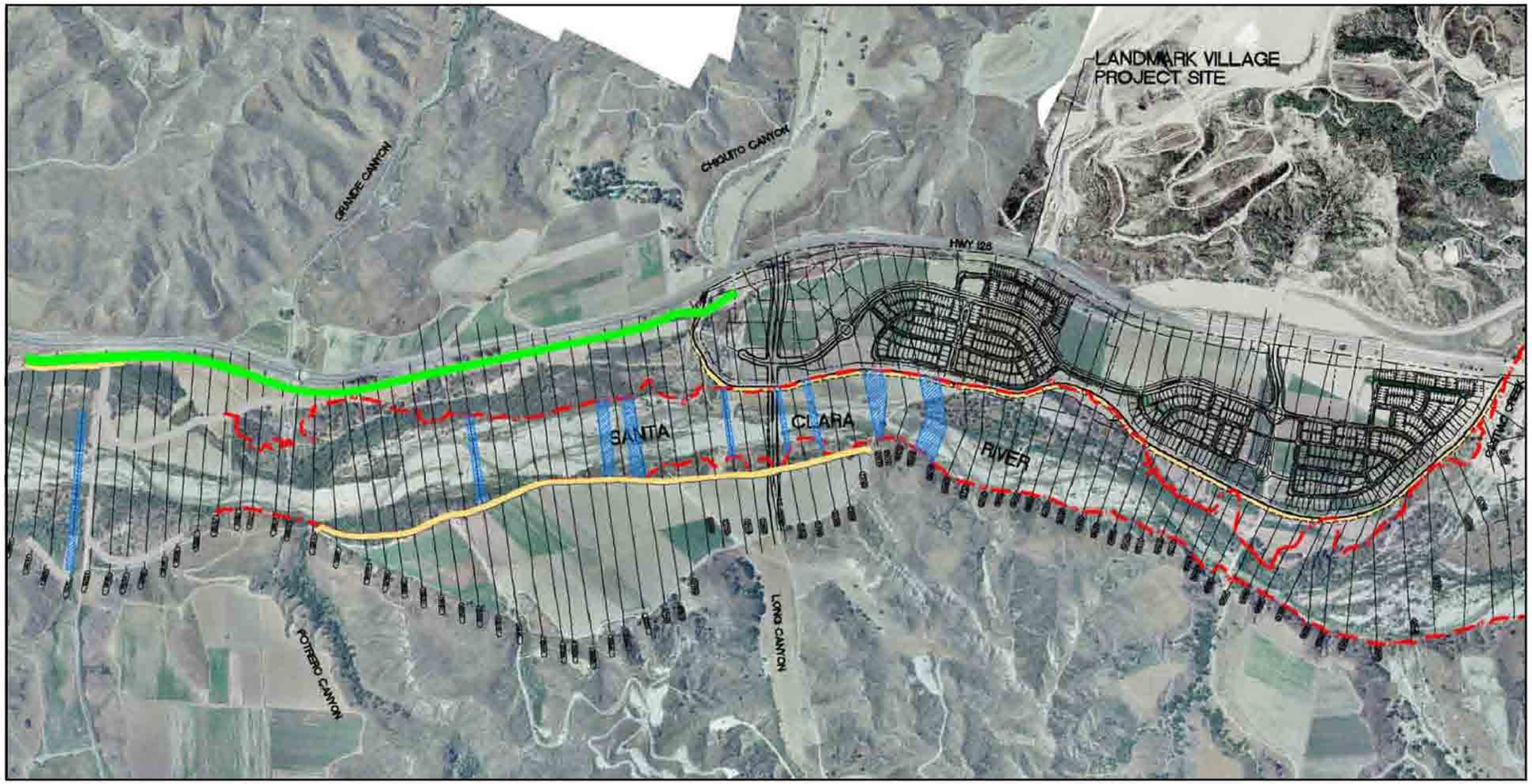


SOURCE: PACE – August 2006

FIGURE **4.5-8e**

Proposed 50-Year Flood Plain Locations with WSE Greater than 1 Ft.

32-92•10/06

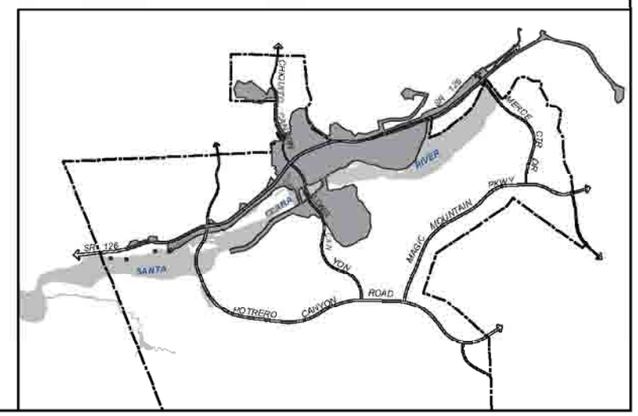


Legend:

- 100-Year Proposed Flood Plain
- Proposed Soil Cement Bank Protection
- Proposed Utility Corridor Bank Protection
- Locations of WSE Change Greater than +1 Ft.

1200 600 0 1200

APPROXIMATE SCALE IN FEET



SOURCE: PACE – August 2006

FIGURE **4.5-8f**

Proposed 100-Year Flood Plain Locations with WSE Greater than 1 Ft.

32-92•10/06

Based on these results, the floodplain modifications associated with the project (i.e., bank protection, bridge, and development in the River Corridor SMA/SEA 23 described above) would not cause significant scouring, and therefore, would not alter the amount and pattern of aquatic, wetland, and riparian habitats in the river at the project site. The current pattern of scouring due to high velocities would remain intact, as shown previously on **Figures 4.5-7a** through **4.5-7f**. Based on this information, no significant impacts would occur due to changes in river velocity.

(c) Impacts on Water Depths

An increase in water depth in the river could result in significant biological impacts if the additional water depth causes greater "shear forces" (i.e., friction caused by the weight of water) on the river bottom, and thereby increasing scouring of the channel bed and removal of vegetation. This effect could reduce the extent of aquatic, wetland, and riparian habitats in the river.

The results of the hydraulic analysis indicate that water depths in the river would not increase significantly due to project improvements. Water depths for all return events would not be significantly different between existing and proposed conditions (**Figures 4.5-8a** through **4.5-8f**) at the project site and downstream. Hence, the project improvements would not cause significant scouring and therefore, would not alter the amount and pattern of aquatic, wetland, and riparian habitats in the river. Therefore, no significant impacts would occur due to changes in water depths in the river.

(d) Impacts on River Corridor SMA/SEA 23

Consistent with the Specific Plan, limited amounts of riparian habitat (6.48 acres) located within the River Corridor SMA/SEA 23 would be converted to developed uses as part of the Landmark Village project. The 6.48 acres to be developed consists of riparian-associated plant communities, including southern willow scrub, southern cottonwood willow riparian forest, mule fat scrub, freshwater marsh, and elderberry scrub. Development within the River Corridor SMA/SEA 23 is limited to the Long Canyon Road Bridge, portions of the Regional River Trail, a scenic vista path, and portions of the utility corridor. The Landmark Village project development would result in the permanent conversion of 59.59 acres of land within the River Corridor SMA/SEA 23 boundary, of which 24.04 acres are agricultural land, 1.32 acres are coastal sage scrub, 0.16 acre is arrow weed scrub, 0.02 acre is live oak woodland, 2.77 acres is non-native grassland, 0.99 acre is river wash, and 23.80 acres are ruderal. An additional 64.98 acres of habitat within the River Corridor SMA/SEA 23 would be temporarily disturbed by bank stabilization and/or haul roads, but would be planted with native vegetation following completion of construction.

The Board of Supervisors contemplated these impacts during the project approvals for the Newhall Ranch Specific Plan. Section 22.56.215(A)(1) of the County Code requires that a conditional use permit be

obtained prior to commencing development within an SEA, and Section 22.56.215(F) requires the applicant to demonstrate that the proposed development conforms to the SEA "design compatibility criteria." The Board of Supervisors found that the Newhall Specific Plan is consistent with the County's SEA design compatibility criteria as it relates to SEA 23. The Board also determined that the development proposed in the Specific Plan is designed to be highly compatible with the biotic resources present in SEA 23, including the setting aside of appropriate and sufficient undisturbed areas.

Further, the Board found that the Specific Plan is consistent with General Plan policies regarding the balancing of SEA policies against other competing public needs. In its discussion of SEA policies, the General Plan states: "Major factors influencing the realization of Plan [SEA] objectives…include…the competing priorities between resource preservation and other critical public needs." (See, Los Angeles County General Plan, p. LU-A12.) Among other things, the Board found that the Specific Plan's bridge crossings implement portions of the County's Master Plan of Highways and are considered essential to the development of a local and regional transportation system. In addition, the Specific Plan's RMP includes an extensive mitigation and habitat management program for the River Corridor SMA/SEA 23. The RMP is considered a significant benefit to the river corridor. The River Corridor SMA would also be dedicated to the public and managed, neither of which occur in SEAs (lands under the County's SEA designation remain under private control and are not typically managed for resource protection).

Finally, the hydraulic analysis shows that the proposed bank stabilization and bridge improvements would not hinder flows under most conditions or cause widespread and chronic scouring of the channel bed and banks through increased velocities or water depth. Scouring can remove a significant amount of aquatic, wetland, and riparian habitats from the river channel. This could substantially modify the relative amounts of these habitats in the river, essentially altering the nature and quality of the riverine environment. Because, the floodplain modifications associated with the project would not alter the amount and pattern of aquatic, wetland, and riparian habitats in the river at the project site, no significant impacts would occur due to changes in flows within the river.

(e) Impacts on Sensitive Aquatic Species

General Findings

As indicated below, no significant impacts to the five targeted sensitive aquatic species would occur as a result of the project implementation. This is generally due to the fact that no substantial change to the aquatic habitats that support sensitive species would occur (for conclusions related to the more general biological impacts of the proposed project, please see EIR **Section 4.4, Biota**. Specific reasons for the absence of significant impacts to these sensitive aquatic species are provided below.

Unarmored Threespine Stickleback

The potential impacts to unarmored threespine stickleback due to the construction and persistence of the project's bank stabilization features and the bridge construction are expected to be less than significant. Stickleback are known to inhabit the Newhall Ranch reach of the Santa Clara River adjacent to the Landmark Village project area. The location of the proposed stabilization features is set back beyond the existing River Corridor SMA/SEA 23 in a majority of the project and construction would not result in significant changes to the overall velocities in the river during frequent storm intervals. Any changes to river hydrology, created by the project, occur during the larger storms when river velocities are high and scouring of river habitat occurs. Thus, project influence on fish is likely to be transparent when viewed in conjunction with flood flows. Based on reconnaissance surveys conducted following recent flood events (January and February 2005), high flow conditions appear to have dislocated and dispersed aquatic organisms downstream.

The *Flood Technical Report for the Landmark Village Project* (PACE, 2006) found that there would be no significant impacts in water flows, velocities, depth, sedimentation, or floodplain and channel conditions adjacent to and downstream of the project site as a result of the proposed project improvements and that such improvements are consistent with those analyzed and approved as part of the Newhall Ranch Specific Plan. These hydraulic effects were also found in the Newhall Ranch Specific Plan EIR to be insufficient to alter the amount, location and nature of aquatic and riparian habitats in the project area and downstream into Ventura County. Based on that technical assessment, ENTRIX concluded that no impacts to adjacent or downstream populations of the unarmored threespine stickleback are expected as a result of the project.

Runoff from developed uses could potentially impact aquatic organisms and systems. However, several Project Design Features (PDFs) have been incorporated into the project to address water quality and hydrologic impacts, including site design, source control, treatment control, and hydromodification control Best Management Practices (BMPs). Effective management of wet and dry weather runoff water quality begins with limiting increases in runoff pollutants and flows at the source. Site design and source control BMPs are practices designed to minimize runoff and the introduction of pollutants in stormwater runoff. Treatment control BMPs are designed to remove pollutants once they have been mobilized by rainfall and runoff. Hydromodification control BMPs are designed to control increases in post-development runoff flows.

As currently planned, stormwater runoff from all urban areas within the project would be routed to bioretention areas, vegetated swales, and/or extended detention basin treatment control BMPs. The extended detention basin, vegetated swales, and bioretention areas would be designed to operate off-line,

receiving dry weather flows, small storm flows, and the initial portion of large storm flows from a low-flow diversion structure in the storm drain.

The *Landmark Village Water Quality Technical Report* (GeoSyntec, 2005) indicates that the modeled concentrations in runoff from developed areas with PDFs are below all benchmark water quality objectives and criteria and total maximum daily loads (TMDL) waste load allocations for the Santa Clara River, and are addressed by a comprehensive site design, source control, and treatment control strategy. These water quality objectives are established to protect various beneficial uses including general wildlife, Rare, Endangered, Threatened and sensitive species. Therefore, potential impacts from the project on receiving water quality and beneficial uses in the Santa Clara River are not significant, and no impacts to adjacent or downstream populations of unarmored threespine stickleback are expected.

Arroyo Toad

A number of surveys have been conducted over the years in an attempt to document the presence or absence of the arroyo toad from this segment of the Santa Clara River. As described above, standardized USFWS "protocol" surveys conducted by Impact Sciences 2001 and Compliance Biology 2004 showed that components of arroyo toad habitat exist within the Landmark Village project boundaries. In addition, non-protocol surveys by Aquatic Consulting Services (2002b) also identified arroyo toad habitat in the Santa Clara River from the Landmark Village project downstream to the Ventura County line. However, no studies or reports have documented the presence of arroyo toads within the Newhall Ranch Specific Plan boundaries.

Although the arroyo toad has not been recorded from within the project area, seemingly suitable but limited areas of habitat exist within the project boundaries in the reach from Castaic Creek downstream at least to Wolcott Road and possibly to the Long Canyon crossing. It is not anticipated that the proposed project's bank stabilization features would substantially alter the local sediment transport regime or otherwise affect in-stream habitat (spawning, foraging) for arroyo toad. The project area falls within an extremely dynamic reach of the Santa Clara River where high disturbance flood events occur every 5 to 10 years and change the existing stream structure. The EIR/EIS for the NRMP area, located directly east of the Landmark Village site, stated that the widening of the river channels within the areas of bank protection (i.e., stabilization) would not cause system-wide channel or bed erosion, or aggradation. In its 1998 and 2002 Biological Opinions on the NRMP (p. 30), USFWS accepted the NRMP's findings, and stated further that the NRMP would not affect arroyo toad habitat negatively within the Santa Clara River mainstem. For these reasons, ENTRIX concluded that utilization of these same methods of bank protection for the Landmark Village project are anticipated to lead to the same result, no impact on arroyo toad habitat.

The *Flood Technical Report for the Landmark Village Project* (PACE, 2006) found that there would be no significant impacts in water flows, velocities, depth, sedimentation, or floodplain and channel conditions adjacent to and downstream of the project site as a result of the project improvements, and that such improvements are consistent with those analyzed and approved as part of the Newhall Ranch Specific Plan. These hydraulic effects were also found in the Newhall Ranch Specific Plan Program EIR to be insufficient to alter the amount, location and nature of aquatic and riparian habitats in the project area and downstream into Ventura County. Based on that technical assessment, ENTRIX concluded that no impacts to downstream populations of the arroyo toad are expected as a result of the project.

Runoff from developed uses could potentially impact aquatic organisms and systems. However, several PDFs have been incorporated into the project to address water quality and hydrologic impacts, including site design, source control, treatment control, and hydromodification control BMPs. Effective management of wet and dry weather runoff water quality begins with limiting increases in runoff pollutants and flows at the source. Site design and source control BMPs are practices designed to minimize runoff and the introduction of pollutants in stormwater runoff. Treatment control BMPs are designed to remove pollutants once they have been mobilized by rainfall and runoff. Hydromodification control BMPs are designed to control increases in post-development runoff flows.

As currently planned, stormwater runoff from all urban areas within the project would be routed to bioretention areas, vegetated swales, and/or extended detention basin treatment control BMPs. The extended detention basin, vegetated swales, and bioretention areas would be designed to operate off-line, receiving dry weather flows, small storm flows, and the initial portion of large storm flows from a low-flow diversion structure in the storm drain.

The *Landmark Village Water Quality Technical Report* (GeoSyntec, 2006) indicates that the modeled concentrations in runoff from developed areas with PDFs are below all benchmark water quality objectives and criteria and TMDL waste load allocations for the Santa Clara River, and are addressed by a comprehensive site design, source control, and treatment control strategy. These water quality objectives are established to protect various beneficial uses including general wildlife, Rare, Endangered, Threatened and sensitive species. Therefore, potential impacts from the project on receiving water quality and beneficial uses in the Santa Clara River are not significant, and no impacts to downstream populations of arroyo toad are expected.

California Red-Legged Frog

The ENTRIX field evaluations indicate that potential spawning or summer habitat for the California red-legged frog is absent from the main channel of the Santa Clara River within the project site. Further, the various USFWS protocol surveys for arroyo toads conducted along the Santa Clara River from Santa

Clarita to the Ventura County line during the past few years would probably have found California red-legged frogs if they occurred in the mainstem of the Santa Clara River, but none were reported during these surveys. Within the project area, impacts to California red-legged frogs would probably result only from short-term construction activity effects on the unlikely presence of dispersing red-legged frogs during the construction process. On that basis, implementation of project improvements would not significantly affect California red-legged frog populations.

The Flood Technical Report for the Landmark Village Project (PACE, 2006) found that there would be no significant impacts in water flows, velocities, depth, sedimentation, or floodplain and channel conditions adjacent to and downstream of the project site as a result of the project improvements, and that such improvements are consistent with those analyzed and approved as part of the Newhall Ranch Specific Plan. These hydraulic effects were also found in the Newhall Ranch Specific Plan Program EIR to be insufficient to alter the amount, location and nature of aquatic and riparian habitats in the project area and downstream into Ventura County. Based on that technical assessment, ENTRIX concluded that no impacts to adjacent or downstream populations of the California red-legged frog are expected.

Runoff from developed uses could potentially impact aquatic organisms and systems. However, several PDFs have been incorporated into the project to address water quality and hydrologic impacts, including site design, source control, treatment control, and hydromodification control BMPs. Effective management of wet and dry weather runoff water quality begins with limiting increases in runoff pollutants and flows at the source. Site design and source control BMPs are practices designed to minimize runoff and the introduction of pollutants in stormwater runoff. Treatment control BMPs are designed to remove pollutants once they have been mobilized by rainfall and runoff. Hydromodification control BMPs are designed to control increases in post-development runoff flows.

As currently planned, stormwater runoff from all urban areas within the project would be routed to bioretention areas, vegetated swales, and/or extended detention basin treatment control BMPs. The extended detention basin, vegetated swales, and bioretention areas would be designed to operate off-line, receiving dry weather flows, small storm flows, and the initial portion of large storm flows from a low-flow diversion structure in the storm drain.

The *Landmark Village Water Quality Technical Report* (GeoSyntec, 2006) indicates that the modeled concentrations in runoff from developed areas with PDFs are below all benchmark water quality objectives and criteria and TMDL waste load allocations for the Santa Clara River, and are addressed by a comprehensive site design, source control, and treatment control strategy. These water quality objectives are established to protect various beneficial uses including general wildlife, Rare, Endangered, Threatened and sensitive species. Therefore, potential impacts from the project on receiving water

quality and beneficial uses in the Santa Clara River are not significant, and no impacts to existing populations of red-legged frog are expected.

Southwestern Pond Turtle

Project impacts on southwestern pond turtles will probably include temporary or permanent alteration of aquatic channel foraging habitat consequent to construction activities, possible loss of basking areas, but probably no long-term effects from bank stabilization as long as adjacent channels or secondary channels (braided system) continue to exist. Oviposition habitat on the south bank and downstream will probably not be affected by bank stabilization, but may be damaged during future road and bridge development. However, these impacts would be temporary in nature and are limited in extent. The bank stabilization would be predominantly constructed outside of the River Corridor SMA/SEA 23 on agricultural land far enough from the river corridor to allow high frequency flows to meander unimpeded within the river. Consequently, habitat preferred by the pond turtle such as permanent or nearly permanent water and basking sites, would remain.

The *Flood Technical Report for the Landmark Village Project* (PACE, 2006) found that there would be no significant impacts in water flows, velocities, depth, sedimentation, or floodplain and channel conditions adjacent to and downstream of the project site as a result of the project improvements, and that such improvements are consistent with those analyzed and approved as part of the Newhall Ranch Specific Plan. These hydraulic effects were also found in the Newhall Ranch Specific Plan Program EIR to be insufficient to alter the amount, location and nature of aquatic and riparian habitats in the project area and downstream into Ventura County. Based on that technical assessment, ENTRIX concluded that no significant impacts to adjacent or downstream populations of the southwestern pond turtle are expected as a result of proposed project.

Runoff from developed uses could potentially impact aquatic organisms and systems. However, several PDFs have been incorporated into the project to address water quality and hydrologic impacts, including site design, source control, treatment control, and hydromodification control BMPs. Effective management of wet and dry weather runoff water quality begins with limiting increases in runoff pollutants and flows at the source. Site design and source control BMPs are practices designed to minimize runoff and the introduction of pollutants in stormwater runoff. Treatment control BMPs are designed to remove pollutants once they have been mobilized by rainfall and runoff. Hydromodification control BMPs are designed to control increases in post-development runoff flows.

As currently planned, stormwater runoff from all urban areas within the project would be routed to bioretention areas, vegetated swales, and/or extended detention basin treatment control BMPs. The extended detention basin, vegetated swales, and bioretention areas would be designed to operate off-line,

receiving dry weather flows, small storm flows, and the initial portion of large storm flows from a low-flow diversion structure in the storm drain.

The *Landmark Village Water Quality Technical Report* (GeoSyntec, 2005) indicates that the modeled concentrations in runoff from developed areas with PDFs are below all benchmark water quality objectives and criteria and TMDL waste load allocations for the Santa Clara River, and are addressed by a comprehensive site design, source control, and treatment control strategy. These water quality objectives are established to protect various beneficial uses including general wildlife, Rare, Endangered, Threatened and sensitive species. Therefore, potential impacts from the project on receiving water quality and beneficial uses in the Santa Clara River are not significant, and no impacts to adjacent or downstream populations of southwestern pond turtle are expected.

Two-Striped Garter Snake

Although fundamentally terrestrial, the two-striped garter snake depends entirely on aquatic habitat for foraging. While the preferred microhabitat is poorly understood, the greatest numbers occur in areas along stream courses where the combination of in-stream rocky or other covers, terrestrial vegetation or other cover, and easy access to aquatic forage species of the approximate size exists.

The proposed bank stabilization would be predominantly constructed outside of the River Corridor SMA/SEA 23 on agricultural or ruderal land far enough from the River Corridor SMA/SEA 23 to allow high frequency flows to meander unimpeded within the river. Consequently, habitat preferred by the two-striped garter snake would largely remain. Project impacts on two-striped garter snake would be less than significant since the proposed project's bank stabilization features are set back from the active channel and existing snake habitat. No adverse change to foraging habitat is expected from project implementation.

The *Flood Technical Report for the Landmark Village Project* (PACE, 2006) found that there would be no significant impacts in water flows, velocities, depth, sedimentation, or floodplain and channel conditions adjacent to and downstream of the project site as a result of the project improvements, and that such improvements are consistent with those analyzed and approved as part of the Newhall Ranch Specific Plan. These hydraulic effects were also found in the Newhall Ranch Specific Plan Program EIR to be insufficient to alter the amount, location and nature of aquatic and riparian habitats in the project area and downstream into Ventura County. Based on that technical assessment, ENTRIX concluded that no impacts to adjacent or downstream populations of the two-striped garter snake are expected as a result of the proposed project.

Runoff from developed uses could potentially impact aquatic organisms and systems. However, several PDFs have been incorporated into the project to address water quality and hydrologic impacts, including site design, source control, treatment control, and hydromodification control BMPs. Effective management of wet and dry weather runoff water quality begins with limiting increases in runoff pollutants and flows at the source. Site design and source control BMPs are practices designed to minimize runoff and the introduction of pollutants in stormwater runoff. Treatment control BMPs are designed to remove pollutants once they have been mobilized by rainfall and runoff. Hydromodification control BMPs are designed to control increases in post-development runoff flows.

As currently planned, stormwater runoff from all urban areas within the project would be routed to bioretention areas, vegetated swales, and/or extended detention basin treatment control BMPs. The extended detention basin, vegetated swales, and bioretention areas would be designed to operate off-line, receiving dry weather flows, small storm flows, and the initial portion of large storm flows from a low-flow diversion structure in the storm drain.

The *Landmark Village Water Quality Technical Report* (GeoSyntec, 2006) indicates that the modeled concentrations in runoff from developed areas with PDFs are below all benchmark water quality objectives and criteria and TMDL waste load allocations for the Santa Clara River, and are addressed by a comprehensive site design, source control, and treatment control strategy. These water quality objectives are established to protect various beneficial uses including general wildlife, Rare, Endangered, Threatened and sensitive species. Therefore, potential impacts from the project on receiving water quality and beneficial uses in the Santa Clara River are not significant, and no impacts to adjacent or downstream populations of two-striped garter snake are expected.

(f) Conclusion

The proposed project would place bank stabilization along selected portions of the river, developing areas behind the bank stabilization, and installing a bridge across the river. These actions would alter flows in the river; however, the effects would only be observed during infrequent flood events that reach the buried bank stabilization. The proposed project would cause an increase in flows, water velocities, and water depth. However, these hydraulic effects would be minor in magnitude and extent. These effects would be insufficient to alter the amount, location, and nature of aquatic and riparian habitats in the project area and downstream. Under the project, the river would still retain sufficient width to allow natural fluvial processes to continue. Hence, the mosaic of habitats in the river that support various sensitive species would be maintained, and the populations of the species within and adjacent to the river corridor would not be significantly impacted.

These findings apply with equal force to other aquatic species dependent upon riparian habitat in the River Corridor SMA/SEA 23 that were not targeted for study in this section. Species such as the Arroyo Chub and Santa Ana sucker, which are expected to occur in the portion of the river adjacent to the project site, have both life history requirements and habitat preferences that are dependent upon aquatic habitat. As described above, the project improvements would not result in significant changes to flow, water velocities, or depth of the river, so the mosaic of habitats that support such aquatic species would be maintained.

8. PROJECT MITIGATION MEASURES

The following mitigation measures have been adopted by the County in connection with its approval of the Newhall Ranch Specific Plan (May 2003). These measures are applicable to the Landmark Village project due to its geographic location along the river and the type of project improvements proposed. Those mitigation measures applicable to the Landmark Village project will be implemented, as appropriate.

a. Mitigation Measures Required by the Adopted Newhall Ranch Specific Plan, as they Relate to the Landmark Village Project

Please refer to **Section 4.2**, **Hydrology**, of this EIR for a listing of Program EIR mitigation measures pertaining to flood control.

b. Additional Mitigation Measures Proposed by this EIR

No additional mitigation beyond that contained in **Section 4.4, Biota**, is required because no significant impacts to biological resources are anticipated due to the bank stabilization, bridge, or changes in the floodplain due to project modifications.

9. CUMULATIVE IMPACTS

Because the Landmark Village project implements a part of the Newhall Ranch Specific Plan, this Draft EIR is tiering from the certified Newhall Ranch Specific Plan Program EIR and Revised Additional Analysis in accordance with Public Resources Code Section 21093(a) and *CEQA Guidelines* Section 15168(c). Public Resources Code Section 21093 encourages a lead agency to "tier" from a previously certified program EIR, whenever feasible. In this way, the Draft EIR can focus on site-specific issues relating to the Landmark Village project and allow the County, as the lead agency, to concentrate on issues ripe for decision while excluding from consideration issues already decided. (*CEQA Guidelines* Sections 15168(c), 15385)

In this case, cumulative impacts on the hydrology and hydraulics of the Santa Clara River associated with development of the entire Newhall Ranch Specific Plan were fully evaluated in Section 2.3 (Floodplain Modifications) of the Newhall Ranch Revised Additional Analysis (May 2003). Consequently, this Draft EIR incorporates by reference the floodplain modification analysis and conclusions from the certified Revised Additional Analysis (May 2003).

That analysis concluded that the reduction in floodplain area caused by bank protection would not create a significant increase in overall velocities or water depth, because the volume of flow carried in these shallow, slow-moving areas along the margins of the river is small. Moreover, variations are localized and limited in scope, especially when viewed in the entirety of the river corridor within the Specific Plan site and downstream. Therefore, the overall mosaic of habitats in the river would be maintained because the key hydraulic characteristics would not be significantly different under the Specific Plan. Based on these results, the Board of Supervisors found that the proposed bank protection and bridges associated with the Specific Plan would not cause significant changes to key hydraulic characteristics, and, therefore, would not alter the amount and pattern of aquatic, wetland, and riparian habitats in the river at the Specific Plan site and downstream in Ventura County.

10. CUMULATIVE MITIGATION MEASURES

No additional mitigation beyond those contained in **Section 4.4, Biota**, for the project are required because no significant cumulative impacts to biological resources are anticipated due to the bank stabilization, bridge, or changes in the floodplain due to project modifications.

11. SIGNIFICANT UNAVOIDABLE IMPACTS

No significant unavoidable impacts are anticipated.

4.6 VISUAL QUALITIES

1. SUMMARY

The Landmark Village project would significantly alter the visual characteristics of the Santa Clara River/State Route 126 (SR-126) corridor. Views in Chiquito Canyon would also be significantly altered due to project implementation. While the Landmark Village project, for the most part, is not replacing prominent visual features, such as river vegetation or river bluffs, the images of residential development, roadways, bridges, and other human activity would be a significant change from the existing site characteristics. Such development would also introduce sources of outdoor illumination that do not presently exist. Outdoor lighting, such as streetlights and traffic signals, are essential safety features in development projects that involve new streets and intersections, and cannot be eliminated if the proposed project is implemented. Chapters 3 and 4 of the Specific Plan contain Development Regulations and Design Guidelines, respectively, that apply to the Landmark Village project. These regulations and guidelines address grading, lighting, fencing, landscaping, signage, architecture, and site planning for subsequent subdivisions within the Newhall Ranch Specific Plan. Despite such features, the identified significant visual impacts would still result from the change in the visual character of the site from rural to urban. Consequently, such significant visual impacts would remain significant and unavoidable, as found in the Newhall Ranch Specific Plan Program EIR.

2. INTRODUCTION

a. Relationship of Project to Newhall Ranch Specific Plan Program EIR

Section 4.7 of the Newhall Ranch Specific Plan Program EIR identified and analyzed the existing conditions, potential impacts, and mitigation measures associated with visual resources on the entire Newhall Ranch Specific Plan. The Newhall Ranch mitigation program was adopted by the County of Los Angeles (County) in findings and in the revised Mitigation Monitoring Plan for the Specific Plan. The Newhall Ranch Specific Plan Program EIR concluded that Specific Plan implementation would result in significant visual impacts that were found to be unavoidable. Pursuant to the Newhall Ranch Specific Plan Program EIR, all subsequent project-specific development plans and tentative subdivision maps must be consistent with the design themes and view considerations contained in the Design Guidelines of the Newhall Ranch Specific Plan, and the County of Los Angeles General Plan and Santa Clarita Valley Areawide Plan.

This project-level EIR is tiering from the previously certified Newhall Ranch Specific Plan Program EIR. **Section 4.6** assesses the Landmark Village project's existing conditions, the project's visual impacts, and

the applicable mitigation measures from the Newhall Ranch Specific Plan Program EIR, as well as the need for any new mitigation measures recommended by this EIR for the Landmark Village project.

3. SUMMARY OF THE NEWHALL RANCH SPECIFIC PLAN EIR FINDINGS

The Newhall Ranch Specific Plan Program EIR found that the Specific Plan area is visible from three corridors: the Santa Clara River/SR-126 corridor; the Chiquito Canyon Road corridor; and the Interstate 5 (I-5) corridor. Eight viewsheds were identified within the three view corridors where large or permanent viewing audiences have prominent views of a portion of the development area. Two additional viewsheds were identified from locations outside of the view corridors.

A view analysis was conducted for each of these viewsheds to determine the significance of the Specific Plan's effects on the visual qualities of these views. Due to the view-blocking effects of intervening topography, much of the Specific Plan development areas are not visible from off-site locations. Specific examples are Specific Plan development areas for middle and upper Potrero Canyon, and the upland portions of Airport Mesa not directly near the bluff edge.

Approximately 6,138 acres (or 51 percent) of the Newhall Ranch site would remain in major open area; nonetheless, development proposed adjacent to the Santa Clara River corridor that parallels SR-126 would significantly alter the visual characteristics of the river corridor. Views in Chiquito Canyon also would be significantly altered due to Specific Plan implementation. Specific Plan development near the Santa Clara River/SR-126 corridor would result in a significant change from the existing characteristics of the site and would introduce sources of outdoor illumination to an otherwise dark area. This result would significantly impact the nighttime environment. Each of the above significant impacts would also combine with the impacts of other ongoing development activities to result in significant unavoidable cumulative visual impacts to the area.

The Regional Planning Commission expressed concern over visual impacts along SR-126 during hearings on the project. In response, the applicant eliminated 494 units and 39,000 square feet of commercial space in the Indian Dunes portion of the Specific Plan. This action reduced development intensity and opened view corridors to the river. Other modifications to the Specific Plan included creation of a development setback along the Los Angeles County/Ventura County line, removal of residential estate units from the High Country Special Management Area (SMA)/Significant Ecological Area (SEA) 20, strengthening of development standards along the river, and use of contour grading techniques. The County Board of Supervisors found that the changes incorporated into the project mitigate the identified impacts to the extent feasible, but impacts would remain unavoidable.

The cumulative analysis presented in the Newhall Ranch Specific Plan Program EIR assessed buildout of cumulative projects, including additional homes, commercial shopping centers, a regional mall, office retail uses, a theme park, and 8.8 million square feet of industrial development. Examples of specific cumulative projects considered in that analysis included:

(a) Valencia Commerce Center: a planned industrial development, located at the northwest corner of the I-5/SR-126 interchange;

(b) Chiquito Canyon Landfill: located along SR-126;

(c) Valencia Industrial Center: the largest employment center in the Santa Clarita Valley, located east of I-5 south of the interchange with SR-126;

(d) Valencia Corporate Center: an office-research campus planned north of Valencia Boulevard;

(e) Magic Mountain Theme Park: a regional attraction located on west side of I-5;

(f) Stevenson Ranch: a planned community, located on west side of I-5;

(g) Westridge: a golf course and residential community under development on the west side of I-5; and

(h) Valencia Marketplace: a regional shopping center along the west side of I-5.

No new development activity visible along I-5 and SR-126 in the Santa Clarita Valley has occurred other than that considered in the Newhall Ranch Specific Plan Program EIR. In light of this fact, and given that the proposed Landmark Village project is consistent with the land use designations contained in the Specific Plan, it can be concluded that the prior Newhall Ranch Specific Plan Program EIR still adequately addresses the cumulative visual impacts of the Landmark Village project, in conjunction with other cumulative projects in the area. Furthermore, it has been determined that the Landmark Village project would not have any significant cumulative effects, which were not previously examined in the Newhall Ranch Specific Plan Program EIR. Consistent with *California Environmental Quality Act (CEQA) Guidelines* Sections 15125 and 15385, this project-level analysis will concentrate on the impacts associated with the Landmark Village project, and will incorporate by reference the discussions and analysis contained in the Newhall Ranch Specific Plan Program EIR pertaining to the cumulative analysis of visual effects in the region.

Based on the Newhall Ranch Specific Plan Program EIR and the record before it, the County's Board of Supervisors found that the Specific Plan's impacts to visual resources would be unavoidably significant even with implementation of the feasible mitigation measures. Consistent with Section 15093 of the *CEQA Guidelines*, the Board of Supervisors found that the Specific Plan offered overriding public benefits that outweigh the potential unavoidable significant impacts and make them acceptable.

4. EXISTING CONDITIONS

a. Introduction

This section provides a focused evaluation of the changes in visual character of the Landmark Village project site and surrounding areas, as observed along the viewshed offered by the Santa Clara River/SR-126 corridor. For the purposes of this analysis, "viewshed" is defined as the most visible portions of the development area that can be seen by:

- a relatively large mobile viewing audience (primarily in automobiles);
- a permanent-resident population (from existing homes); or
- a recreational viewing population (from trail alignments).

The analysis will describe the prominent features visible in the Santa Clara River/SR-126 viewshed and discuss how they would be affected by the Landmark Village development area. "Prominent visual features" are defined as features that are unique to the area or Los Angeles County or those that stand out in relation to their surroundings. "Development area" is defined as that portion of the Landmark Village project site that will be subject to grading or construction activity due to project buildout.

Due to the location of the proposed Landmark Village project relative to the viewsheds previously analyzed, it is evident that impacts associated with the project development area would be limited to the Santa Clara River/SR-126 corridor, which is described below.

b. Santa Clara River/SR-126 Corridor

The Santa Clara River/SR-126 corridor supports a large mobile viewing (automobile) audience. It is also in a largely undeveloped, rural condition, and much of the level land in the vicinity of the Santa Clara River is cultivated for farming. SR-126 is not an adopted scenic highway but is designated by the County as a "First Priority Scenic Route," which is proposed for further study.[1] The County's General Plan Conservation and Open Space Element contains a policy directed at the protection of scenic resources found along officially designated and first priority proposed scenic highways. The policy is as follows: "Protect the visual quality of scenic views from public roads, trails and vantage points."

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1 Los Angeles County Department of Regional Planning, "Scenic Highway Element" in County of Los Angeles General Plan (Los Angeles, California: 11 October 1974).

The SR-126 corridor contains visual features considered unique within the Santa Clarita Valley Planning Area and Los Angeles County. Such features include the following:

- Santa Clara River and its associated riparian vegetation;
- River bluffs and steep canyons, which rise from the river on its southern bank;
- Various stands of oak trees;
- Mesas, which are elevated above the river corridor and are partially visible;
- Sawtooth Ridge, which stands out in sharp contrast due to its exposed rock faces; and
- Higher elevations of the Santa Susana Mountains, which include the approved Specific Plan High Country SMA.

Figure 4.6-1, Existing Visual Characteristics of the Santa Clara River/SR-126 Corridor, contains a viewshed analysis that provides a representative overview of the existing visual characteristics of the Santa Clara River/SR-126 corridor in the vicinity of the Landmark Village project site. As shown, unimpeded views of this corridor are available when approaching the Landmark Village site traveling east on SR-126. As one draws closer, the elevation of the SR-126 roadbed begins to increase, providing a greater degree of visual separation from this corridor and permitting clearer views of the bluffs across the Santa Clara River. Eventually, the SR-126 alignment cuts through a hillside whose remnants obstruct direct views into the site interior and the adjacent river corridor in the vicinity of Long Canyon. Views quickly open into the site interior where agricultural fields and ancillary structures are visible. As one approaches the eastern most portion of the studied SR-126 roadway segment, views of the Castaic Creek streambed and associated vegetation appear, and beyond lies the Travel Village Recreational Vehicle Park, located in the vicinity of the Newhall Ranch Specific Plan site.

(1) Representative View of Site Interior as Observed along Santa Clara River/SR-126 Corridor

Figure 4.6-2, Representative View of Site Interior as Observed along Santa Clara River/SR-126 Corridor, documents direct views along that segment of SR-126 located adjacent to the project when looking south across the river corridor toward the Grapevine and Exxon Mesas and the High Country SMA. The foreground view is of actively cultivated agricultural fields and related storage facilities, with the willow riparian woodland vegetation associated with this corridor framing the background. The river corridor, due to its thicker vegetation, is considered a prominent visual feature.

The relatively flat, open mesas and adjoining river bluffs are visible within the middle-ground scene. From this view, both Grapevine and Exxon Mesa are visually prominent, as they provide a horizontal/

linear element that visually separates the river bluffs below from the High Country SMA above. The river bluffs and the oak trees on the bluffs are also considered visually prominent as they form the backdrop for the river corridor.

The upper slopes and skyline ridgelines of the Santa Susana Mountains form a dominant background landscape. These mountains are considered prominent visual features in this view.

Prominent Visual Features: In summary, the prominent visual features are the river corridor, Exxon and Grapevine Mesas, river bluffs, oak trees on the bluffs, and the upper slopes and skyline ridgelines of the Santa Susana Mountains both on site and off site.

(2) Representative View of the Borrow Site as Observed along SR-126

This view is from SR-126, opposite Chiquito Canyon Road, looking south across the river corridor toward Adobe Canyon/Long Canyon. As illustrated on **Figure 4.6-3, Representative View of Adobe Canyon Borrow Site as Observed along SR-126**, in the midground, cultivated farmland and the river corridor are features visible beyond SR-126 in the foreground. Disturbed open areas along the side of the road are visible as well. Natural hillsides behind the farmland frame the view of the river corridor and provide a window into Long Canyon. Stands of oak trees are prominent on the east-facing slope of Long Canyon fronting along the river corridor. A smaller group of oak trees is visible on the west-facing slope of Long Canyon. Prominent visual features in the foreground view include the steep hillsides that border the southern edge of the river corridor and the stand of oak trees.

In the background, hillsides and ridgelines within the Specific Plan site's High Country SMA are visible. As the highest landscape feature in this view, with a distinctive ridgeline that forms a horizon line against the sky, these landforms are considered prominent visual features.

Prominent Visual Features: In summary, the prominent visual features are the steep hillsides bordering the southern edge of the river corridor, portions of the river corridor itself, the stand of oak trees at the base of the west- and east-facing slopes of Long Canyon, and the High Country SMA area.

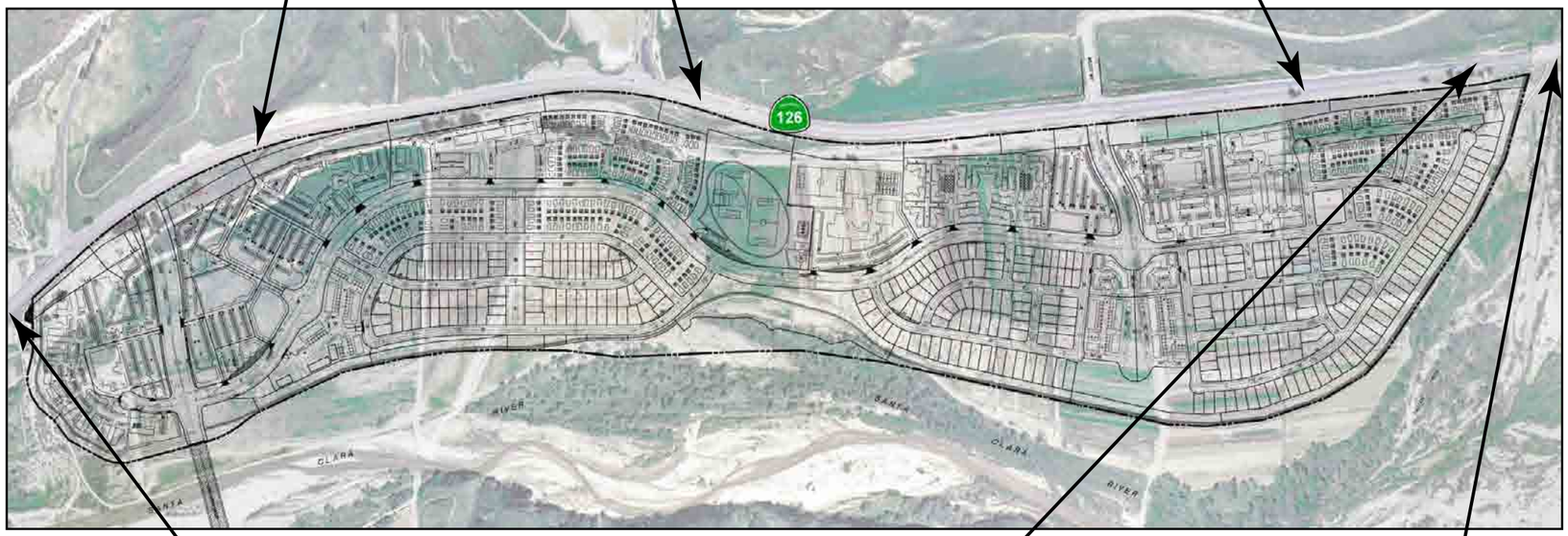
(3) Representative View of Off-Site Grading

Figure 4.6-4, Representative View of Chiquito Canyon Grading Site as Observed along SR-126, depicts views looking northeast along SR-126 toward the Chiquito Canyon off-site grading location. As shown, the intersection of Chiquito Canyon Road with the SR-126 is visible in the foreground, along with utility poles and power lines that travel across the otherwise open landscape. Visible in the midground beyond Chiquito Canyon Road is the natural hillside representing this grading site. A single oak tree is prominent on the south-facing slope of this hillside. In the far right corner of this image across SR-126 is a stand of eucalyptus trees located on the tract map site.

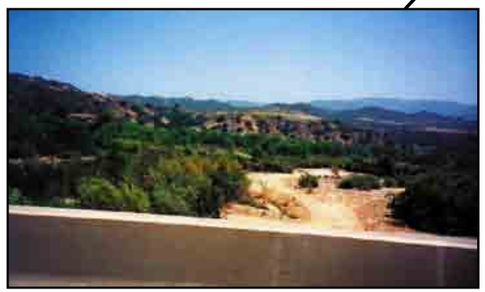
View Obstruction to be Removed by Project Improvements

View Obstruction to be Partially Removed by Project Improvements

View of Existing Agricultural Operations



Existing River Corridor View



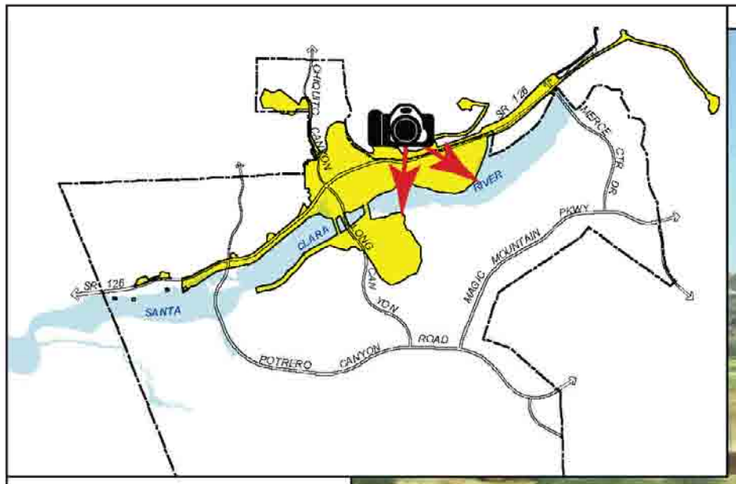
Existing View of Castaic Creek

Existing View of Travel Village

SOURCE: River Village Planning Notebook – May 2002, Impact Sciences, Inc. – September 2006

FIGURE **4.6-1**

Existing Visual Characteristics of the Santa Clara River/SR-126 Corridor



Existing View

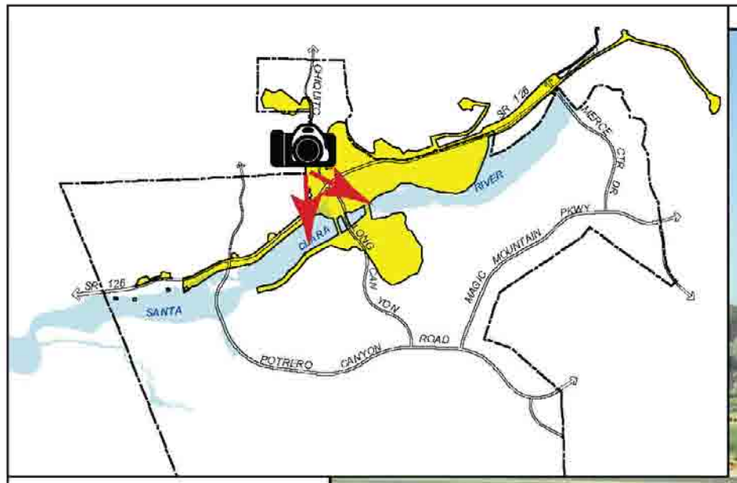
Proposed View

SOURCE: Ford Design Visualization - August 2004, May 2006

FIGURE **4.6-2**

Representative View of Site Interior as Observed along Santa Clara River/SR-126 Corridor

32-92•05/06



Existing View

Proposed View

SOURCE: Ford Design Visualization – August 2004

FIGURE **4.6-3**

Representative View of Adobe Canyon Borrow Site as Observed along SR-126

32-92•05/06

In the background to either side of the grading site are hillsides and ridgelines of the Santa Susana Mountains. As the highest landscape feature in view, with a distinctive ridgeline that forms a horizon line against the sky, these landforms are considered prominent visual features.

Prominent Visual Features: In summary, the prominent visual features are the Santa Susana Mountains that form the backdrop to this image and the single oak tree visible in the midground from this vantage point.

(4) Representative Overview of Tract Map Site

Figure 4.6-5, Representative View of Tract Map Site, depicts views as observed by motorists who are west of the project site and are traveling in the eastbound direction on SR-126. As shown, the elevated nature of this vantage point provides unimpeded views across the entire tract map site and up the Santa Clara River valley. Cultivated farmland is visible in the foreground. Views of the agricultural fields extend to the midground of the image, where they abut the river corridor. The bluffs overlooking the Santa Clara River and associated river vegetation dominate background views from this location.

Prominent Visual Features: Prominent visual features from this viewing location include the river corridor and river bluffs that form the backdrop to this scene.

(5) Representative View of Tract Map Site from Wolcott Road

Figure 4.6-6, Representative View of Tract Map Site from Wolcott Way, depicts views as observed by motorists who are traveling south on Wolcott near the intersection with SR-126. From this vantage point, foreground views are defined by the asphalt pavement and traffic control signals associated with the intersection of SR-126 and Wolcott Road. A fenced storage yard containing agricultural-related equipment and a metal shed are visible in the midground of this image. Background views are dominated by the Exxon and Grapevine Mesas located above river bluffs as well as the High Country SMA. Riparian vegetation associated with the river corridor is also visible in the background of this viewing location.

Prominent Visual Features: Views from this vantage point are dominated by the river bluffs and associated mesas (both Exxon and Grapevine).

(6) Representative View of Valencia Commerce Center Water Tank Site

Figure 4.6-7, Representative View of Valencia Commerce Center Water Tank, depicts views of the existing Valencia Commerce Center water tank site as observed by motorists traveling along SR-126 and Commerce Center Drive. Visible in the foreground of this image are asphalt roadway and traffic control signals located at the intersection of SR-126 with Commerce Center Drive. Midground views consist of vacant land planned for development as part of the Valencia Commerce Center business park and

improvements associated with SR-126. Background views from this location are defined by the Santa Susana Mountains. The existing Valencia Commerce Center water tank site is visible on the hillside in the right hand side of the image.

Prominent Visual Features: Views from this vantage point are dominated by the landforms associated with the Santa Susana Mountains.

5. PROPOSED PROJECT IMPROVEMENTS

The Landmark Village tract map site proposes to develop Landmark Village with up to 1,444 detached and attached residential dwellings, approximately 1,033,000 square feet of mixed-use/commercial space, 9-acre elementary school, 16.1-acre Community Park, public and private recreational facilities, trails, open space, and supporting roadway and infrastructure improvements. The Landmark Village project incorporates key design features of the Newhall Ranch Specific Plan that will:

(a) preserve the natural Santa Clara River vegetation and river bluffs;

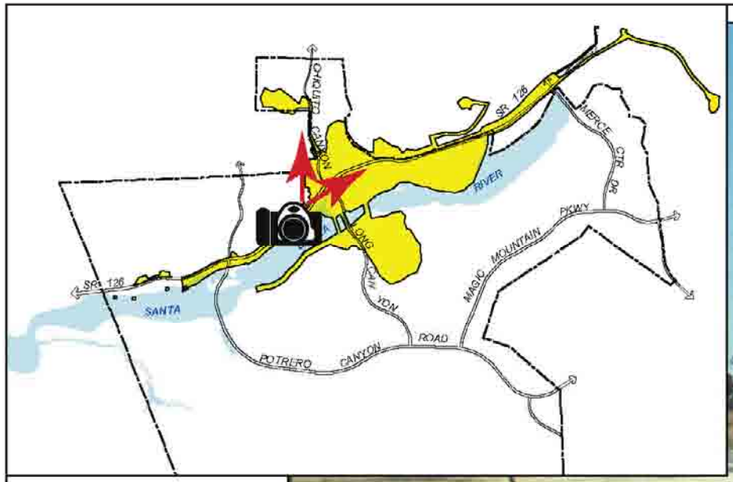
(b) place a regional river trail in between SR-126 and the Santa Clara River; and

(c) create large "windows," which allow views of the river corridor, river bluffs, and Santa Susana Mountains from SR-126 to be maintained.

Uses constructed within the Landmark Village tract map site are subject to the Development Regulations and Design Guidelines that govern the development within the Newhall Ranch Specific Plan. The guidelines are intended to achieve a developed image that blends with adjoining land uses and reduces the amount of alteration of scenic vistas and natural features found on the Specific Plan site. The Specific Plan regulations also specifically address building setbacks and heights; signage; parking; site planning; architecture; fencing; landscape design; and lighting. In conjunction with the development review process set forth in the Specific Plan, the proposed project must incorporate both the Development Regulations and Design Guidelines listed in the Specific Plan.

In addition to the tract map site, the project also includes approximately 679.2 acres of grading and/or development at locations beyond the tract map site. These off-site project components relative to the tract map site were shown earlier in **Figure 1.0-3, Project Boundary/Environmental Setting**.

Off-site grading includes construction of the Long Canyon Road Bridge, which is intended as the primary bridge crossing over the Santa Clara River providing access to the central portions of the Newhall Ranch Specific Plan. The bridge would span approximately 1,000 feet over the river, with a width of approximately 100 feet. Support for the bridge would involve construction of 11 piers within the river corridor. Each pier would be spaced approximately 100 feet apart. Abutments and bank stabilization would be required on both sides of the bridge to protect against erosive forces.



Existing View

NOTE: Illustrates grading concept only.

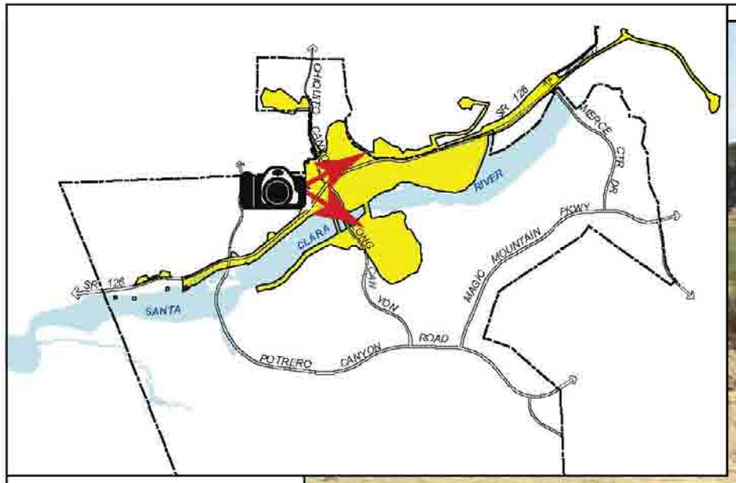
Proposed View

SOURCE: Ford Design Visualization – August 2004

FIGURE **4.6-4**

Representative View of Chiquito Canyon Grading Site as Observed along SR-126

32-92•05/06



Existing View

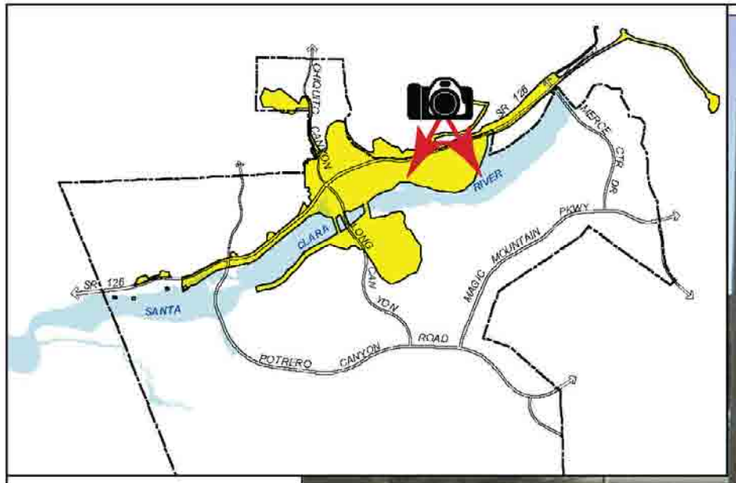
Proposed View

SOURCE: VisionScape Imagery – May 2006

FIGURE **4.6-5**

Representative View of Tract Map Site

32-92•05/06



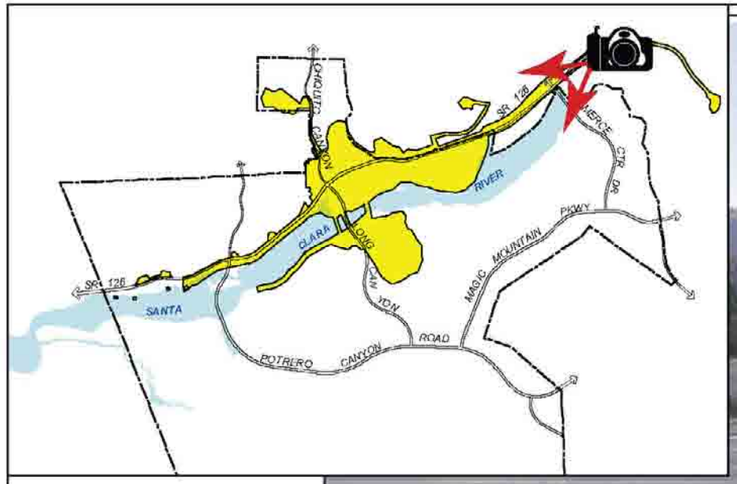
Existing View

Proposed View

SOURCE: VisionScape Imagery – 2005

FIGURE **4.6-6**

Representative View of Tract Map Site from Wolcott Way



Existing View

Proposed View

SOURCE: VisionScape Imagery – 2005

FIGURE **4.6-7**

Representative View of Valencia Commerce Center Water Tank

32-92•05/06

To elevate the tract map site above the floodplain of the river, soil would be imported from the Adobe Canyon borrow site located within Adobe Canyon/Long Canyon south of the river. This borrow site is approximately 215 acres in size and is located due south of the tract map site. Haul routes would be created to cross the river between Long Canyon and the tract map site (the river crossings would be similar in construction to those installed annually to support agricultural operations on the Specific Plan site; steel piping is placed in the river and then covered with earth material). In addition, to accommodate project-necessitated improvements (SR-126 and debris basins for stormwater flows that are collected by the project storm drainage system), land directly north of SR-126 would be graded within Chiquito Canyon (the Chiquito Canyon grading site). This grading site is approximately 120 acres in size.

The project also includes a 110-acre utility corridor that runs parallel to SR-126, from the western boundary of the tract map site to the Newhall Ranch Water Reclamation Plan (WRP) site near the Los Angeles County/Ventura County line, from the eastern boundary of the tract map site to I-5, and then south to the existing Valencia District 32 WRP. The utility corridor would serve to extend municipal services to the tract map site (e.g., wastewater lines, water lines, etc.), and would be largely placed in the existing utility easements within SR-126 and other existing roadway rights-of-way.

The Landmark Village project site would include buried bank stabilization along the river and Castaic Creek adjacent to and downstream of the tract map site. In total, approximately 17,700 linear feet (LF) of bank would be provided with buried bank stabilization. This would include approximately 10,900 feet fronting the southern and eastern boundary of the tract map site on the north bank of the river and the west bank of Castaic Creek and approximately 6,800 LF on the south bank of the river off the tract map site, beginning at the Long Canyon Road Bridge and extending westward. Areas disturbed during installation of the buried bank stabilization would be revegetated following the conclusion of construction-related activities.

Potable water would be conveyed to the tract map site from two separate water tank sites. One potable water tank is proposed north of SR-126 within the existing Valencia Commerce Center business park immediately adjacent to an existing water tank. The second potable water tank would be located within the Adobe Canyon borrow site. The project would also implement a portion of the Specific Plan's reclaimed water storage and distribution system by installing two reclaimed water tanks in Chiquito Canyon, north of the Chiquito Canyon grading site.

6. PROJECT IMPACTS

a. Significance Threshold Criteria

Based on the thresholds of significance identified in Appendix G of the 2005 *CEQA Guidelines*, the proposed project would result in a significant aesthetic impact if the project would:

(a) Have a substantial adverse effect on a scenic vista;

(b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;

(c) Substantially degrade the existing visual character or quality of the site and its surroundings; or

(d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area.

The County of Los Angeles Environmental Document Reporting and Procedures Guidelines provide additional, more detailed, criteria for determining if a project's changes in the existing landscape could be considered adverse or significant. If a project meets one or more of the listed criteria to a substantial degree, it can be concluded that the project could result in a significant visual impact. The County criteria are assessed below.

(1) Is the project adjacent to a visual corridor? (And, would the project substantially affect a visual corridor?)

The Landmark Village project site is visible from one of three corridors identified in the Newhall Ranch Specific Plan Program EIR, the Santa Clara River/SR-126 corridor. SR-126, while not an adopted County "Scenic Highway," is identified in the County Scenic Highway Element of the County General Plan as a "First Priority Scenic Route," which is proposed for further study, but carries no regulatory restrictions or significance. The County's General Plan Conservation and Open Space Element contains a policy directed at the protection of scenic resources found along officially designated and first priority proposed scenic highways. The policy is as follows: "Protect the visual quality of scenic views from public roads, trails and key vantage points." However, the County General Plan allows urban development to occur along Scenic Highways and First Priority Scenic Routes.

(2) Does the project obstruct unique views from other development or vantage points?

Ten viewsheds were analyzed in the Newhall Ranch Specific Plan Program EIR to determine if the Specific Plan would result in partial or complete blockage of prominent features contributing to a unique view or vantage point. That analysis found that views of future development on the Landmark Village

site would not be visible from I-5 or other off-site vantage points, other than views observed along SR-126, due to the visual obstruction created by the presence of intervening landforms, vegetation, and development.

(3) Is the project out of character in an area with unique aesthetic features?

Under this criterion, a determination was made on whether the proposed project would result in a substantial change in the existing view, particularly a change within a view corridor from non-urban to urban.

(4) Does the scale (height, bulk) of the project exceed that existing in the surrounding area (usually applies within already urbanized areas)?

This criterion does not apply because the Landmark Village project site is not located immediately adjacent to existing development.

(5) Does the project result in sun/shadow effects on adjacent land uses?

This criterion does not apply to the Landmark Village project, as this project is not located immediately adjacent to existing development. Future land uses constructed as a result of this project would be located along the SR-126 corridor, so there is a potential for daytime and nighttime light and glare impacts to motorists.

Each of the relevant criteria is discussed below in relation to the proposed project.

b. Impact Analysis

(1) Construction Impacts

(a) Grading and Earth Movement

Off-site grading would occur both north and south of the Santa Clara River/SR-126 corridor. Development of the project site would require the import of approximately 5.8 million cubic yards of soil and subsequent site grading and contouring to establish building pads, roadway configurations, and develop drainage patterns. The off-site grading proposes to excavate soil from the Adobe Canyon borrow site within the Specific Plan and transport the soils to elevate the tract map site for development. Off-site grading in the Adobe Canyon borrow site would excavate and reshape the hills and depressions forming the ridge separating Long and Adobe Canyons. Much of the grading would occur along the top and bluffs of an unnamed plateau located near Sawtooth Ridge. The grading would excavate the

southeastern portion of this plateau, creating a gentler slope leading up to the top of the ridge. The grading would alter the west-facing slope leading up to the plateau, creating a bench separated by two manufactured slopes stepping down the west-facing ridgeline defining Adobe Canyon at a 3:1 (horizontal to vertical) grade. Additional earthwork is planned at the terminus of Adobe Canyon.

The second off-site grading location (i.e., Chiquito Canyon grading site) is planned just north of SR-126 near the SR-126/Chiquito Canyon Road intersection. This grading site is proposed on a ridgeline of a northeast-southwest trending hillside. The terrain on the southwesterly portion of this hillside gently slopes toward the intersection in a "finger" shape where elevations reach approximately 950 feet above mean sea level (msl) at its lowest point (slightly elevated above the road bed). The terrain becomes progressively steeper and more rugged toward the northeast portion of the ridge, with the peak elevation reaching 1,160 feet above msl. The grading would lower the "finger" extending toward the SR-126/ Chiquito Canyon Road intersection by approximately 60 feet when compared to the existing elevation. Rather than a gradual incline that extends upward at an increasingly greater grade, the reshaped slope would approximate the grade of SR-126 for about 1,500 feet east of its intersection with Chiquito Canyon Road. At that point, the grading would create a manufactured slope extending upward at a uniform 3:1 (h:v) grade reaching a high of 1,160 feet above msl. Approximately 1.2 million cubic yards of soils would be excavated from this area and placed as fill in the adjacent canyons to facilitate SR-126 improvements and the installation of debris basins.

During site grading, the disturbed earth would stand out in contrast to the vegetated areas left untouched by such activity. Heavy trucks and other conveyance equipment (e.g., small trucks, scrappers, etc.) would be visible moving to and from the off-site grading sites, and heavy equipment would be visible on the tract map site itself, while the fill is deposited and compacted. These views are limited to working hours and would cease once the fill has been imported and compacted to create development pads; however, they would stand out in contrast to the open area character of the surroundings.

During the construction phase of the proposed tract map site, visual impacts would differ as the framework of the structures would be raised and finished, and parking areas and streets would be paved. As the structures are constructed and finished, the scale of the project and changes in the visual character of the project site would become more evident.

(b) Bank Stabilization

A combination of buried and exposed bank stabilization would be installed along the Santa Clara River, and at the Long Canyon Road Bridge crossing, as shown earlier in **Figure 1.0-24, Landmark Village Portion of Specific Plan Conceptual Backbone Drainage Plan**. The majority of the natural vegetation

within the Santa Clara River will remain; however, portions of vegetation along the northern bank would be temporarily removed for bank stabilization. Approximately 17,700 LF of bank stabilization would be necessary for the proposed project. To resist scouring, bank stabilization would be buried and generally made of soil cement, except at the Long Canyon Road Bridge, outlet structures, and access ramps where stabilization would not be buried. Please see **Figure 1.0-27, Bank Stabilization Techniques**, for photo illustrations depicting various bank stabilization techniques. Upon completion, the banks would be planted with native vegetation so that over time the banks would return to a naturalized condition and be visually indistinguishable from natural conditions when viewed along the Santa Clara River/SR-126 corridor.

The exposed gunite/bank stabilization would be similar in appearance to the existing bank stabilization located along the Santa Clara River east of the project site, and would not be visible from the Santa Clara River/SR-126 corridor due to the presence of intervening structures and vegetation in the post-development condition.

(c) Utility Corridor

Short-term visual impacts related to construction activities associated with the utility corridor would be limited to areas within and in the immediate vicinity of an active construction zone. The proposed improvements would occur in phases over a 12-month period. During this period, views would consist of construction workers using equipment to remove asphalt and excavate the necessary utility trench. Displaced soil, heavy equipment, trucks transporting material to and from the work zone, and work crews would all be visible. Upon completion of the workday, all trenches would be back-filled or covered with steel plates. Cuts in street sections would be re-paved as a distinct construction element at the end of the construction period at each roadway segment. These views would not be considered to represent a sharp contrast to the existing visual character along the alignment, which is a unique mixture of vacant land, cultivated farmland, and existing Highway Commercial and Business Park uses. While some may consider these views to be an adverse aesthetic impact, the visual impacts associated with construction activity would be limited to working hours. Furthermore, this activity would be mobile and would move steadily as work progresses along the alignment of the utility corridor.

Upon completion of the improvements, the visual character along most segments of the roadway would remain unchanged from its present character since the utility lines are buried beneath the surface. Views of existing land uses would still be the predominant visual element observed. No significant visual impacts would occur as a result of utility corridor construction.

(d) Water Tank Locations

Visual impacts associated with the potable and reclaimed water tanks would evolve over the course of construction. Initial views would be temporary and consist of work crews and equipment preparing the site. Concrete footings would be poured and the concentric steel rings welded into place. Displaced soil, heavy equipment, and trucks transporting material to and from the work zone would all be visible during construction of the water tanks. Over time, the tank would begin to take shape and the views of work crews and construction equipment would be replaced by permanent views. Views generated during construction would be temporary in nature and are not considered significant, as construction activity would cease upon completion of the permanent water tank structures.

(e) Conclusion

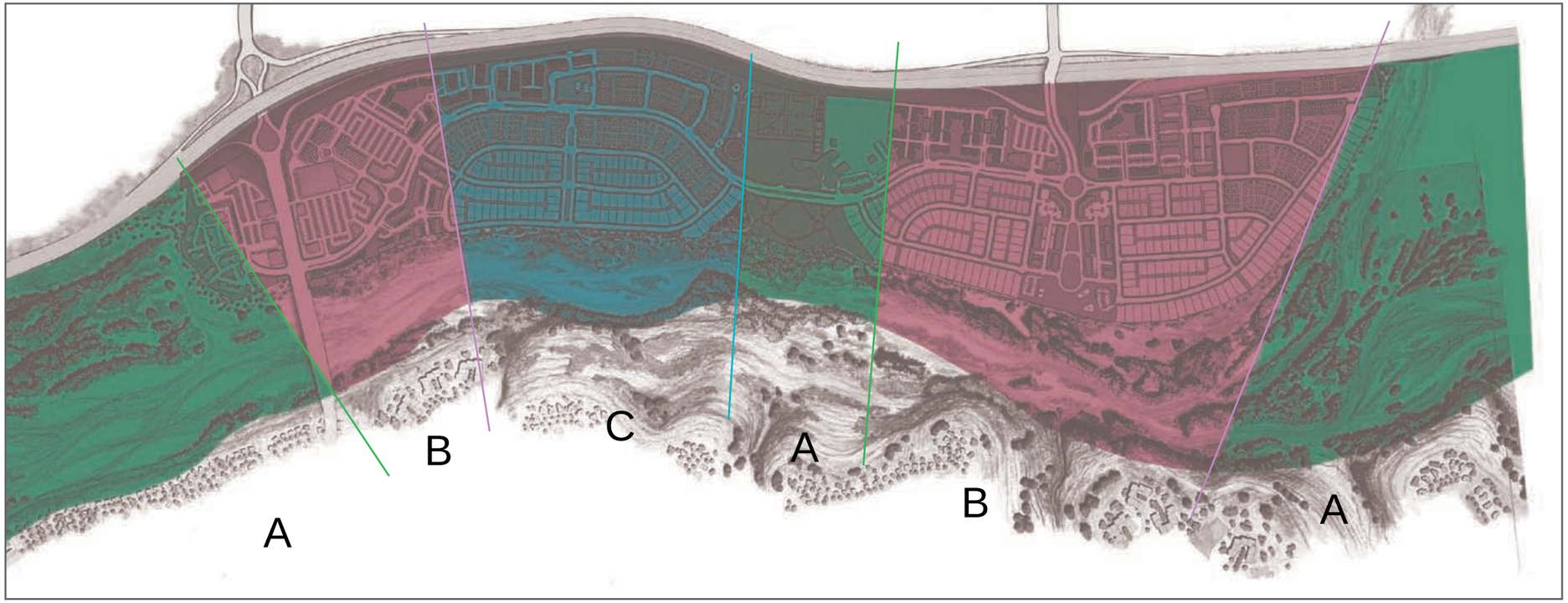
Changes to the visual character of the project site would occur over a period of years. The earthwork needed to develop the Landmark Village project would require alteration of hillsides and ridgelines, which form a prominent visual feature within the Santa Clara River/SR-126 corridor. The construction activity is considered to substantially affect this corridor and represents a short-term significant impact.

(2) Operational Impacts

(a) Obstruct or Affect a Visual Corridor or Unique Aesthetic Features

The site plan has been designed to retain view corridors consistent with Mitigation Measure 4.7-2 of the Specific Plan and the Newhall Ranch Specific Plan Program EIR. This mitigation requires that the site planning of tentative tract maps, multi-family and commercial mixed-use land use designations planned along SR-126 employ techniques to maintain views of the river, bluffs and ridgelines, which form the prominent visual features found along the Santa Clara River/SR-126 corridor. Consistent with this requirement, the Landmark Village development combines a 9-acre elementary school with a 16-acre park in the central portion of the project site to create a large viewing window of the river, bluffs, and ridgelines beyond the river. An oblique view of these features also remains available as one approaches and departs that segment of SR-126 in the vicinity of the Landmark Village project site.

Figure 4.6-8, Degree of Visual Impact, depicts the degree of visual impact created by the tract map site on views available to motorists traveling along SR-126 looking south toward the Santa Clara River/SR-126 corridor. As shown, buildout of the proposed project would convert cultivated agricultural fields to developed uses, resulting in the permanent visual alteration of this land from an open area to one more urban in nature. The presence of commercial, residential, and institutional buildings combined with the noise attenuation walls necessary along SR-126 would obstruct and alter views of the river, bluffs, and ridgelines visible along this corridor. This is considered a significant impact under criteria one and two, shown earlier in this section, despite implementation of the required site planning techniques.



A Viewshed Unaltered by Project

Much of the current SR-126/Santa Clara River viewshed will remain unaltered. The areas flanking Landmark Village will maintain their views from the highway of River Corridor vegetation. The community has also been designed to allow for a view opportunity through the community park area into the river habitat and bluffs beyond.

B Viewshed Substantially Altered by Project Development and Transportation Improvements

The major viewshed impact of Landmark Village will be the sound attenuation landscape and structures added to the SR-126 corridor. Above the landscape and sound attenuation walls, views of the river corridor bluffs and the major ridgeline of the High Country will remain visible.

C Viewshed Partially Altered by Project (Including Opening of Currently Obstructed Views)

This section of SR-126 will be at an elevated grade so that partial views of the river corridor, over the development, will be possible. Sound attenuation walls will be a factor but to a lesser extent than at grade condition.

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SOURCE: River Village Planning Notebook – May 2002

FIGURE **4.6-8**

Degree of Visual Impact

Removal of earth from the Adobe Canyon borrow site south of the river would substantially alter views of a plateau located due west of Sawtooth Ridge and related hillside, which forms a prominent visual feature within the Santa Clara River/SR-126 corridor. Similarly, off-site grading on the north side of SR-126 would visually alter a prominent hillside and remove an oak tree that is highly visible from this corridor. This is considered a significant visual impact. These conclusions are consistent with the findings presented in the Newhall Ranch Specific Plan Program EIR.

(b) Light and Glare

The proposed project would increase the amount of glare (including reflected light) generated on the Landmark Village project site during the day and would increase the amount of light generated during the night. Daytime sources of glare would primarily include the activities of people and the sun reflecting off glass windows of structures, automobiles, and trucks. Nighttime sources of light would include lights fixed to poles in commercial and residential areas, lighted signs mounted to commercial buildings, the headlights of automobiles and trucks, and parking lot lighting. Given that the site presently produces little or no light or glare, the light and glare impact on the surrounding area would be a substantial change over the present condition. The combined effect of all the light and glare generated on the project site would transform this undeveloped area into that of a developed community similar to the neighboring community of Valencia. The introduction of additional automobile and truck lights, street lights and parking lot lighting would be the most adverse during the nighttime. However, to ensure that such impacts are minimized, Section 4.7 of the Specific Plan contains standards to control the placement and orientation of lighting fixtures to prevent glare or light intrusion into adjacent areas. While such measures would minimize the outward and upward migration of nighttime light, it would not completely mask the change in the night sky that would occur as a result of the project and such impacts would be considered significant. This conclusion is consistent with the findings presented in the Newhall Ranch Specific Plan Program EIR.

7. PROJECT MITIGATION MEASURES

Although the proposed Landmark Village project may result in potential visual impacts prior to mitigation, the County already has imposed mitigation measures in connection with its approval of the Newhall Ranch Specific Plan. These mitigation measures, as they relate to visual resources, are found in the previously certified Newhall Ranch Specific Plan Program EIR and the adopted Mitigation Monitoring Plan for the Specific Plan (May 2003). The applicant has committed to implementing the applicable measures from the Newhall Ranch Specific Plan Program EIR to ensure that visual impacts are reduced to the maximum extent feasible.

a. Mitigation Measures Required by the Adopted Newhall Ranch Specific Plan as they Relate to the Landmark Village Project

The following mitigation measures were adopted by the County in connection with its approval of the Newhall Ranch Specific Plan (May 2003). These measures are applicable to the Landmark Village project due to its geographic location. Those mitigation measures applicable to the Landmark Village project will be implemented, as appropriate. These measures are preceded by "SP," which stands for Specific Plan.

SP 4.7-1 In conjunction with the development review process set forth in Chapter 5 of the Specific Plan, all future subdivision maps and other discretionary permits which allow construction shall incorporate the Development Guidelines (Specific Plan, Chapter 3) and Design Guidelines (Specific Plan Chapter 4), and the design themes and view considerations listed in the Specific Plan.

SP 4.7-2 In design of residential tentative tract maps and site planning of multifamily areas and Commercial and Mixed-Use land use designations along SR-126, the following Design Guidelines shall be utilized:

- Where the elevations of buildings will obstruct the views from SR-126 to the south, the location and configuration of individual buildings, driveways, parking, streets, signs, and pathways shall be designed to provide view corridors of the river, bluffs, and the ridge lines south of the river. Those view corridors may be perpendicular to SR-126 or oblique to it in order to provide for views of passengers within moving vehicles on SR-126.
- The Community Park between SR-126 and the Santa Clara River shall be designed to promote views from SR-126 of the river, bluffs, and ridge lines to the south of the river.
- Residential Site Planning Guidelines set forth in Section 4.3.1, Residential and Architectural Guidelines, set forth [in] Section 4.4.1, Residential, shall be employed to ensure that the views from SR-126 are aesthetically pleasing and that views of the river, bluffs, and ridge lines south of the river are preserved to the extent practicable.
- Mixed-Use and the Commercial Site Planning Guidelines set forth in Section 4.3.2 and Architectural Guidelines set forth Section 4.4.2 shall be incorporated to the extent practicable in the design of the Riverwood Village Mixed-Use and Commercial land use designations to ensure that the views from SR-126 are aesthetically pleasing and to preserve views of the river, bluffs, and ridge lines south of the river.
- Landscape improvements along SR-126 shall incorporate the Landscape Design Guidelines, set forth in Section 4.6 in order to ensure that the views from SR-126 are aesthetically pleasing and to preserve views of the river, bluffs, and ridge lines south of the river.

b. Additional Mitigation Measures Proposed by this EIR

No additional mitigation measures are recommended beyond that already incorporated into the Specific Plan and the Newhall Ranch Specific Plan Program EIR.

8. CUMULATIVE IMPACTS

The cumulative analysis presented in the Newhall Ranch Specific Plan Program EIR assessed buildout of cumulative projects, and this analysis is incorporated by this reference. No new development activity visible along I-5 and SR-126 in the Santa Clarita Valley has occurred other than that considered in the Newhall Ranch Specific Plan Program EIR. In light of this fact, and given that the proposed Landmark Village project is consistent with the land use designations contained in the Specific Plan, it can be concluded that the prior Newhall Ranch Specific Plan Program EIR still adequately addresses the cumulative visual impacts of the Landmark Village project, in conjunction with other cumulative projects in the area. Furthermore, it has been determined that the Landmark Village project would not have any cumulative effects, which were not previously examined in the Newhall Ranch Specific Plan Program EIR. Consistent with *CEQA Guidelines* Sections 15125 and 15385, this project-level analysis incorporates by reference the discussions and analyses contained in the Newhall Ranch Specific Plan Program EIR pertaining to the cumulative analysis of visual effects in the region.

Buildout of all existing, planned, approved, and pending development projects along I-5 and SR-126 would result in a significant unavoidable visual impact as evaluated in the Newhall Ranch Specific Plan Program EIR.

9. CUMULATIVE MITIGATION MEASURES

Other than complying with the same mitigation that is required of the project, no further mitigation is recommended or required, because the project does not contribute to significant cumulative impacts.

10. SIGNIFICANT UNAVOIDABLE IMPACTS

Project and cumulative development would significantly alter the visual characteristics of the SR-126/ Santa Clara River corridor through the introduction of residential, commercial, and institutional uses on land presently cultivated with crops. Earthwork necessary for site development would also significantly alter hillsides and ridgelines, which form prominent visual features within the SR-126 river corridor. These impacts remain significant and unavoidable.

4.7 TRAFFIC/ACCESS

1. SUMMARY

This section is based upon traffic reports prepared for the proposed Landmark Village project by Austin-Foust Associates, Inc., dated September 2004 and April 2006, which are included in their entirety in ***Appendix 4.7*** *of this EIR.*

The proposed project would buildout in three phases. Phase 1 is estimated to generate approximately 4,950 average daily trips (ADT) with approximately 375 tripends occurring in the AM peak hour and approximately 505 tripends occurring in the PM peak hour. Phase 2 (including Phase 1) is estimated to generate approximately 20,700 total ADT with approximately 1,400 tripends occurring in the AM peak hour and approximately 1,900 tripends occurring in the PM peak hour. Finally, Phase 3 is estimated to generate an additional 21,200 ADT for a total of 41,900 ADT at project buildout. At buildout, the project would generate approximately 2,900 tripends in the AM peak hour and 4,100 tripends in the PM peak hour. Approximately 30 percent of the Phase 1 and 2 tripends would be internal tripends. The remaining tripends would be for trips off site.

The traffic impact analysis, using the Los Angeles County (County) performance standards, found that the project would result in a significant impact at the following intersections:

Phases 1 and 2 Combined

- *Wolcott/State Route 126 (SR-126)*
- *Commerce Center Drive/SR-126*

Phase 3 (Project Buildout)

- *Interstate 5 (I-5)/Southbound Ramps/SR-126*
- *Wolcott/SR-126*
- *Commerce Center Drive/SR-126*
- *Chiquito-Long Canyon/SR-126*

A traffic signal warrant is met at the Chiquito Canyon Road/Long Canyon Road/SR-126 intersection during Phase 1 of the project, and at the Long Canyon Road/A Street intersection for project buildout conditions, thereby necessitating a traffic signal at these locations.

Mitigation measures are recommended that would reduce the level of impact at all of these intersections to less than significant.

No significant impact to Congestion Management Plan (CMP) intersections or freeways, or on SR-126 or State Route 23 (SR-23) in Ventura County would occur.

Significant cumulative traffic impacts in the project study area would occur at the following locations absent mitigation:

Year 2010 Project Buildout and Related Projects

- *I-5 Southbound Ramps/SR-126*
- *I-5 Northbound Ramps/SR-126*
- *Wolcott/SR-126*
- *Chiquito-Long Canyon/SR-126*

Long Range Cumulative Forecast

- *I-5 south of (s/o) Magic Mountain Parkway*
- *I-5 s/o Rye Canyon Road*

In addition, Year 2020 buildout of the entire Newhall Ranch Specific Plan would contribute to potentially significant cumulative impacts at the following SR-126 intersections in the community of Piru and City of Fillmore in Ventura County:

- *Center Street and Telegraph Road (SR-126)*
- *E Street and Ventura Street (SR-126)*
- *El Dorado Road and Ventura Street*

Identified mitigation measures would reduce the project's contribution to the cumulative impacts in Los Angeles County to a level below significant. Mitigation measures also are proposed that would reduce the Specific Plan buildout traffic's contribution to potentially significant cumulative impacts at SR-126 intersections in Piru and Fillmore in Ventura County to a level below significant.

2. BACKGROUND

a. Relationship of Project to Newhall Ranch Specific Plan Program EIR

Section 4.8 of the Newhall Ranch Specific Plan Program EIR identified and analyzed the existing conditions, potential impacts, and mitigation measures associated with Traffic/Access for the entire Newhall Ranch Specific Plan. The County, in its findings and in a revised Mitigation Monitoring Plan,

adopted the Newhall Ranch mitigation program for the Specific Plan. The Newhall Ranch Specific Plan Program EIR concluded that Specific Plan implementation would result in significant impacts, but that the identified mitigation measures would reduce the impacts to below a level of significance. All subsequent project-specific development plans and tentative subdivision maps must be consistent with the Newhall Ranch Specific Plan, adopted May 2003, the County of Los Angeles General Plan, and Santa Clarita Valley Areawide Plan.

This project-level EIR is tiering from the previously certified Newhall Ranch Specific Plan Program EIR. **Section 4.7** assesses, at the project-level, the existing conditions for the Landmark Village site, the project's potential environmental impacts on transportation and access, and the applicable mitigation measures from the Newhall Ranch Specific Plan Program EIR, as well as additional mitigation measures, if any, recommended by this EIR for the Landmark Village project.

3. SUMMARY OF THE NEWHALL RANCH SPECIFIC PLAN PROGRAM EIR FINDINGS

The Specific Plan contains a backbone circulation plan that identifies the roadway and circulation improvements required to support buildout of uses allowed by the Specific Plan. As approved, the Newhall Ranch Specific Plan would generate 357,000 ADT, of which 211,300 are accounted for by residential land use while the remainder represents non-residential land uses.

The Newhall Ranch Specific Plan Program EIR, and related findings, determined that buildout of the Specific Plan would cause a significant off-site impact along 19 separate arterial roadways and two state highways: SR-126 and I-5, as well as the SR-126/I-5 interchange. These impacts extended along SR-126 into Ventura County. Before mitigation, the Specific Plan caused significant impacts at the following freeway/highway interchanges and intersections:

- Valencia Boulevard at I-5 Interchange
- Magic Mountain Parkway at I-5 Interchange
- SR-126/Chiquito Canyon Intersection
- SR-126/Wolcott/Franklin Avenue Intersection
- SR-126/Commerce Center Drive Intersection

A number of mitigation measures were identified to address the significant impacts. For example, each subdivision filed within the Specific Plan must undergo a transportation performance evaluation that identifies the specific improvements for all on-site roadways, which are necessary to provide adequate

roadway and intersection capacity as well as adequate right-of-way for the subdivision and other expected traffic. Based on the Newhall Ranch Specific Plan Program EIR and the entire record, the County's Board of Supervisors found that the identified significant impacts on traffic/access were mitigated to below a level of significance by adoption of specified mitigation.[1]

4. METHODOLOGY

a. Project Study Area

The project study area, illustrated in **Figure 4.7-1, Project Study Area**, includes the roadways and intersections within and near the project site where project-generated traffic could cause a significant impact. Generally, the study area incorporates those locations where project traffic represents 1.0 percent or more of total traffic. The project study area generally extends to the Ventura County line to the west, San Martinez Canyon to the north, the I-5 to the east, and the southern project site boundary to the south.

b. Study Horizon Year

For purposes of this analysis, it is assumed that the project would be constructed in three phases. Phase 1 consists of 500 residential units. Phase 2 consists of the balance of the residential component, the elementary school, 100,000 square feet of commercial uses, and a park. Phase 3 consists of the balance of the commercial uses (933,000 square feet). The traffic impacts of this project are evaluated by phase based on the year in which occupancy will occur, and are analyzed both singularly and together with the cumulative traffic from other known developments. Planned years of occupancy for each of the phases are identified below:

Project Phasing	Planned Year of Occupancy
Phase 1	2007
Phase 2	2008
Phase 3	2010

(1) Ambient Growth

Horizon year baseline conditions are derived using actual traffic volumes (measured in 2003) plus a growth factor of 2.0 percent per year to account for background growth in ambient traffic.

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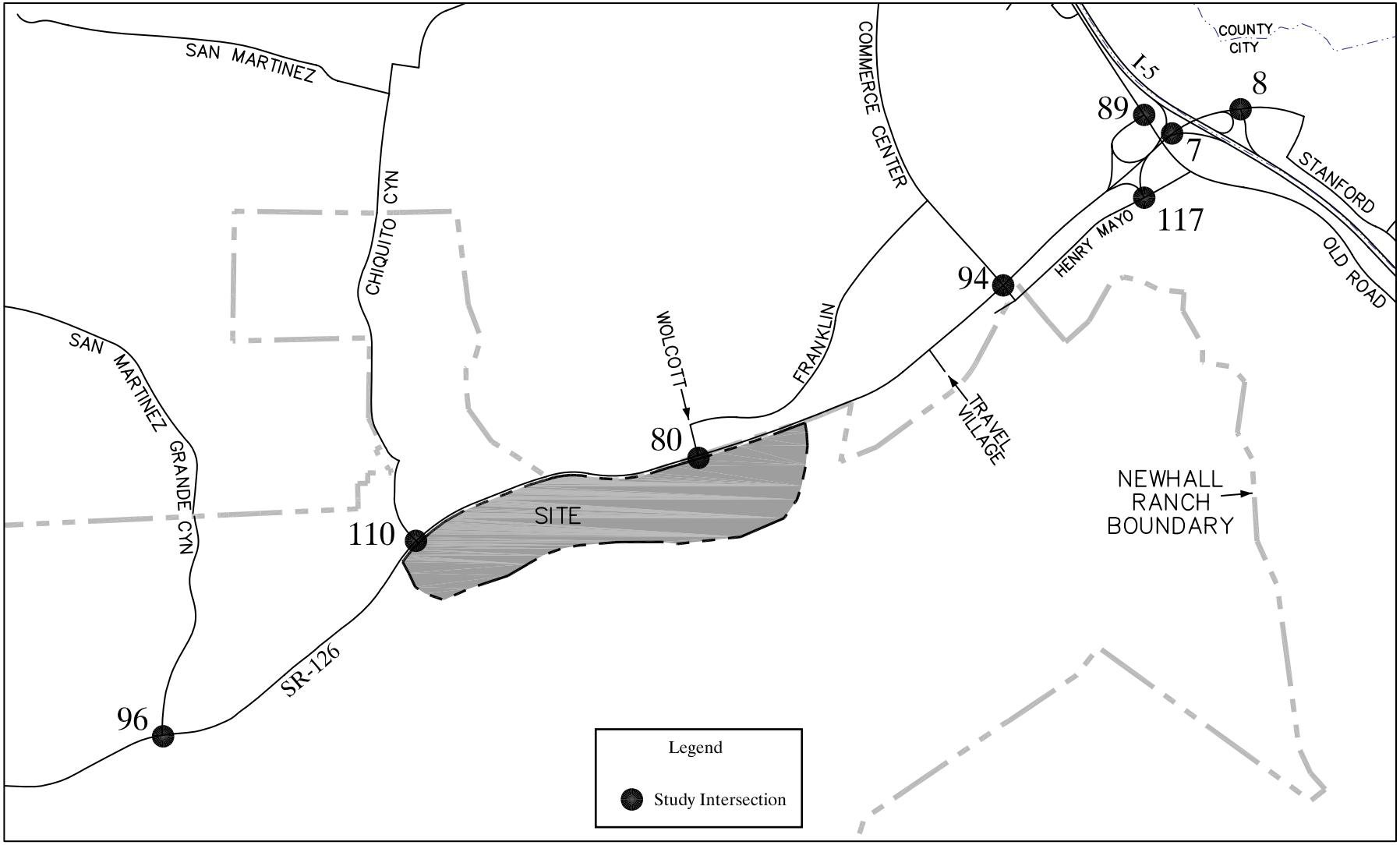
1 See Mitigation Measure 4.8-1 through 4.8-13 in both the certified Newhall Ranch Specific Plan Program EIR and the adopted Mitigation Monitoring Plan for the Specific Plan (May 2003).



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SOURCE: Austin-Foust Associates, Inc. – September 2004

FIGURE **4.7-1**

Project Study Area

32-92•05/06

(2) Related Projects

Additional future traffic volumes from other development planned to occur in the area (related projects) are also added to existing and ambient growth for an analysis of cumulative conditions. Related projects consist of future development that is reasonably expected to be in place by 2007. This analysis takes into account all pending, approved, recorded, or constructed projects that are not occupied at the time of the existing traffic counts (2003). The County Department of Regional Planning was contacted to obtain the latest listing of projects in the area and the project applicant, who has a number of other projects planned for the area, was consulted for a comprehensive list of planned development. A summary of the related projects within an approximate 3-mile radius of the project site is provided in **Table 4.7-1, Related Projects Summary**, and the locations of these projects are illustrated in **Figure 4.7-2, Related Project Location Map**. Appendix C of the Austin-Foust report in **Appendix 4.7** of this EIR contains the computerized listing of development activity obtained from the Department of Regional Planning.

Table 4.7-1
Related Projects Summary

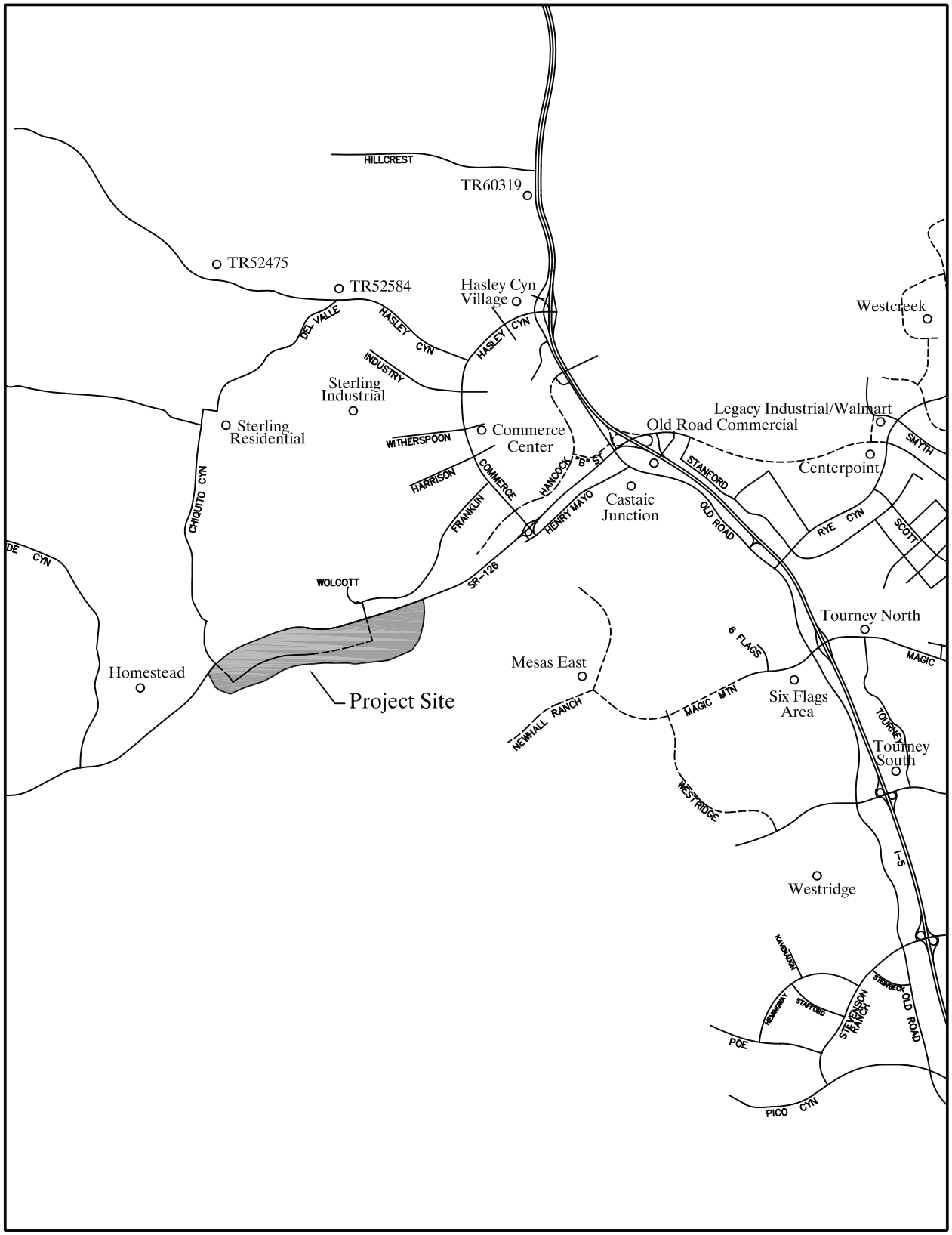
Project	Description	Status/Occupancy Estimate
Homestead Phase 1 (Newhall Ranch)	1,500 DU Residential (850 Multi-Family, 650 Single Family) – used in Phase 2 & Phase 3 analysis only	Pending/2008 (Specific Plan Approved)
Mesas East (Newhall Ranch)	6,146 DU Residential (4,746 Multi-Family, 1,400 Single Family) 1,500 TSF Commercial Office/Retail 26 AC Park	Pending/2008 (Specific Plan Approved)
Valencia Commerce Center/Hasley Canyon Village (including PM 26363)	Phase 1 Analysis (2007): 2,200 TSF (8,300 TSF including existing) Industrial Park/Commercial Retail Phase 2 & 3 Analysis (2008+): 8,360 TSF (13,516 TSF including existing) Industrial Park/Commercial Retail	Approved/2003–2007
Sterling Commercial Center	1,300 TSF Industrial Park	Pending/2005–2007
Sterling Residential	400 DU Residential (150 Multi-Family, 250 Single Family) 50 TSF Commercial Retail	Pending/2005
Castaic Junction	1,000 TSF Industrial Park 534 TSF Business Park 65 TSF Commercial Center 500 Apartment Units	Pending/2007

Project	Description	Status/Occupancy Estimate
Old Road Commercial	120 TSF Commercial Retail	Pending/2005
Area Around Six Flags	1,300 DU Residential 1,160 TSF Commercial Retail/Business Park 700 Room Hotel	Pending/2007
Westridge (including TR 45433 & PM 19050)	1,515 DU Residential 192 TSF Commercial Retail 460 STU Elementary School 208 AC Golf Course	Approved & Under Construction/2005
Valencia Industrial Center/Centerpoint	1,006.55 TSF Industrial Park 150 TSF Commercial Retail	Approved/2004
TR 52584	216 DU Residential 18 Hole Golf Course	Approved/2004
TR 52475	63 DU Residential	Pending/2005
TR 60319 (Tincher)	36 Multi-Family Dwelling Units	Pending/2005
Tourney North	450 TSF Office	Pending/2007
Tourney South	165 TSF Office	Pending/2007
Legacy (Rye Cyn) Business Park	4,016 TSF Industrial Park (including existing) 134 TSF Walmart	Approved/2003–2006

*Source: Austin-Foust Associates (September 2004)(see **Appendix 4.7**).*
SF = single family; MF = multi-family; TSF = thousand square feet; STU = student; AC = acre; FAR = floor-area ratio; DU = dwelling units
The related projects are used in each of the 2007, 2008 and 2010 analyses, unless noted differently above.

c. Levels of Service Descriptions

Level of service (LOS) is a concept developed to quantify the degree of comfort afforded to drivers as they travel on a given roadway. The degree of comfort includes such elements as travel time, number of stops, total amount of stopped delay, etc. As defined in the Transportation Research Board, National Research Council's *Highway Capacity Manual* (HCM 2000), six grades are used to denote the various LOS and are denoted A through F. **Table 4.7-2, Level of Service of Arterial Roads**, and **Table 4.7-3, Level of Service of Freeway Segments**, describes the six grades of LOS for these respective facilities. Please refer to **Subsection 6, Performance Criteria/Significance Thresholds**, for the specific methods of calculating LOS for arterial roads and freeways in the project study area.



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SOURCE: Austin-Foust Associates – September 2004

FIGURE **4.7-2**

Related Project Location Map

Table 4.7-2
Level of Service of Arterial Roads

LOS	Description	Percent of FFS[1]
A	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	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	LOS C describes stable operations; however, ability to maneuver and change lanes in midblock locations may be more restricted than 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	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	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	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: Highway Capacity Manual *2000, Transportation Research Board, National Research Council.*
FFS = Free Flow Speeds

[1] *The average travel speed along an urban street is the determinant of the operating level of service (LOS). The travel speed along a segment, section, or entire length of an urban street is dependent on the running speed between signalized intersections and the amount of control delay incurred at signalized intersections. The following general statements characterize LOS along urban streets and show the relationship to FFS.*

Table 4.7-3
Level of Service Descriptions – Freeway Segments

LOS	Description
A	LOS A describes free-flow operations. FFS prevail. Vehicles are almost completely unimpeded in their ability to maneuver with the traffic stream. The effects of incidents or point breakdowns are easily absorbed at this level.
B	LOS B represents reasonably free-flow, and FFS are maintained. The ability to maneuver with the traffic stream is only slightly restricted, and the general level of physical and psychological comfort provided to drivers is still high. The effects of minor incidents and point breakdowns are still easily absorbed.
C	LOS C provides for flow with speeds at or near the FFS of the freeway. Freedom to maneuver within the traffic stream is noticeably restricted, and lane changes require more care and vigilance on the part of the driver. Minor incidents may still be absorbed, but the local deterioration in service will be substantial. Queues may be expected to form behind any significant blockage.
D	LOS D is the level at which speeds begin to decline slightly with increasing flows and density begins to increase somewhat more quickly. Freedom to maneuver within the traffic stream is more noticeably limited, and the driver experiences reduced physical and psychological comfort levels. Even minor incidents can be expected to create queuing, because the traffic stream has little space to absorb disruptions.
E	At its highest density value, LOS E describes operation at capacity. Operations at this level are volatile, because there are virtually no usable gaps in the traffic stream. Vehicles are closely spaced, leaving little room to maneuver with the traffic stream at speeds that still exceed 49 miles per hour. Any disruption of the traffic stream, such as vehicles entering from a ramp or a vehicle changing lanes, can establish a disruption wave that propagates throughout the upstream traffic flow. At capacity, the traffic stream has no ability to dissipate even the most minor disruption, and any incident can be expected to produce a serious breakdown with extensive queuing. Maneuverability with the traffic stream is extremely limited, and the level of physical and psychological comfort afforded the driver is poor.
F	LOS F describes breakdowns in vehicular flow. Such conditions generally exist within queues forming behind breakdown points, and are the result of a bottleneck downstream point. LOS F is also used to describe conditions at the point of the breakdown or bottleneck and the queue discharge flow that occurs at speeds lower than the lowest speed for LOS E, as well as the operations within the queue that forms upstream. Whenever LOS F conditions exist, they have the potential to extend upstream for significant distances.

Source: Highway Capacity Manual *2000, Transportation Research Board, National Research Council*
FFS = Free-flow speeds; LOS = Level of Service

d. Trip Generation

Trip generation for a project is based upon the amount and type of future land use proposed in an area and requires that future land use projections be broken down into specific units, such as square feet of floor area, number of dwelling units, etc. Vehicle trip generation estimates for the project were calculated using the Institute of Transportation Engineers (ITE) *Trip Generation Manual* – 6th Edition, which is one of the most widely accepted trip generation rate sources. The results of the trip generation are calculated as

"tripends," which are defined as the total trips entering and leaving a given location. Project trip generation rates are presented later in this EIR section.

e. Trip Distribution

The geographic distribution of project-generated vehicle trips for Landmark Village was determined using the Santa Clarita Valley Consolidated Traffic Model (SCVCTM),[2] which takes into account the specific type of land uses proposed for the site and how those land uses would interact with the other land uses in the valley. The SCVCTM provides traffic volume forecasts for two future scenarios: Interim Year, which generally corresponds to a horizon of approximately 10 years in the future, and Long-Range Cumulative, which represents Santa Clarita Valley buildout conditions. As part of the development of this traffic impact analysis, an update to the traffic model was prepared which involved a review of current related project information from both the City of Santa Clarita and the County of Los Angeles. The SCVCTM land use database was then updated where necessary in order to include the most current information.

f. Planned Roadway Improvements

The project site is located in an area that is currently experiencing growth, and will continue to experience growth. To accommodate this growth, a number of new roadway facilities are planned for construction within the next 5 to 10 years. **Table 4.7-4, Planned Roadway Improvement Projects**, lists the known roadway improvement projects within the project study area. Each of the roadway improvement projects is "committed," i.e., each is fully-planned with an appropriate funding mechanism in place. However, for purposes of this analysis, only the I-5/SR-126 Interchange and the Newhall Ranch Road roadway improvements are assumed as part of background conditions for future forecasts of traffic conditions, both with and without project generated traffic. This approach is due to the fact that the estimated year

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2 The SCVCTM is a traffic planning computer model and the principal tool for transportation planning in the Santa Clarita Valley. It was developed jointly by the City of Santa Clarita and the County of Los Angeles Public Works Department to provide traffic forecasts for transportation planning in the valley. Specifically, the model analyzes expected or possible projects based on actual development applications and general plan provisions, and predicts traffic impacts based on various assumptions for different time periods as the valley builds out. The model is regularly updated to include any City or County general plan amendments in the valley that may alter buildout numbers. Therefore, for any given future land use scenario for the Santa Clarita Valley area, the model can forecast future traffic volumes on the future roadways in the area under evaluation. The SCVCTM is developed from regional models prepared by the Southern California Association of Governments and also forecasts traffic in a regional context. This means that not only are trips to and from the Santa Clarita Valley included in the forecasts, but trips that pass through the valley are also included. As part of the development of this traffic impact analysis, an update to the traffic model was prepared which involved a review of current related project information from both the City and County. The SCVCTM land use database was then updated where necessary in order to include the most current information (see **Subsection 4.1.3** for related project information).

of completion for these improvements would precede project occupancy. The SR-126 improvements, on the other hand, have not been assumed to be completed before project occupancy, but, since the estimated year of completion is 2008, they are used as part of the evaluation of cumulative conditions for Phase 2 and Phase 3 of the Landmark Village project.

Table 4.7-4
Planned Roadway Improvement Projects

Location	Improvement	Estimated Year of Completion
I-5/SR-126 Interchange	Interchange improvements that include adding access to eastbound SR-126 from southbound I-5, access to southbound I-5 from westbound SR-126, direct access to northbound I-5 from westbound State Route 12 (SR-12) and widening bridge to 8 lanes.	Completed
Newhall Ranch Road	Construct segment between Vanderbilt Way and Copper Hill Drive/Rye Canyon Road	2007
SR-126/Commerce Center Drive Interchange	Grade separated interchange between SR-126 and Commerce Center Drive	2008
SR-126 between Commerce Center Drive and I-5	Widen to 8 lanes	2008

Source: Austin-Foust Associates (September 2004), as revised by personal communication (February 2006).

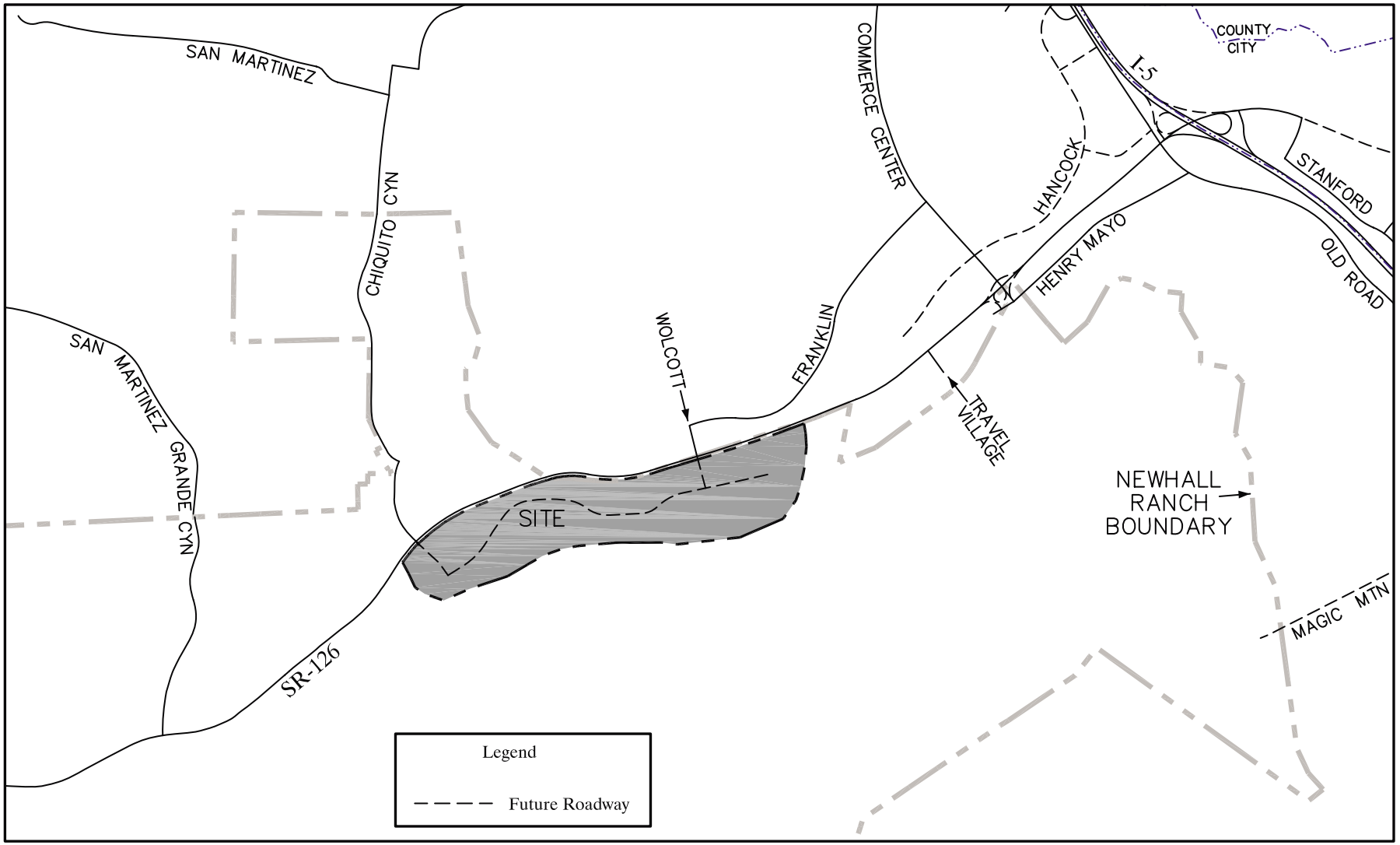
Figure 4.7-3, Interim Year Transportation System, illustrates the SCVCTM Interim Year roadway network, which generally corresponds to a horizon of 10 years in the future. Notable changes from existing conditions include the reconfigured I-5/SR-126 interchange, the removal of the direct ramps to the SR-126 from both The Old Road and Henry Mayo Drive, the grade separated interchange for Commerce Center Drive at SR-126, and the extension of Newhall Ranch Road east to Copper Hill Drive.

5. EXISTING CONDITIONS

a. Existing Roadway System

The existing roadway network in the project study area is illustrated in **Figure 4.7-4, Existing Roadway Network**, in the form of mid-block lanes as well as intersection lane configurations and control types for the intersections being studied. SR-126 parallels the northern border of the project site and features at-grade intersections with Chiquito Canyon Road and Wolcott Way.

The I-5 Freeway provides regional access for future residents of the site and is located approximately 2 miles east of the project site.

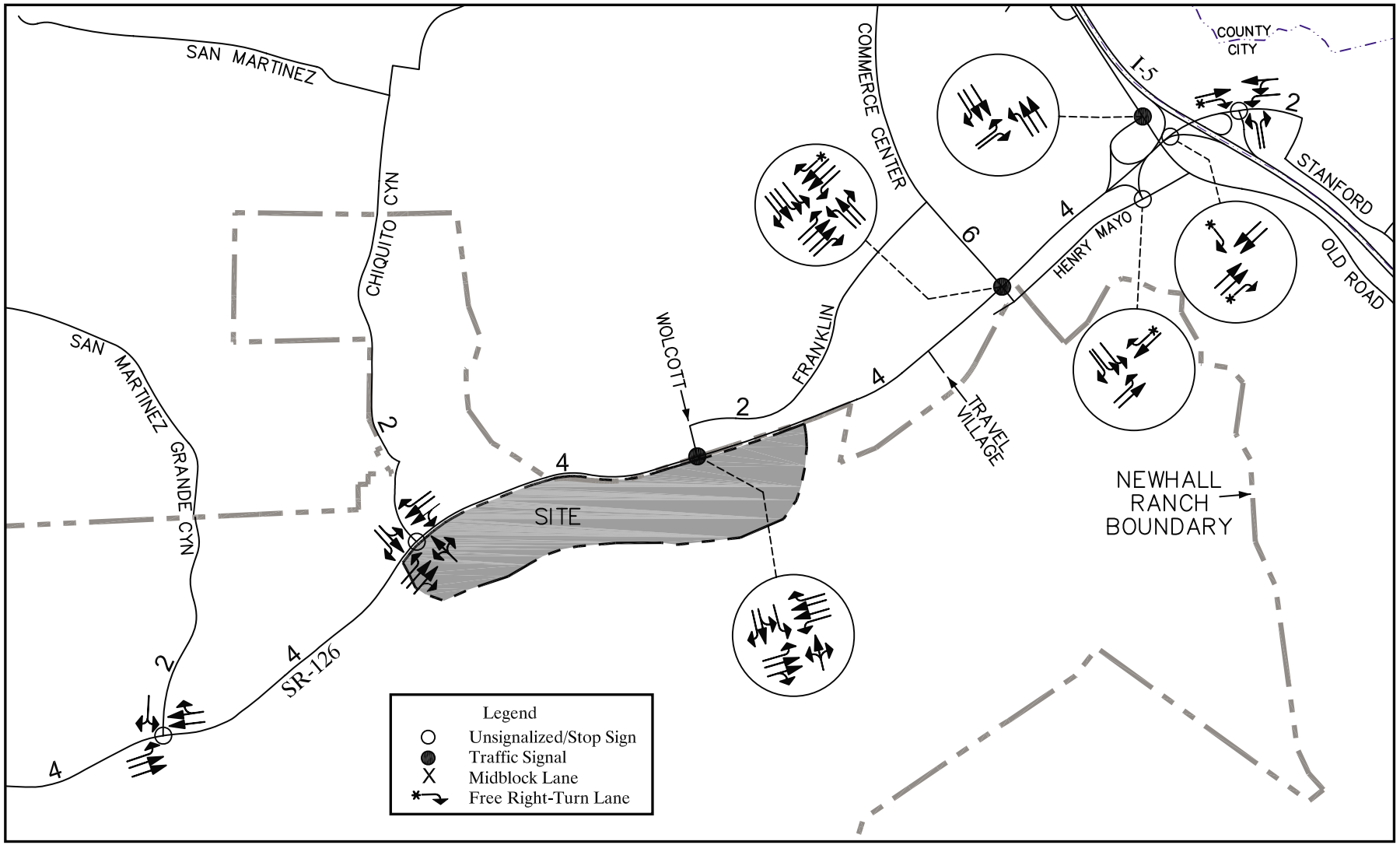


NOT TO SCALE

SOURCE: Austin-Foust Associates, Inc. – September 2004

FIGURE **4.7-3**

Interim Year Transportation System



NOT TO SCALE

SOURCE: Austin-Foust Associates, Inc. – September 2004

FIGURE **4.7-4**

Existing Roadway Network

b. Existing Traffic Volumes and Levels of Service

Illustrations of peak hour turning movement volumes for each study area intersection can be found in **Figure 4.7-5, AM Peak Hour Turning Movement Volumes – Existing (2003) Conditions**, and **Figure 4.7-6, PM Peak Hour Turning Movement Volumes – Existing (2003) Conditions**, for the AM and PM peak hours, respectively. The peak hour counts were collected during June 2003. ADT volumes for select roadway segments are illustrated in **Figure 4.7-7, Average Daily Traffic Volumes – Existing (2003) Conditions**.

Twenty-four hour roadway counts were also collected on Chiquito Canyon Road and Wolcott Way, just north of their intersections with SR-126. Since SR-126 is a state highway, Caltrans was contacted to obtain current traffic volume data for this facility. Traffic volumes on I-5 were obtained from the Caltrans database, which is published annually. **Table 4.7-5, Roadway Volume Summary – Existing (2003) Conditions**, summarizes the traffic count data for these roadways.

Table 4.7-5
Roadway Volume Summary – Existing (2003) Conditions

Roadway Segment	Direction	Lanes	AM Peak Hour	PM Peak Hour	ADT
SR-126 at Ventura/LA County Line	EB	1	920	1,030	13,060
	WB	1	810	960	11,870
Chiquito Canyon Road	NB	1	30	100	880
	SB	1	110	70	1,060
Wolcott Way	NB	1	20	10	130
	SB	1	10	20	150
I-5 north of SR-126	NB	4	2,100	2,500	49,000*
	SB	4	1,900	2,100	45,000*
I-5 south of SR-126	NB	4	2,800	3,100	60,000*
	SB	4	2,400	2,500	53,000*

*Source: Austin-Foust Associates (September 2004)(see **Appendix 4.7**).*
EB = eastbound; WB = westbound; NB = northbound; SB = southbound
**AADT by direction*
Level of service ranges:

.00 – .60	*A*
.61 – .70	*B*
.71 – .80	*C*
.81 – .90	*D*
.91 – 1.00	*E*
Above 1.00	*F*

For adjacent intersections in which the raw count data do not balance from one location to the next, manual adjustments are applied.[3] Typically the higher of the two volumes are used as the basis for balancing in order to provide a worst-case estimate of existing conditions. Intersection capacity utilization (ICU) and LOS analyses for intersections near the project site are provided in **Table 4.7-6, ICU and LOS Summary – Existing (2003) Conditions**, (detailed ICU worksheets are provided in Appendix A of the Austin-Foust report in **Appendix 4.7**). The table shows how each intersection in the project study area currently meets the county's performance standard. As noted in the table, some intersections in the project study area are not currently controlled by a traffic signal. For those locations, the ICU provides an indication of the LOS based on traffic signal control and provides a benchmark for comparison of future conditions with the proposed project.

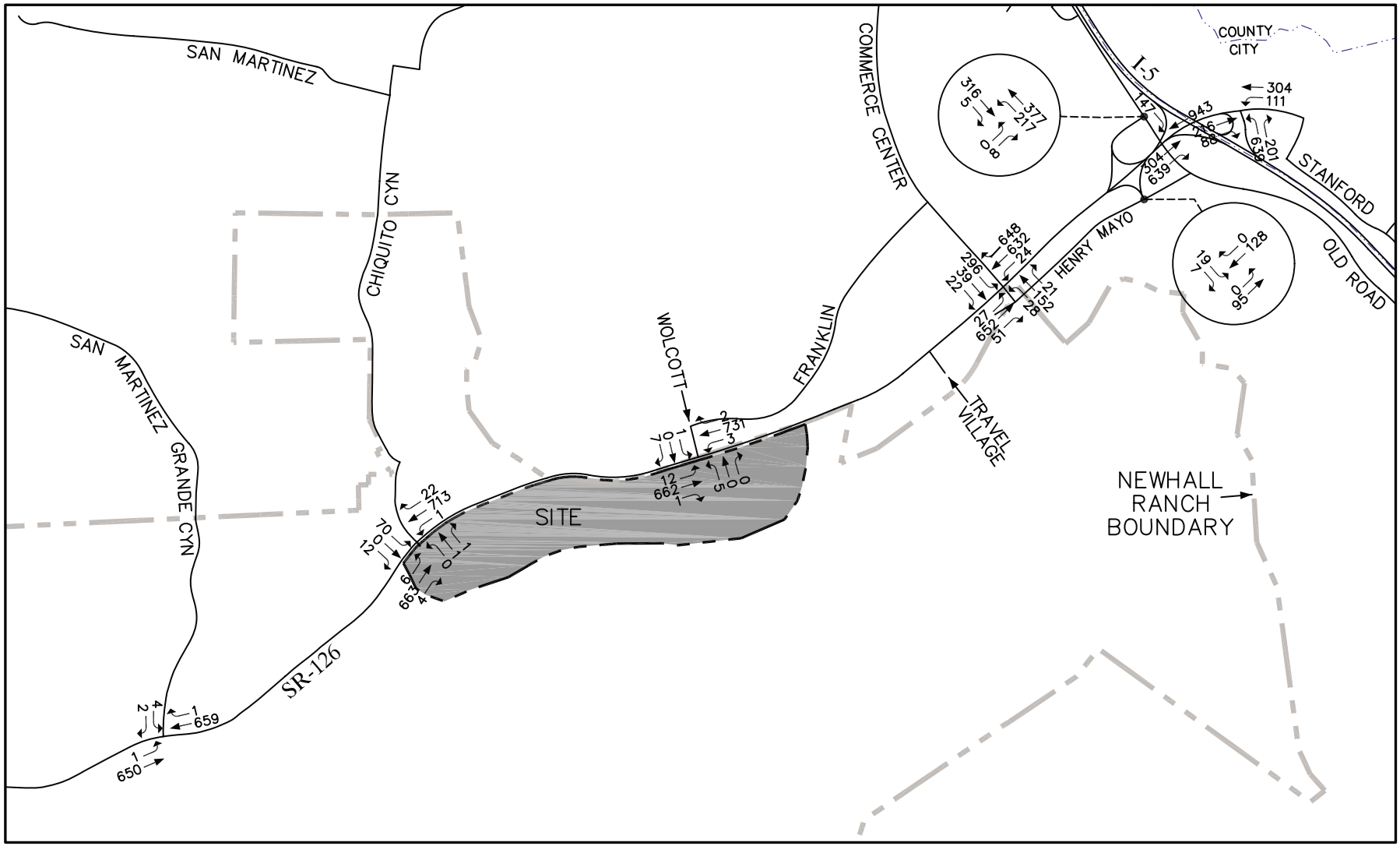
Table 4.7-6
ICU and LOS Summary – Existing (2003) Conditions

Intersection	AM Peak Hour		PM Peak Hour		Count Date
	ICU	LOS	ICU	LOS	
7. I-5 SB Ramps/SR-126*	.39	A	.36	A	June 2003
8. I-5 NB Ramps/SR-126**	.71	C	.77	C	June 2003
80. Wolcott/SR-126	.34	A	.42	A	June 2003
89. Old Road/SR-126 WB Ramps	.34	A	.32	A	June 2003
94. Commerce Center/SR-126	.52	A	.68	B	June 2003
96. San Martinez Canyon/SR-126**	.31	A	.40	A	June 2003
110. Chiquito Canyon/SR-126**	.36	A	.43	A	June 2003
117. SR-126 EB Ramp/Henry Mayo**	.19	A	.22	A	June 2003

Source: Austin-Foust Associates (September 2004).
**Uncontrolled (no conflicting movements)*
*** Stop Sign Control*
Parenthesis indicates ICU or

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

3 There are a number of reasons why raw count data does not balance, including counts taken on different days or intersections that experience different peak hours due to varying side-street volumes.



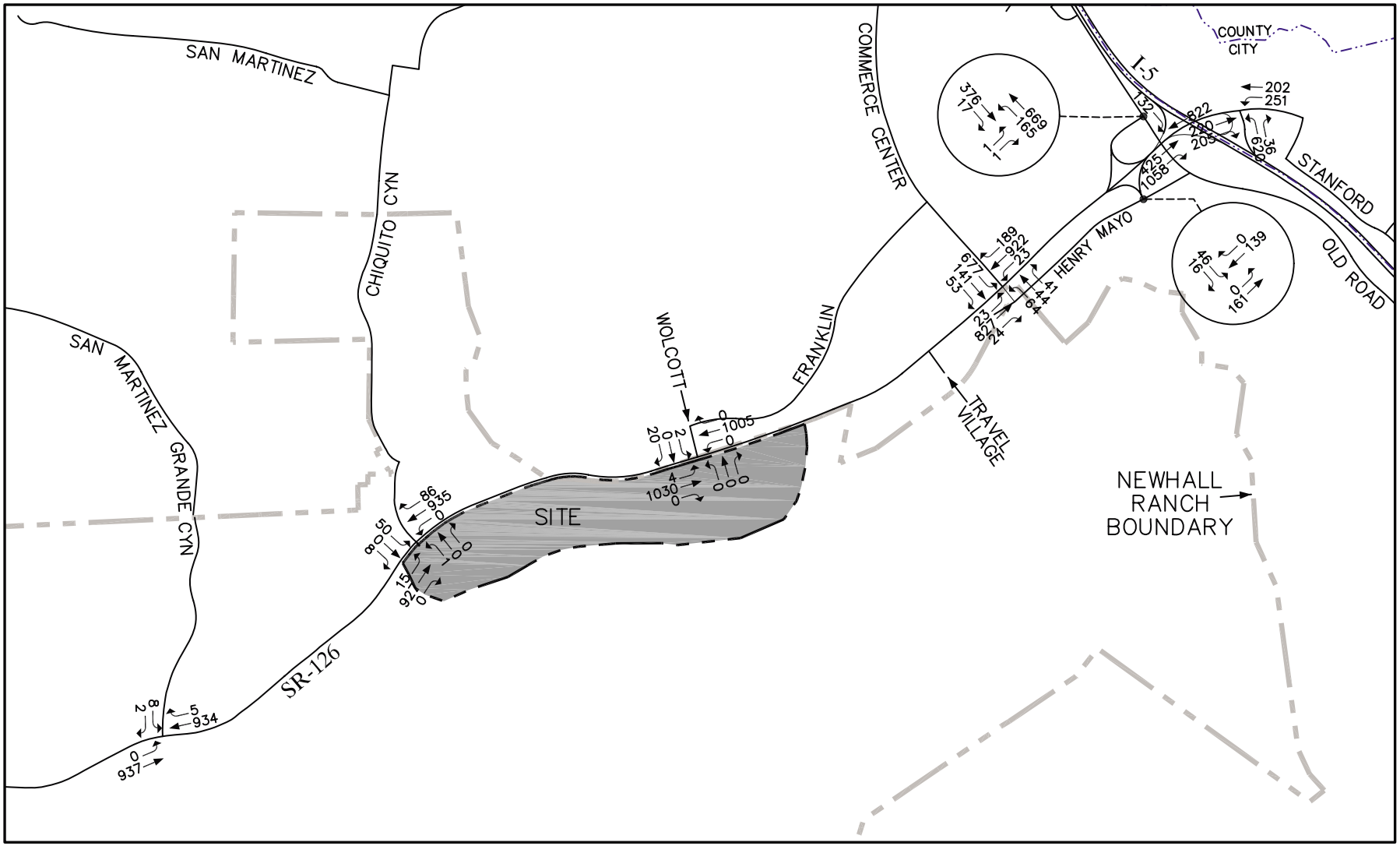
NOT TO SCALE

SOURCE: Austin-Foust Associates, Inc. – September 2004

FIGURE **4.7-5**

AM Peak Hour Turning Movement Volumes — Existing (2003) Conditions

32-92•05/06



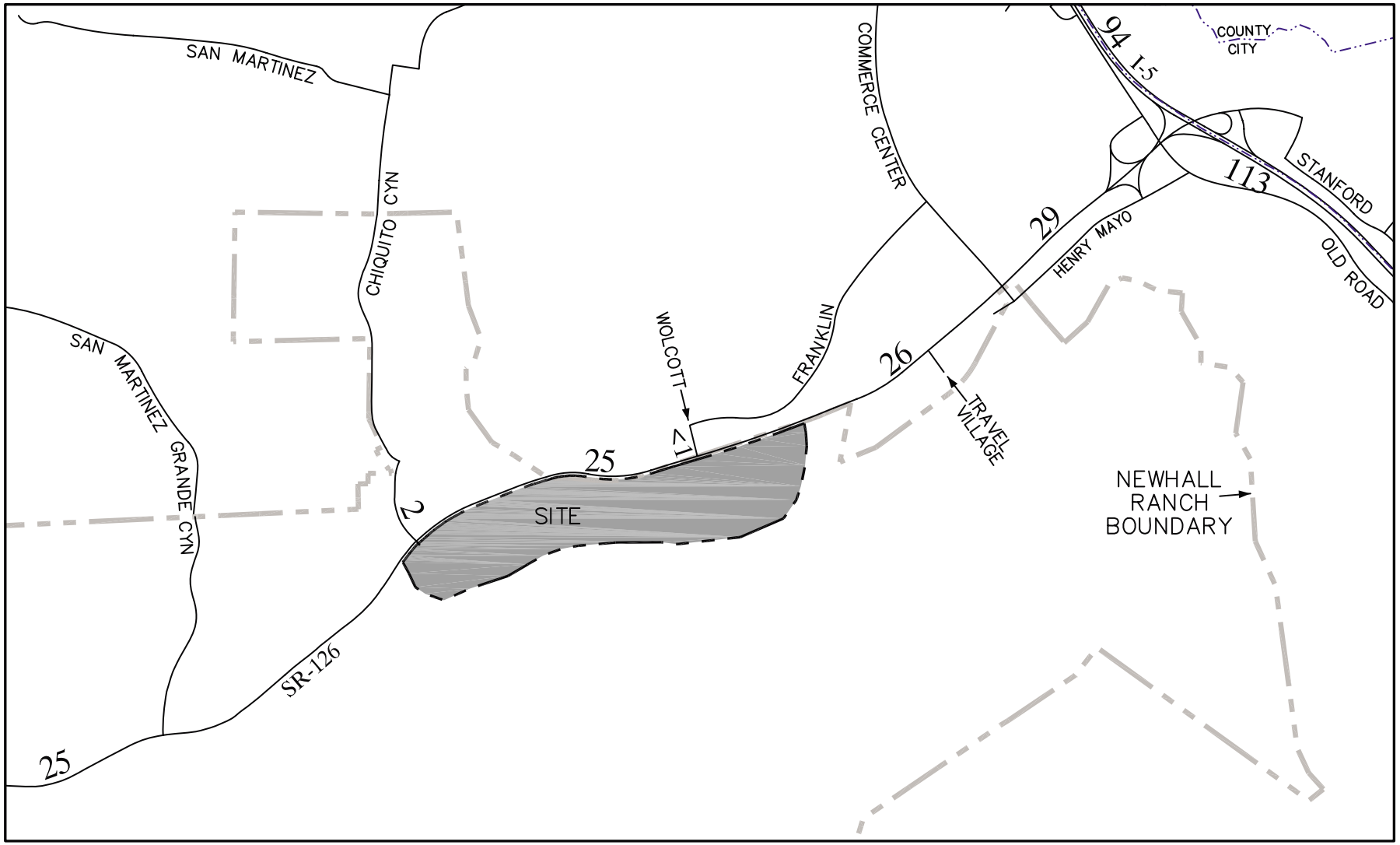
NOT TO SCALE

SOURCE: Austin-Foust Associates, Inc. – September 2004

FIGURE **4.7-6**

PM Peak Hour Turning Movement Volumes — Existing (2003) Conditions

32-92•05/06



NOT TO SCALE

SOURCE: Austin-Foust Associates, Inc. – September 2004

FIGURE **4.7-7**

Average Daily Traffic Volumes — Existing (2003) Conditions

Since each of the affected intersections is located on a state highway, the *Highway Capacity Manual* signalized intersection methodology has been used to evaluate capacity and LOS.[4] The procedure determines LOS from the average control delay per vehicle during the peak hours and in this way is different from the County's ICU methodology that determines LOS from percent of used capacity.

c. Existing Transit Service

The project study area is served by two major transit carriers: the Santa Clarita Transit (SCT) system operated by the City of Santa Clarita and Metrolink operated by the Southern California Regional Rail Authority (SCRRA). The SCT largely serves the Santa Clarita Valley, while Metrolink currently serves Ventura, Los Angeles, San Bernardino, Riverside, Orange, and San Diego Counties.

Santa Clarita Transit currently operates one fixed-route transit line (Route 2), which provides service near to the project site. The route passes the project site via SR-126 and provides service to the Newhall Metrolink station, the Valencia Industrial and Commerce Centers, and the Valencia Town Center area. Buses run every 30 minutes. Route 2 connects with other bus routes at McBean Transfer Station, and connects with commuter trains at the Jan Heidt Metrolink Station in Newhall. Major destinations along Route 2 are Soledad Entertainment Center, Newhall, Newhall Metrolink Station, Valencia Town Center, Valencia Industrial Center, Valencia Commerce Center, and Val Verde.

It can be anticipated that, over time, the local bus service will expand as additional development occurs within the valley. Typically, bus route plans are evaluated on an annual basis, and routes are added and/or modified as appropriate and as funding permits; therefore, as Landmark Village develops, service to the project area would be added accordingly at the discretion of SCT. Meanwhile, the current transit arrangement is anticipated to continue to serve local residents of the area, connecting residential areas with employment and commercial centers.

SCT commuter buses provide regional service to downtown Los Angeles, the San Fernando Valley and the Antelope Valley. Specifically, commuter bus service is provided to the following locations: Olive View Medical Center in Sylmar (Route 790), Chatsworth Metrolink/Amtrak Station – Warner Center (Route 791), UCLA/Westwood – Century City (Routes 792 and 797), Van Nuys – Sherman Oaks (Routes 793 and 798), Los Angeles Union Station/Gateway Transit Center (Route 794), Vincent Grade/Acton Metrolink Station and Lancaster Metrolink Station (Route 795), Warner Center (Route 796), and downtown Los Angeles - 7th and Spring Streets (Route 799).

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4 This is the evaluation methodology prescribed by the California Department of Transportation (Caltrans) in their guide for the preparation of traffic impact studies.

The Landmark Village site is west of the Santa Clarita Metrolink Rail Station on Soledad Canyon Road and the Jan Heidt Metrolink Station in Newhall. Metrolink provides commuter rail service between the Antelope Valley and Downtown Los Angeles, thereby supplying additional regional transit to the site. Metrolink also links Ventura, Los Angeles, San Bernardino, Riverside, Orange, and San Diego Counties with convenient transfer service between the bus and rail systems. The Los Angeles County Metropolitan Transit Authority oversees transit planning in the Los Angeles County area, and has a long-range plan for future rail transit. An eventual Metrolink extension along the SR-126 corridor to Ventura County is part of the long-range transit plans prepared by Ventura County, City of Santa Clarita, and Southern California Association of Governments.

d. Existing Conditions – Ventura County Community of Piru

Existing peak hour turning movement volumes were collected in January 2004 at the intersections of Main Street/Torrey Road at Telegraph Road, and Center Street at Telegraph Road. The Main Street/Torrey Road intersection is signalized while the Center Street intersection is under stop sign control. In June 2003, Caltrans collected a 24-hour volume on Telegraph Road in this vicinity of approximately 25,000 vehicles per day.

Peak hour turning movement volumes were used to calculate intersection LOS using the ICU methodology for the signalized intersection and HCM methodology for both the signalized and the unsignalized intersections. The results are summarized in **Table 4.7-7, ICU and LOS Summary – Existing (2003 & 2004) Conditions Piru**.

Table 4.7-7
ICU and LOS Summary – Existing (2003 & 2004) Conditions Piru

Intersection	AM Peak Hour	PM Peak Hour
Main St./Torrey & Telegraph Rds.		
ICU/LOS	.38 (A)	.43 (A)
Average Delay(s) LOS	16.9 (B)	16.3 (B)
Center Street & Telegraph Rd.		
SB Approach Delay(s)/LOS	22.2 (C)	26.4 (D)

Source: Austin-Foust Associates (October 2005).

As shown in **Table 4.7-7**, the intersection of Main Street/Torrey Road and Telegraph Road (signalized) currently operates at LOS A under the ICU methodology, and LOS B under the HCM delay analysis methodology. Using the HCM delay analysis methodology solely for the unsignalized intersection of

Center Street and Telegraph Road results in a LOS C in the AM peak hour and LOS D in the PM peak hour (note that the delay is calculated only for the southbound approach since traffic on Telegraph Road is uncontrolled).

6. PROPOSED PROJECT IMPROVEMENTS

a. Site Access and Proposed Improvements

The Landmark Village project-level circulation system is intended to be consistent with, and implement, the mobility objectives of the Specific Plan's approved Master Circulation Plan. The Newhall Ranch Specific Plan designates Long Canyon Road as a six lane Major Arterial Highway for the segment that passes through the project site. Chiquito Canyon Road is designated as a Limited Secondary Arterial Highway from SR-126 through the Specific Plan area. The Specific Plan designates A Street through the Landmark Village project site as a four-lane Secondary Highway.

All roadways within Landmark Village would be constructed in substantial conformance with the requirements of the Specific Plan and, in many cases, would require only minor project-specific modification to the street sections set forth in the Los Angeles County Subdivision Code. The one change from the Specific Plan's Master Circulation Plan would be the project applicant's request to revise the A Street classification from a four-lane Secondary Highway to a two-lane Collector Street. The Secondary Highway designation is also included in the County's Master Plan of Highways and the Santa Clarita Valley Areawide Plan's Circulation Plan.

The project circulation plan is characterized by a system of local streets with access to and from a curvilinear road (A Street) that traverses the site in an east/west direction. Two north/south roadways, Wolcott Road and Long Canyon Road, would connect A Street to the off-site highway system (SR-126). The primary function of A Street is to provide connectivity between the Landmark Village neighborhoods and access from local streets to the arterial highway system. The proposed project would construct temporary intersections with SR-126, which would be consistent with the project's planned potential future grade separated crossings for Wolcott Road/SR-126 and Long Canyon Road/SR-126.

The project will also construct a fire station, located west of Long Canyon Road. The applicant and the Fire Department have agreed to locating a fire station within the Landmark Village Project, as shown on **Figure 4.14-2, Landmark Village Fire Station**. The Fire Department is requiring that the station be 11,000 square feet on a minimum 1.25 net building pad. The fully constructed, equipped, and furnished station shall be conveyed to the Fire District prior to the issuance of the 723rd certificate of occupancy issued for the Landmark Project. The station will house 7 firefighters, 24-hours a day. Shift change occurs once a day. Station personnel will average 1 to 2 ancillary trips daily. The number of responses from the fire

station is projected to be 4 to 5 a day. The traffic impacts of locating a fire station on the site plan have been analyzed in a technical memorandum found in **Appendix 4.7, Traffic/Access**, of this EIR.

The project applicant is also proposing to construct the Long Canyon Road Bridge component of the Specific Plan, in conjunction with the Landmark Village project. The Long Canyon Road Bridge is one of the three bridge crossings over the Santa Clara River, and it would serve central portions of the Newhall Ranch Specific Plan. The new bridge would span the width of the Santa Clara River, equating to a roadway segment of approximately 1,100 feet in length and 100 feet in width. A six-lane highway would be constructed that extends from the proposed realignment of the existing Chiquito Canyon Road/SR-126 intersection in a southerly direction over the Santa Clara River to the proposed bridge terminus.

b. Expected Transit Usage

The mixed-use/commercial areas planned along Wolcott Road and Long Canyon Road permit park-and-ride lots, and the project includes the construction of a parking-and-ride lot. In addition, the mixed-use/ commercial area in the vicinity of Wolcott Road reserves a future transit station within the project site. Project residents and employees on the project site are expected to use these to access existing transit facilities in the project area and throughout the valley, as well as any additional transit service that may be expanded to the project area. As will be discussed below, buildout of the proposed project is forecast to generate 41,884 ADT. Of these trips, 2,052 total daily transit trips and approximately 200 peak hour transit trips are expected to be generated at Landmark Village buildout (see **Subsection 7.g., Congestion Management Plan**, below, for how these daily and peak hour transit trips were calculated). This trip demand would be met by existing bus service along SR-126 with connections to other locations within the region, Metrolink, and other transit services that may be extended to the project site in the future.

7. PROJECT IMPACTS

a. Significance Threshold Criteria

Significance threshold criteria for traffic/access are specified in Appendix G of the 2005 *California Environmental Quality Act (CEQA) Guidelines*. A project would have a significant impact on traffic/access if it 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 LOS 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 (addressed in the Project Initial Study);
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment) (addressed in the Project Initial Study);
- Result in inadequate emergency access (addressed in the Project Initial Study);
- Result in inadequate parking capacity;[5] or
- Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).[6]

In addition, Los Angeles County has established performance criteria that are utilized as significance thresholds for purposes of this impact analysis. In most traffic studies, performance criteria are based on two primary measures. The first is "capacity," which establishes the vehicle carrying ability of a roadway and the second is "volume." The volume measure is either a traffic count (in the case of existing volumes) or a forecast for a future point in time. The ratio between the volume and the capacity gives a volume-to-capacity (V/C) ratio and a corresponding LOS.

Table 4.7-8, Volume/Capacity Ratio Level of Service Ranges, summarizes the V/C ranges that correspond to LOS A through F for arterial roads, intersections, and freeway segments. The V/C ranges listed for arterial roads within the project study area are those used by the County of Los Angeles.

Los Angeles County utilizes both the V/C ratio and the LOS when determining impact significance. The county deems certain LOS values unacceptable and increases in the V/C ratio that cause or contribute to the LOS being unacceptable are defined as significant impacts.

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5 The proposed project would provide parking consistent with the parking regulations set forth in Specific Plan, Section 3.7. Therefore, the project would provide adequate parking for the uses proposed under the Landmark Village tract map and no further analysis of parking capacity is necessary.

6 With respect to alternative transportation policies, plans and programs, this EIR, **Section 2.0**, **Environmental and Regulatory Setting**, analyzes the proposed project's consistency with regional plans and policies, including SCAG's Regional Mobility Element/Regional Transportation Plan, and the Congestion Management Program for Los Angeles County. The project is considered consistent with these adopted plans and programs. Therefore, no further analysis is necessary.

Table 4.7-8
Volume/Capacity Ratio Level of Service Ranges

V/C Ratio Range	LOS
Arterial Roads/Intersections	
0.00 – 0.60	A
0.61 – 0.70	B
0.71 – 0.80	C
0.81 – 0.90	D
0.91 – 1.00	E
Above 1.00	F
Freeway Segments (FFS = 65 MPH)	
0.00 – 0.30	A
0.31 – 0.50	B
0.51 – 0.71	C
0.72 – 0.89	D
0.90 – 1.00	E
Above 1.00	F

Source: Austin-Foust Associates (September 2004).

The following outlines the impact criteria for the facilities within the project study area.

(1) Arterial Roads

The ICU calculation methodology and associated impact criteria proposed for the project study area arterial system are summarized in **Table 4.7-9, Arterial Intersection Performance Criteria**. The county strives to maintain LOS C (ICU not to exceed 0.80) at existing intersections and utilizes LOS D (ICU not to exceed 0.90) as the accepted standard and target LOS for future intersections.

(2) State Highways

Since the project is located along a state highway, the methodology for determining LOS that is preferred by Caltrans is also used as part of this study. This procedure determines LOS from the average control delay per vehicle during the peak hours and in this way is different from the County's ICU methodology, which determines LOS from percent of used capacity.

Table 4.7-9
Arterial Intersection Performance Criteria

ICU Calculation Methodology		
LOS to be based on peak hour ICU values calculated using the following assumptions: Saturation Flow Rates: County Methodology: 1,600 vehicles/hour/lane for through lanes, right-turn lanes & single left-turn lanes 2,800 vehicles/hour for dual left-turn lanes Clearance Interval: .10		
Performance Standard		
County: LOS D (peak hour ICU less than or equal to 0.90) for new (future) intersections and intersections in the Commerce Center area LOS C or existing LOS, whichever is greater, for existing intersections		
Impact Thresholds		
An intersection is considered to be significantly impacted if: 1. The intersection is forecast to operate deficiently (i.e., worse than the performance standard). 2. Compared to the ICU in the no-project alternative, the ICU in the with-project alternative increases the ICU by the following:		
PRE-PROJECT ICU	**PROJECT INCREMENT**	**WITH PROJECT ICU**
.00 – .70 (LOS A/B)	greater than or equal to .04	.75 or greater
.71 – .80 (LOS C)	greater than or equal to .04	N/A
.81 – .90 (LOS D)	greater than or equal to .02	N/A
>.90 (LOS E/F)	greater than or equal to .01	N/A

Source: Austin-Foust Associates (September 2004).
Abbreviations: ICU – Intersection Capacity Utilization; V/C – Volume/Capacity Ratio; LOS – Level of Service

(3) Congestion Management Plan Facilities

The CMP defines a significant impact as occurring when the proposed project increases traffic demand on a CMP facility by 2 percent or more of capacity (V/C ≥ .02), causing or worsening LOS F (V/C > 1.00).

b. Project Construction

Construction of the proposed project and recommended improvements could result in temporary disruptions of normal traffic patterns on roadways or intersections in the immediate vicinity of the active construction zone. The disruption of normal traffic flow would be limited in both duration and extent, with most occurring during earlier phases of construction when earthwork and utility construction is taking place. Potential traffic disruption and conflicts between construction activities and through traffic will be controlled in accordance with the Caltrans Traffic Manual. These controls are expected to adequately reduce any potentially significant impacts resulting from disruptions of traffic and access

during the construction period to a level below significant. Specific measures described in the Traffic Manual that are typically used at a construction site are summarized below:

- All traffic control measures, construction signs, delineators, etc., and their use during the construction phase of this project shall conform to the provisions set forth in the State of California, Department of Transportation, Manual of Traffic Controls, January 1992.
- In areas where traffic control necessitates, the contractor shall provide, post, and maintain "No Parking" and "No Stopping" signs, as directed by the Director of Public Works.
- The location of all signs shall be determined in the field by the County Engineer in conjunction with the contractor.
- No travel lane shall be less than 10 feet wide.
- Delineators shall be spaced at 50 feet maximum, or as noted on the final Traffic Control Plan.
- All traffic signal facilities shall be protected during construction or relocation.
- "Construction Ahead" and appurtenant signs are to be placed 1,000 feet in advance of all approaches to the project area, for the duration of construction.
- Private driveway closures shall be limited to the times of the day that construction is in progress.
- Cross street closures shall be limited to the times of the day that construction is in process.

c. Project Trip Generation

Trip generation estimates for the proposed project are shown in **Table 4.7-10, Project Trip Generation and Trip Rate Summary**. Phase 1 is estimated to generate approximately 4,950 ADT with approximately 375 tripends occurring in the AM peak hour and approximately 505 tripends occurring in the PM peak hour. Phase 2 (including the 500 units of Phase 1) is estimated to generate approximately 20,700 total ADT with approximately 1,400 tripends occurring in the AM peak hour and approximately 1,900 tripends occurring in the PM peak hour.

The third phase of the project (project buildout) is estimated to generate an additional 21,200 ADT for a total of 41,900 ADT. The total project will generate approximately 2,900 tripends in the AM peak hour and 4,100 tripends in the PM peak hour.

Table 4.7-10
Project Land Use and Trip Generation Summary

Land Use	Units		AM Peak Hour			PM Peak Hour			ADT
			In	Out	Total	In	Out	Total	
TRIP GENERATION									
Residential – Phase 1									
Single Family Detached	500	DU	95	280	375	325	180	505	4,950
Residential – Phase 2									
Single Family Detached	91	DU	17	51	68	59	33	92	900
Condominiums	398	DU	24	191	215	187	103	291	3,184
Apartment	455	DU	36	196	232	187	96	282	3,140
Residential Phase 1 + 2 Total	**1,444**	DU	**173**	**718**	**890**	**758**	**412**	**1,170**	**12,174**
Non-Commercial									
Elementary School	750	STU	195	150	345	60	68	128	1,088
Developed Park	20.9	AC	0	0	0	1	1	1	54
Non-Commercial Phase 1 + 2 Total			**195**	**150**	**345**	**61**	**68**	**129**	**1,142**
Commercial – Phase 2									
Commercial Center (<10 ac)	49.0	TSF	53	34	87	163	176	339	4,168
Commercial Shops	9.5	TSF	7	5	11	17	17	34	352
Commercial Office	9.5	TSF	15	2	17	2	12	14	110
Commercial Center (<10 ac)	32.0	TSF	35	22	57	106	115	221	2,722
Commercial – Phase 2 Total	**100.0**	TSF	**110**	**62**	**172**	**288**	**321**	**609**	**7,352**
PHASE 1 + 2 TOTAL TRIPENDS			**478**	**930**	**1,407**	**1,107**	**801**	**1,908**	**20,668**
Commercial – Buildout (Phase 2 + Phase 3)									
Commercial Center (<10 ac)	49.0	TSF	53	34	87	163	176	339	4,168
Commercial Center (<10 ac)	27.1	TSF	30	19	49	90	98	188	2,305
Commercial Shops	9.5	TSF	7	5	11	17	17	34	352
Commercial Office	9.5	TSF	15	2	17	2	12	14	110
Commercial Center (10-30 ac)	252.0	TSF	184	118	302	600	650	1,250	13,623
Commercial Office	692.9	TSF	1,074	131	1,205	146	894	1,040	8,010
Commercial – Buildout Total	**1,040**	TSF	**1,363**	**309**	**979**	**1,018**	**1,847**	**2,865**	**28,568**
BUILDOUT TOTAL TRIPENDS			**1,731**	**1,177**	**2,908**	**1,837**	**2,327**	**4,164**	**41,884**

Land Use	Units	AM Peak Hour			PM Peak Hour			ADT
		In	Out	Total	In	Out	Total	
TRIP RATES								
Single Family (6-10 DU/Ac) – SCVCTM #3	DU	.19	.56	.75	.65	.36	1.01	9.90
Condominium/Townhouse – SCVCTM #4	DU	.06	.48	.54	.47	.26	.73	8.00
Apartment – SCVCTM #5	DU	.08	.43	.51	.41	.21	.62	6.90
Commercial Ctr (10-30 ac) – SCVCTM #11	TSF	.73	.47	1.20	2.38	2.58	4.96	54.06
Commercial Ctr (<10 ac) – SCVCTM #12	TSF	1.09	.69	1.78	3.32	3.60	6.92	85.06
Commercial Shops – SCVCTM #13	TSF	.72	.48	1.20	1.80	1.80	3.60	37.06
Commercial Office – SCVCTM #40	TSF	1.55	.19	1.74	.21	1.29	1.50	11.56
Elementary/Middle School – SCVCTM #20	STU	.26	.20	.46	.08	.09	.17	1.45
Developed Park – SCVCTM #51	AC	.00	.00	.00	.03	.04	.07	2.60

Source: Austin-Foust Associates (June 2004).

DU = dwelling unit; STU = student; TSF = thousand square feet; AC = acre

Peak hour rates are from the County's traffic model (SCVCTM) and are consistent with the TIA preparation guidelines and ITE trip generation manual.

d. Project Trip Distribution

The geographic distribution of project-generated trips was derived by utilizing the SCVCTM. The SCVCTM first calculates production and attraction tripends for the proposed land uses and by using the built in distribution functions of the model, an estimation of travel patterns for the project site is developed. The quantity of trips internal to the project site is also determined through this process. A special select zone trip assignment calculates the volume of project traffic on roadway segments throughout the study area. Since the volume of traffic generated by Phase 1 is significantly less than the subsequent phases, the distribution for Phase 1 was derived manually using the select zone model runs as a reference. Phase 1 is also unique in that it is the only phase that is made up entirely of residential uses and, therefore, will have a negligible amount of on-site trip capture.

Figure 4.7-8, Project Distribution – Phase 1, illustrates the distribution pattern assumed for Phase 1 and **Figure 4.7-9, AM Peak Hour Volumes – Project Phase 1 Trips Only**, and **Figure 4.7-10, PM Peak Hour Volumes – Project Phase 1 Trips Only**, illustrate the project generated trips (Phase 1 only) for the critical AM and PM peak hours, respectively.

Figure 4.7-11, Project Distribution – Project Phase 2, illustrates the general distribution pattern for the Phase 2 project traffic on a daily basis and **Figure 4.7-12, AM Peak Hour Volumes – Project Phase 2 Trips Only**, and **Figure 4.7-13, PM Peak Hour Volumes – Project Phase 2 Trips Only**, illustrate the project generated trips for the AM and PM peak hours, respectively. **Figure 4.7-14, AM Peak Hour Volumes – Project Buildout Trips Only**, and **Figure 4.7-15, PM Peak Hour Volumes – Project Buildout Trips Only**, illustrates the AM and PM peak hour volumes for buildout of the project site. As noted above, the SCVCTM was utilized to calculate the distribution patterns and since the SCVCTM models the AM and PM peak hours uniquely, there are variations in distribution percentages between the two time periods, as depicted in the figures referenced above. The change from Phase 2 to Phase 3 would also result in a significant change to the mix of land uses, which has an effect on the distribution. In Phase 2, approximately 60 percent of the total tripends would be generated from residential uses whereas in Phase 3, the amount of residential tripends would reduce to approximately 30 percent of the total. Detailed information regarding the on-site interaction between the mixed land-use types and the corresponding on-site and off-site volumes can be found in Appendix F of the Austin-Foust report in **Appendix 4.7**.

Approximately 30 percent of the Phase 2 tripends to and from the elementary school, as well as the commercial uses on site, would be internal tripends. The remaining 70 percent of the Phase 2 tripends would be for trips off site. When tripends are converted to trips, approximately 18 percent of the total Phase 2 trips would be internal to the site and 82 percent would leave the site, as shown by **Table 4.7-11, Project Tripend and Trip Summary – Phase 2**.

Table 4.7-11
Project Tripend and Trip Summary – Phase 2

	Internal[1]	External[2]	Total
Tripends	6,200	14,500	20,700
% of Total Trips	30%	70%	100%
Trips	3,100	14,500	17,600
% of Total Trips	18%	82%	100%

Source: Austin-Foust Associates (June 2004).

1 *Both the origin and destination tripends on site.*

2 *One tripend (either origin or destination) on site, the other tripend (either destination or origin) off site.*

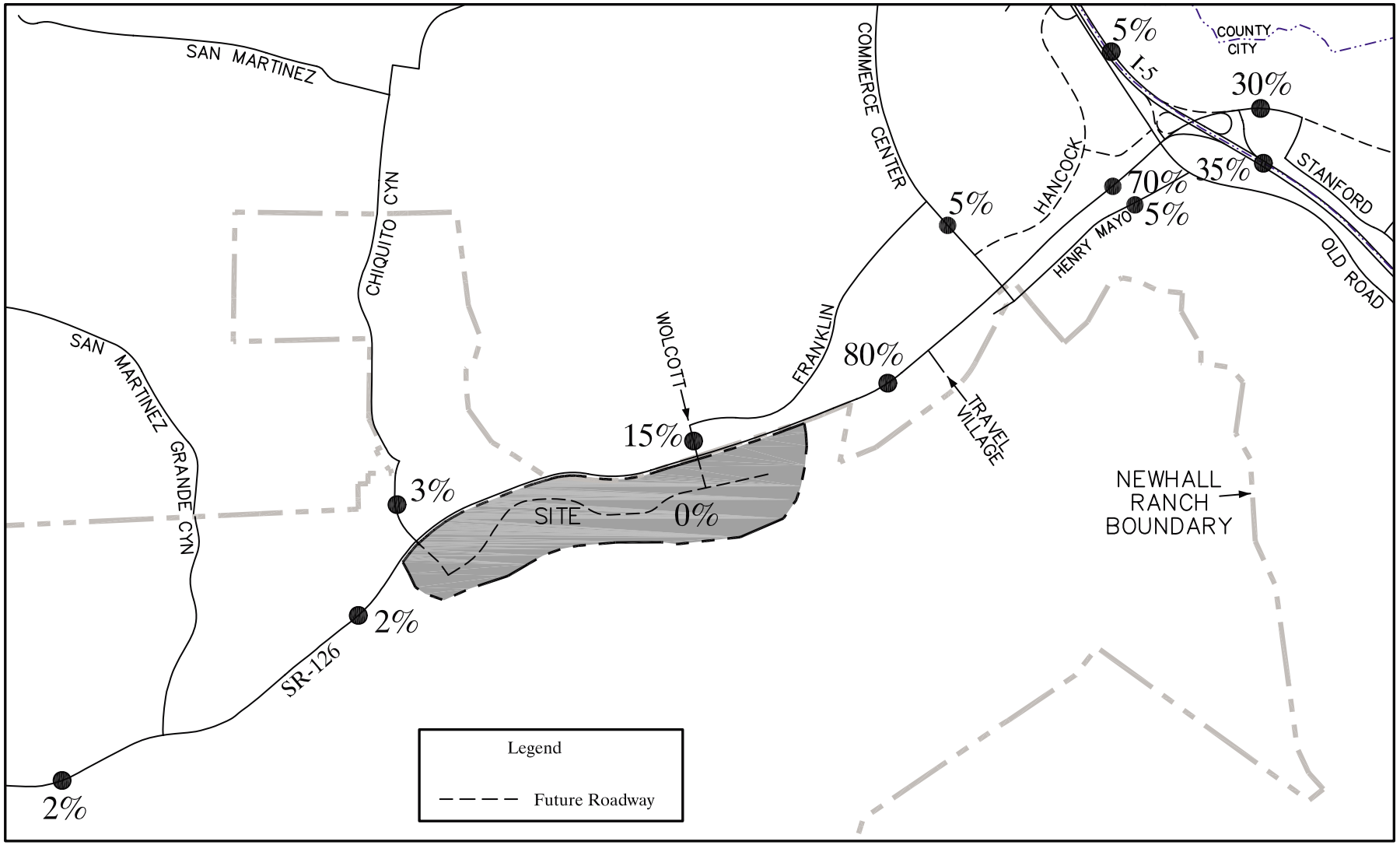
e. Year 2007/Phase 1 Impacts

Year 2007 traffic conditions are based on existing (2003) roadway conditions plus four years of ambient growth (2 percent growth per year). This forms the basis for identifying the potential 2007 traffic impacts of Phase 1 of the project.[7]

(1) Year 2007 Traffic Conditions without Project

Year 2007 no-project (existing conditions plus ambient growth) peak hour turning movement volumes for the intersections in the study area and ADT volumes for select roadway segments are provided in Appendix G of the Austin-Foust report in **Appendix 4.7**. **Table 4.7-12, ICU and LOS Summary – Year 2007 Traffic Conditions without Project**, provides the corresponding ICU values and also listed for comparison purposes are the ICUs for existing conditions. The ICU tabulations indicate that, based on ambient growth only, by 2007 the LOS of Commerce Center Drive/SR-126 would change from LOS B to LOS C. Each of the remaining intersections is forecast to remain at current LOS or improve due to improvement projects currently underway, as discussed in **Subsection 5., Proposed Improvements and Expected Transit Ridership**.

7 Representative study area traffic counts taken in November 2005 indicate changes in ambient traffic volume since 2003 range between -2 percent and +1 percent. Based on this data, a 2 percent annual ambient growth rate assumption is reasonable and, in fact, may result in overstating ambient traffic growth.

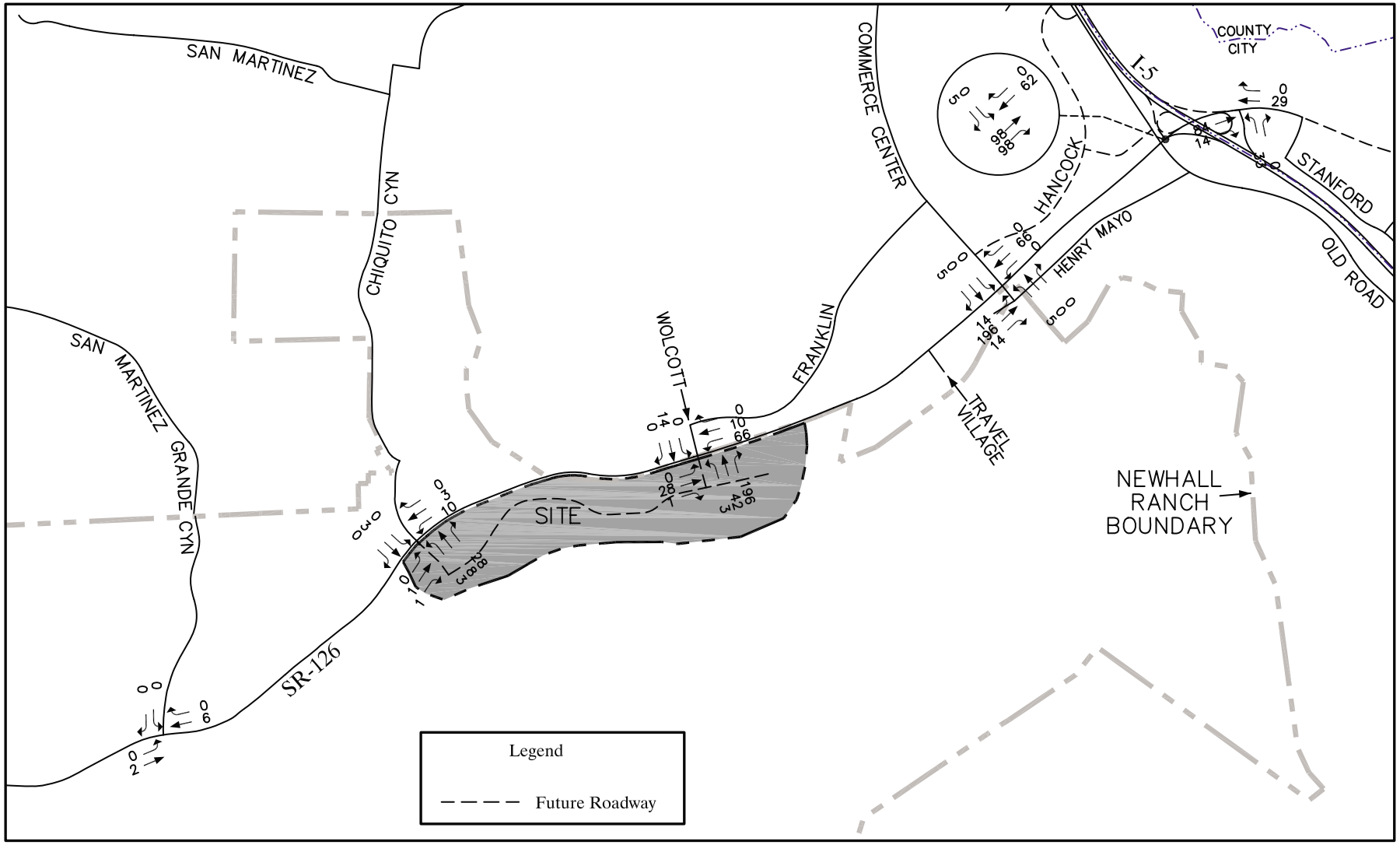


NOT TO SCALE

SOURCE: Austin-Foust Associates, Inc. – September 2004

FIGURE **4.7-8**

Project Distribution — Phase 1

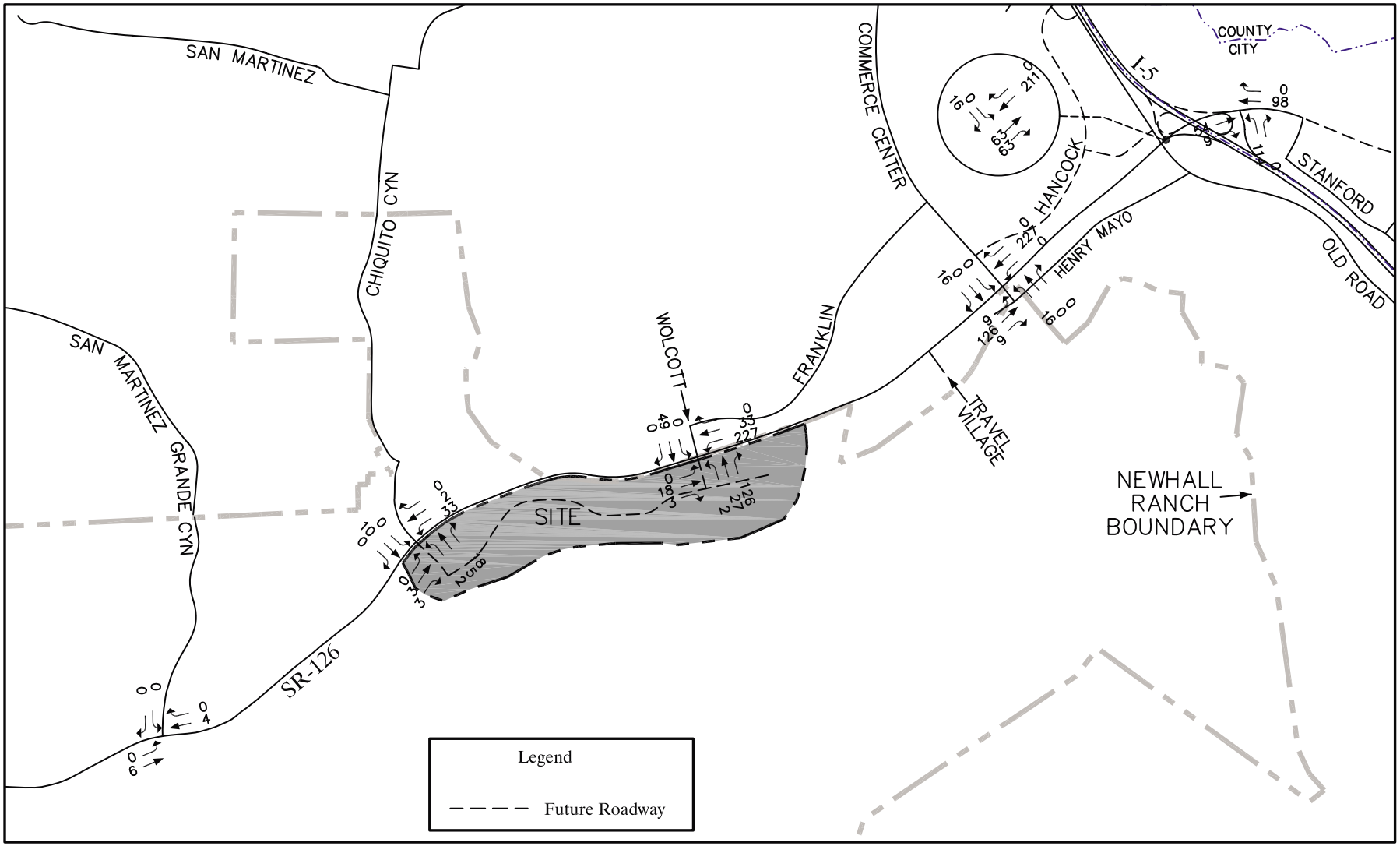


NOT TO SCALE

SOURCE: Austin-Foust Associates, Inc. – September 2004

FIGURE **4.7-9**

AM Peak Hour Volumes — Project Phase 1 Trips Only

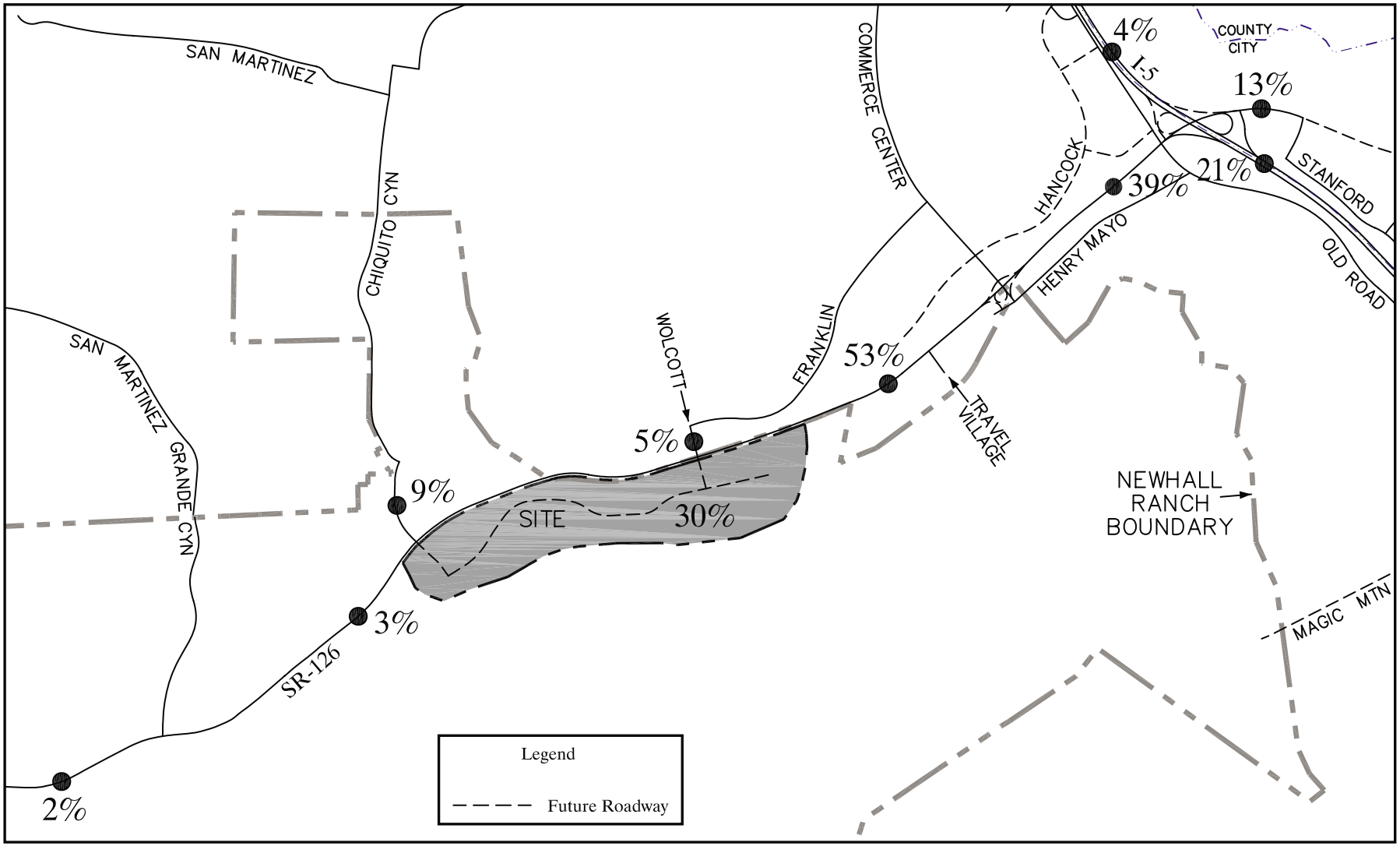


NOT TO SCALE

SOURCE: Austin-Foust Associates, Inc. – September 2004

FIGURE **4.7-10**

PM Peak Hour Volumes — Project Phase 1 Trips Only

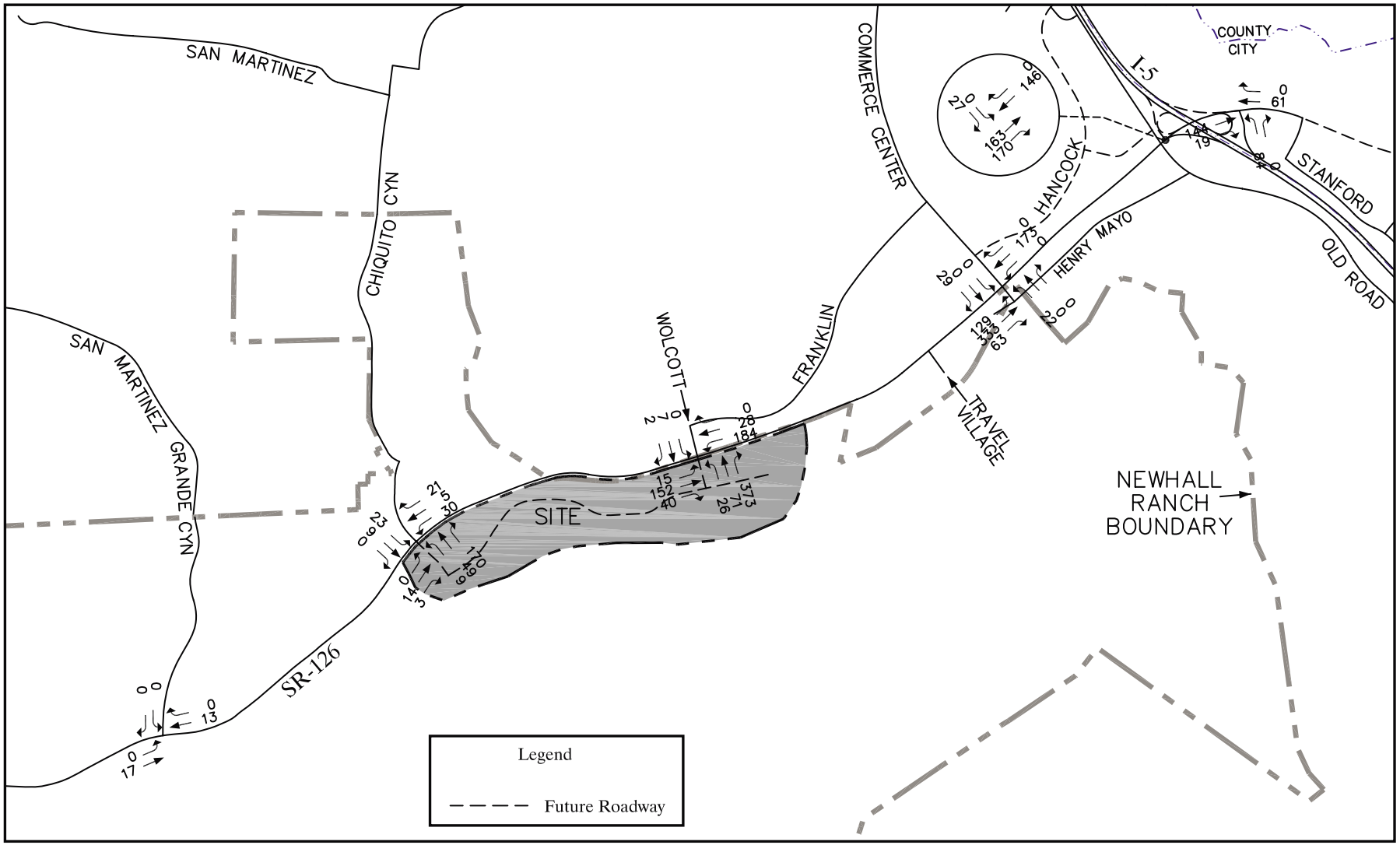


NOT TO SCALE

SOURCE: Austin-Foust Associates, Inc. – September 2004

FIGURE **4.7-11**

Project Distribution — Project Phase 2

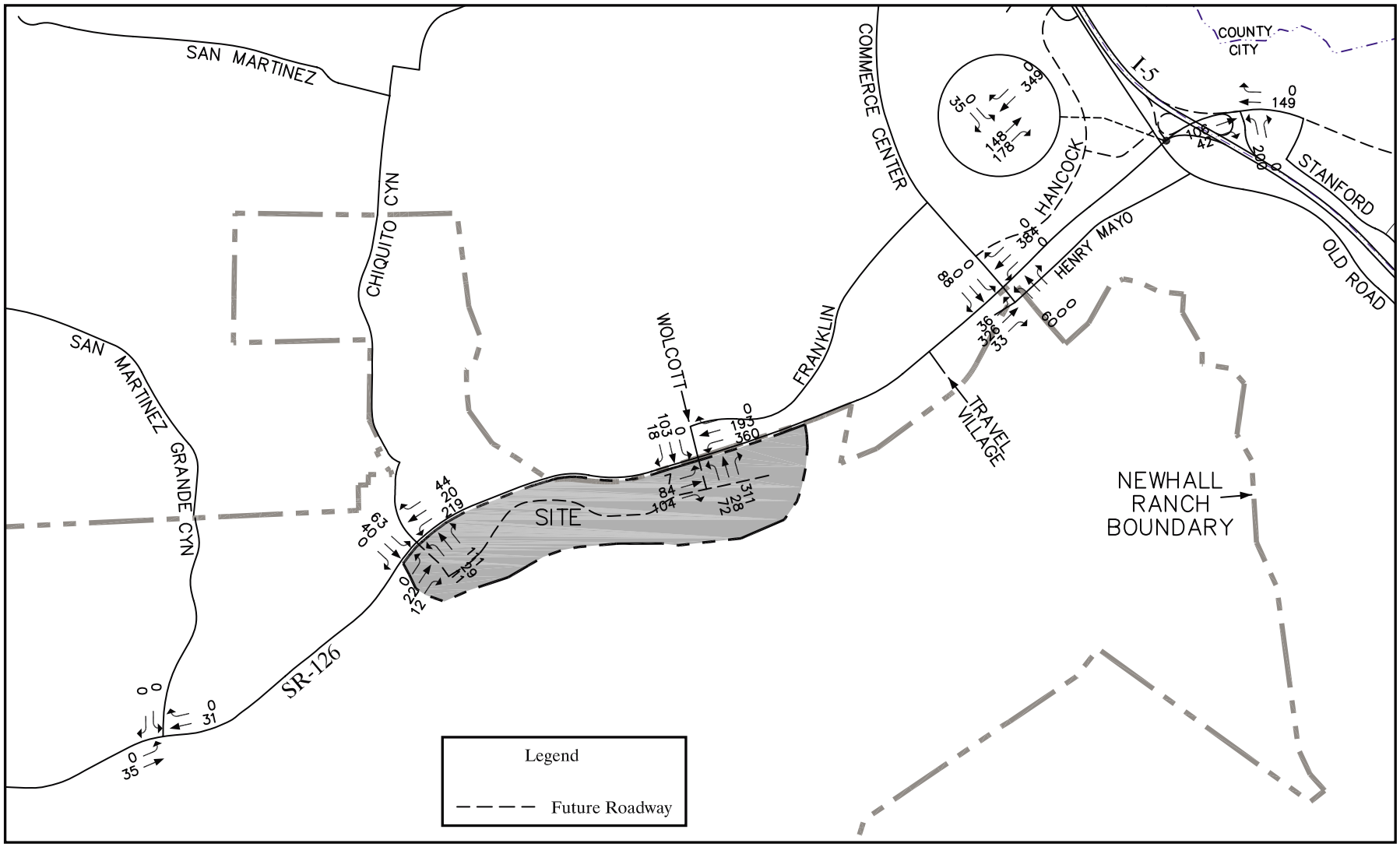


NOT TO SCALE

SOURCE: Austin-Foust Associates, Inc. – September 2004

FIGURE **4.7-12**

AM Peak Hour Volumes — Project Phase 2 Trips Only

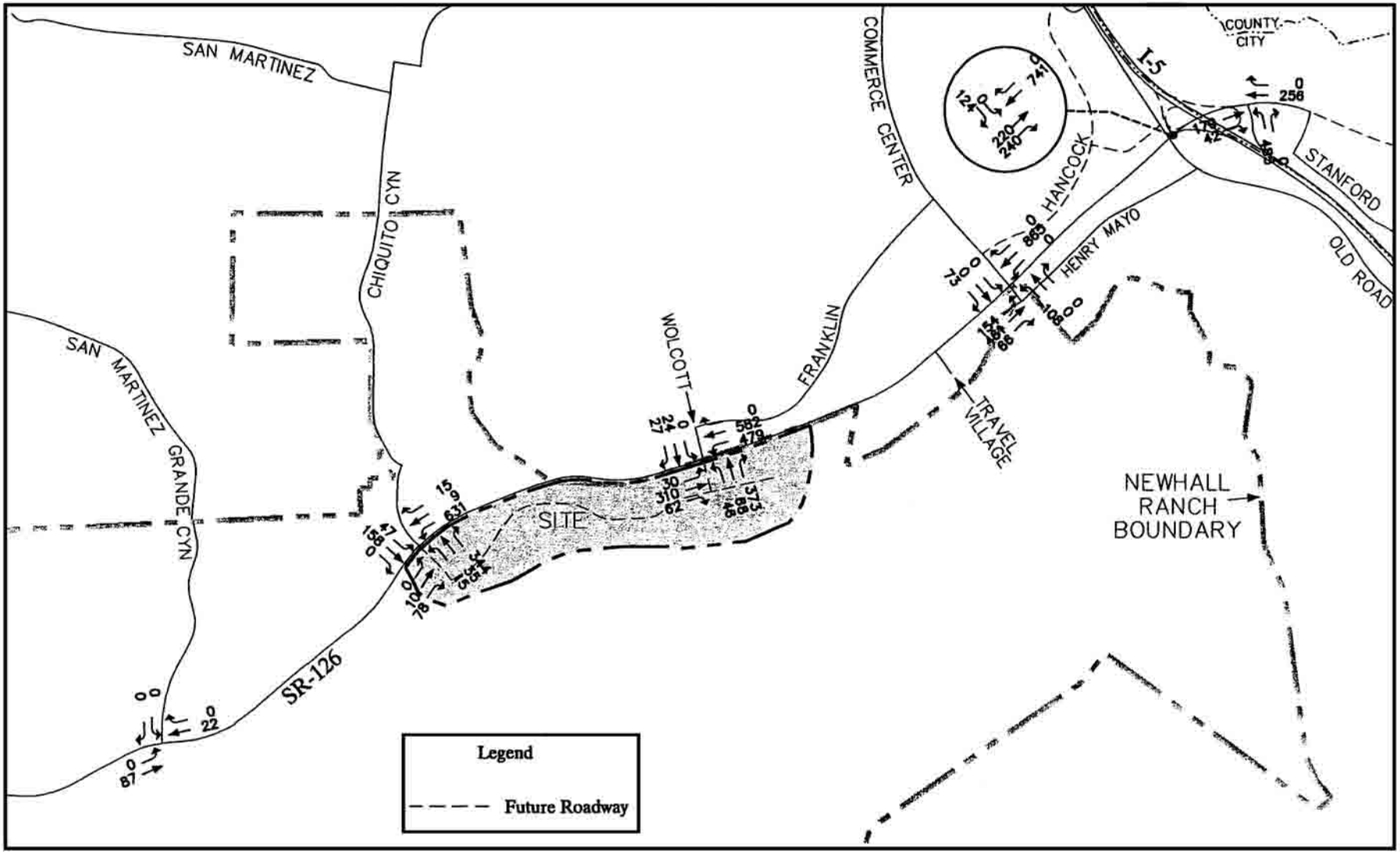


NOT TO SCALE

SOURCE: Austin-Foust Associates, Inc. – September 2004

FIGURE **4.7-13**

PM Peak Hour Volumes — Project Phase 2 Trips Only

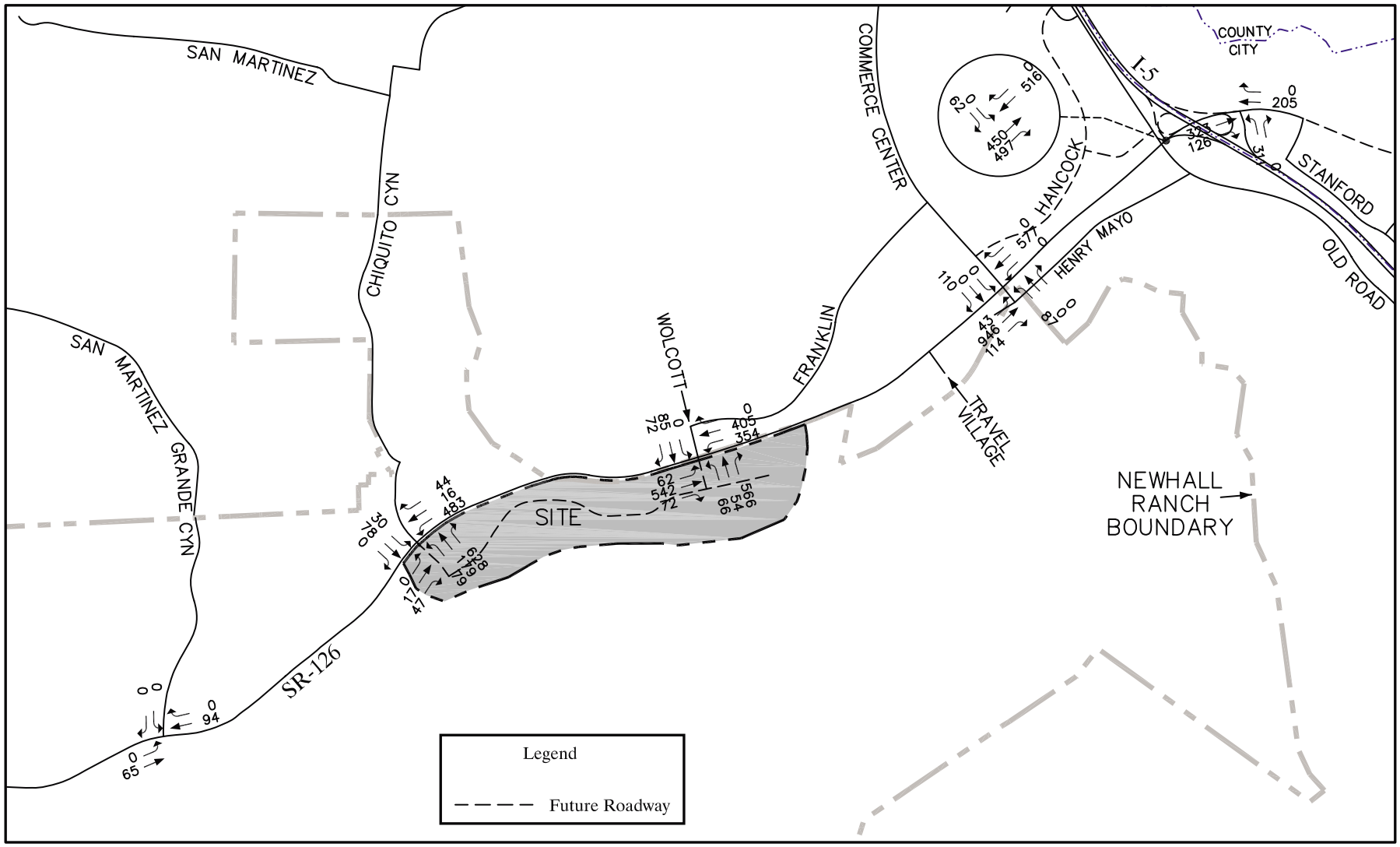


NOT TO SCALE

SOURCE: Austin-Foust Associates, Inc. – September 2004

FIGURE **4.7-14**

AM Peak Hour Volumes — Project Buildout Trips Only



NOT TO SCALE

SOURCE: Austin-Foust Associates, Inc. – September 2004

FIGURE **4.7-15**

PM Peak Hour Volumes — Project Buildout Trips Only

Table 4.7-12
ICU and LOS Summary – Year 2007 Traffic Conditions without Project

Intersection	Existing				2007 No Project (Existing Plus Ambient)				Increase	
	AM		PM		AM		PM		AM	PM
7. I-5 SB Ramps/SR-126	.39	A	.36	A	.51	A	.48	A	.12	.12
8. I-5 NB Ramps/SR-126	.71	C	.77	C	.50	A	.50	A	-.21	-.27
80. Wolcott/SR-126	.34	A	.42	A	.36	A	.45	A	.02	.03
89. Old Road/SR-126 WB Ramps*	.34	A	.32	A	--		--		--	--
94. Commerce Center/SR-126	.52	A	.68	B	.55	B	.72	C	.03	.04
96. San Martinez Canyon/SR-126**	.31	A	.40	A	.32	A	.43	A	.01	.03
110. Chiquito Canyon/SR-126**	.36	A	.43	A	.39	A	.46	A	.03	.03
117. SR-126 EB Ramp/Henry Mayo*	.19	A	.22	A	--		--		--	--

Source: Austin-Foust Associates (September 2004).
**Removed by SR-126/I-5 Interchange Project*
***Stop Sign Control*

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

(2) Year 2007 Traffic Conditions with Project Phase 1

Year 2007 volumes with Phase 1 traffic (existing conditions plus ambient growth plus Phase 1) and ADT volumes for select roadway segments are provided in Appendix G of the Austin-Foust report in **Appendix 4.7**. Peak hour ICU values can be found in **Table 4.7-13, ICU and LOS Summary -- Year 2007 Traffic Conditions with Project Phase 1**, which also provides a comparison between 2007 no-project and 2007 with-project conditions. The table shows that no intersections would experience a significant traffic impact due solely to project-generated traffic for Phase 1.

Table 4.7-13
ICU and LOS Summary – Year 2007 Traffic Conditions with Project Phase 1

Intersection	2007 No Project				2007 With Project Phase 1				Increase	
	AM		PM		AM		PM		AM	PM
7. I-5 SB Ramps/SR-126	.51	A	.48	A	.53	A	.54	A	.02	.06
8. I-5 NB Ramps/SR-126	.50	A	.50	A	.54	A	.56	A	.04	.06
80. Wolcott/SR-126	.36	A	.45	A	.52	A	.69	B	.16	.24
94. Commerce Center/SR-126	.55	B	.72	C	.61	B	.80	C[1]	.06	.08
96. San Martinez Canyon/SR-126	.32	A	.43	A	.32	A	.43	A	.00	.00
110. Chiquito-Long Canyon/SR-126	.39	A	.46	A	.41	A	.49	A	.02	.03

Source: Austin-Foust Associates (September 2004).

[1] *Since this intersection achieves LOS C and given that LOS D is the established design LOS for intersections serving (and within) the Valencia Commerce Center, there is not a significant project impact for this scenario. This intersection is planned for reconstruction as a grade separated interchange by 2008.*

Level of service ranges:

.00 – .60	*A*
.61 – .70	*B*
.71 – .80	*C*
.81 – .90	*D*
.91 – 1.00	*E*
Above 1.00	*F*

f. Year 2008/Phase 2 Impacts

The 2008 traffic conditions are based on existing (2003) roadway conditions plus five years of ambient growth. This forms the basis for identifying the potential 2008 traffic impacts of the proposed project. The following sections discuss the 2008 no-project and with-project conditions.

(1) Year 2008 Traffic Conditions without Project

The 2008 no-project (existing conditions plus ambient growth) peak-hour turning movement volumes for the intersections in the project study area and ADT volumes for select roadway segments are shown in Appendix G of the Austin-Foust report in **Appendix 4.7**. The 2008 no-project conditions are discussed in the following subsections as a comparison to the with-project conditions.

(2) Year 2008 Traffic Conditions with Project Phases 1 and 2

As previously discussed, Phase 2 of the Landmark Village project would add the remaining residential units, the elementary school and 100,000 square feet of commercial uses to Phase 1 development. To

assess the impact of Phases 1 and 2 combined, the traffic volumes generated by these phases were added to the 2008 no-project (existing plus ambient) traffic volumes.

Year 2008 volumes that include traffic from Phases 1 and 2 (existing conditions plus ambient growth plus project Phases 1 and 2) are provided in Appendix G of the Austin-Foust report in **Appendix 4.7**. Peak hour ICU values are presented in **Table 4.7-14, ICU and LOS Summary – Year 2008 Traffic Conditions with Project Phases 1 and 2**, which also provides a comparison between 2008 no-project and 2008 with-project conditions. The table shows that the following two intersections would experience a significant impact due solely to project generated traffic for Phases 1 and 2 unless mitigated.

- 80. Wolcott/SR-126
- 94. Commerce Center Drive/SR-126

Table 4.7-14
ICU and LOS Summary – Year 2008 Traffic Conditions with Project Phases 1 and 2

Intersection	2008 No Project				2008 with Project Phases 1 & 2				Increase	
	AM		PM		AM		PM		AM	PM
7. I-5 SB Ramps/SR-126	.51	A	.48	A	.57	A	.59	A	.06	.11
8. I-5 NB Ramps/SR-126	.50	A	.51	A	.58	A	.62	B	.08	.11
80. Wolcott/SR-126	.36	A	.46	A	.80	C	1.00	E	.44*	.54*
94. Commerce Center/SR-126	.55	A	.74	C	.68	B	.92	E	.13	.18*
96. San Martinez Canyon/SR-126	.33	A	.43	A	.33	A	.44	A	.00	.01
110. Chiquito-Long Canyon/SR-126	.40	A	.46	A	.56	A	.73	C	.27	.27

Source: Austin-Foust Associates (September 2004).
**Significant Project Impact*

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

g. Year 2010/Project Buildout Impacts

The 2010 traffic conditions are based on existing (2003) roadway conditions plus seven years of ambient growth. This forms the basis for identifying the potential 2010 traffic impacts of the proposed project. The following subsections discuss the 2010 no-project and with-project conditions.

(1) Year 2010 Traffic Conditions without Project

The 2010 no-project (existing conditions plus ambient growth) peak hour turning movement volumes for the intersections in the project study area and ADT volumes for select roadway segments are shown in Appendix G of the Austin-Foust report in **Appendix 4.7**.

(2) Year 2010 Traffic Conditions with Project Buildout

The analyses presented in previous subsections were based on Phase 1 and Phase 2 of the proposed project. As previously discussed, Phase 3 would add an additional 940,000 square feet of commercial (retail and office) uses to Phases 1 and 2 and represents project buildout. To assess the impact of project buildout, the traffic volumes generated by the project were added to the 2010 no-project (existing plus ambient) traffic volumes.

Year 2010 volumes that include traffic generated by project Phases 1, 2, and 3 combined (existing conditions plus ambient growth plus project Phase 3) are provided in Appendix G of the Austin-Foust report in **Appendix 4.7**. Peak hour ICU values can be found in **Table 4.7-15, ICU and LOS Summary – Year 2010 Traffic Conditions with and without Project Buildout**, which provides a comparison between 2010 no-project and 2010 with-project conditions. The table shows that the following intersections would experience a significant impact due solely to the traffic generated by the built-out project unless mitigated:

- I-5 Southbound Ramps/SR-126
- Wolcott/SR-126
- Commerce Center Drive/SR-126
- Chiquito-Long Canyon/SR-126

Table 4.7-15
ICU and LOS Summary – Year 2010 Traffic Conditions with and without Project Buildout

Intersection	2010 No Project (Existing Plus Ambient)				2010 with Project Buildout				Increase	
	AM		PM		AM		PM		AM	PM
7. I-5 SB Ramps/SR-126	.54	A	.49	A	.79	C	.66	B	.25*	.17
8. I-5 NB Ramps/SR-126	.52	A	.53	A	.74	C	.73	C	.22	.20
80. Wolcott/SR-126	.37	A	.47	A	1.05	F	1.31	F	.68*	.84*
94. Commerce Center/SR-126	.58	A	.77	C	.95	E	1.08	F	.37*	.31*
96. San Martinez Canyon/SR-126	.34	A	.44	A	.36	A	.47	A	.02	.03
110. Chiquito-Long Canyon/SR-126	.40	A	.48	A	1.08	F	1.35	F	.68*	.87*

Source: Austin-Foust Associates (September 2004).
**Significant Project Impact*
Level of service ranges:

.00 – .60	*A*
.61 – .70	*B*
.71 – .80	*C*
.81 – .90	*D*
.91 – 1.00	*E*
Above 1.00	*F*

(3) Year 2010 Traffic Conditions with Project Buildout and Related Projects

Illustrations of 2010 conditions for the AM and PM peak hours, respectively, with the new roadway network, existing traffic, project traffic and related project traffic, as well as ADT volumes for this scenario, are provided in Appendix G of the Austin-Foust report in **Appendix 4.7**.

Peak hour ICU values for project buildout conditions can be found in **Table 4.7-16, ICU and LOS Summary – Year 2010 Traffic Conditions With Project Buildout and Related Projects**, which provides a comparison between the 2010 no-project conditions and the 2010 with project buildout plus related projects. The ICU table shows that the following four intersections would experience a significant impact due to the cumulative impact of the project and related projects unless mitigated:

- I-5 Southbound Ramps/SR-126
- I-5 Northbound Ramps/SR-126
- Wolcott/SR-126
- Chiquito-Long Canyon/SR-126

Table 4.7-16
ICU and LOS Summary – Year 2010 Traffic Conditions with Project Buildout and Related Projects

Intersection	2010 No Project (Existing Plus Ambient)				2010 with Project Buildout Plus Related Projects				Increase	
	AM		PM		AM		PM		AM	PM
7. I-5 SB Ramps/SR-126	.54	A	.49	A	1.51	F	1.06	F	.97*	.57*
8. I-5 NB Ramps/SR-126	.52	A	.53	A	1.40	F	1.34	F	.88*	.81*
80. Wolcott/SR-126	.37	A	.47	A	.82	D	.90	D	.45*	.43*
81. Commerce Center/Henry Mayo**	--		--		.56	A	.41	A	--	--
82. Commerce Center/SR-126 EB**	--		--		.28	A	.21	A	--	--
83. Commerce Center/SR-126 WB**	--		--		.78	C	.64	B	--	--
94. Commerce Center/SR-126	.58	A	.77	C	--		--		--	--
96. San Martinez Canyon/SR-126	.34	A	.44	A	.57	A	.52	A	.23	.08
110. Chiquito-Long Canyon/SR-126	.40	A	.48	A	1.07	F	.81	D	.67*	.33*

Source: Austin-Foust Associates (September 2004).
**Significant Project Impact*
***New 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*

h. Traffic Signal Warrant

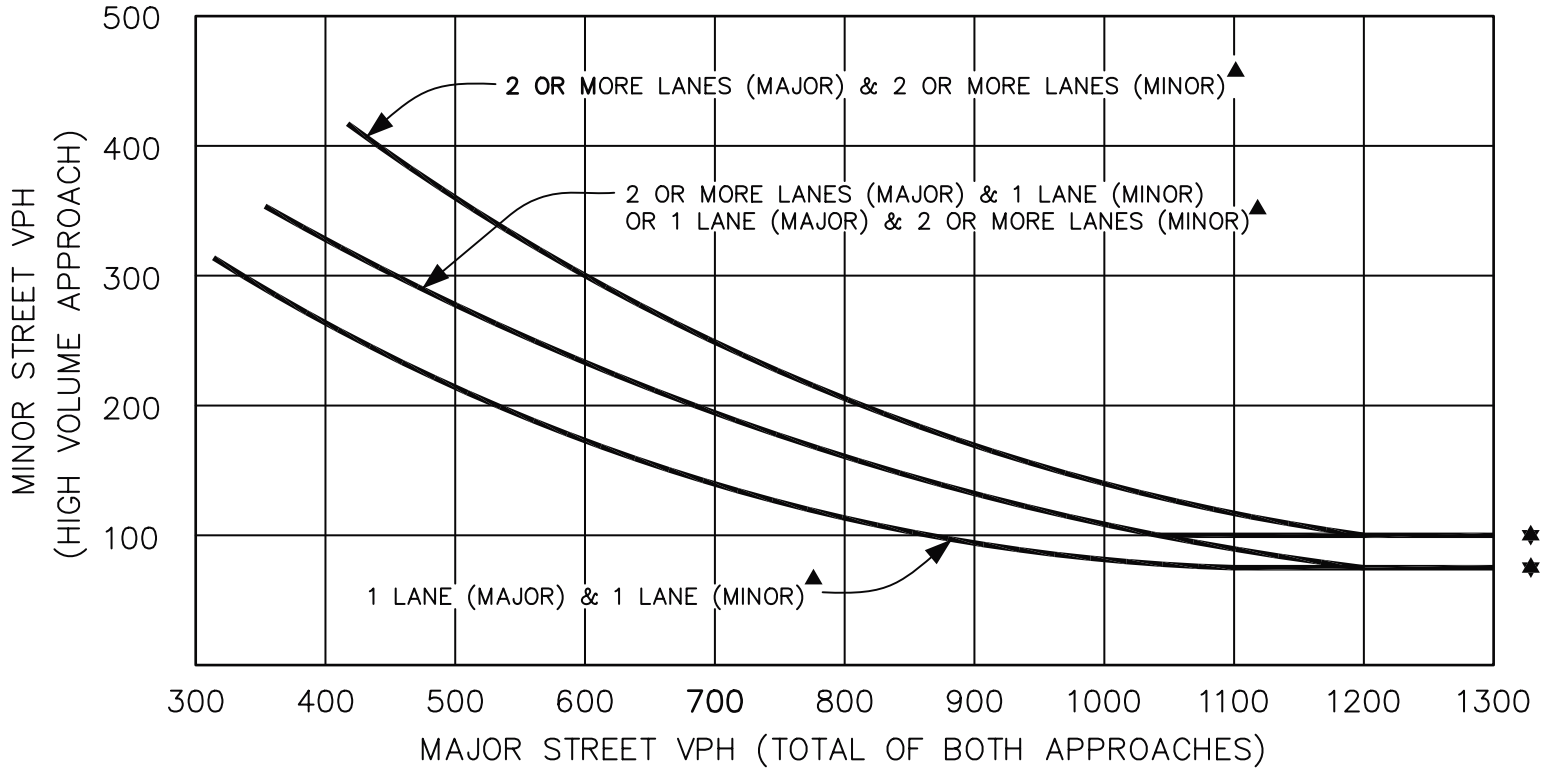
A number of study locations are currently stop sign controlled intersections. One of these, the I-5 northbound off-ramp at SR-126, will be signalized as part of the current construction project at that location. **Table 4.7-17, Traffic Signal Peak Hour Volume Warrant**, summarizes peak hour forecast traffic volumes for the other locations (including applicable on-site intersections) and evaluates them using the Caltrans peak hour volume warrant. The peak hour volume warrant for rural areas (or major street speed of 40 miles per hour [mph] or greater) is illustrated in **Figure 4.7-16, Peak hour Volume Signal Warrant – Rural**, and the peak hour volume warrant for urban areas (or major street speed of 35 mph or less) is illustrated in **Figure 4.7-17, Peak Hour Volume Signal Warrant – Urban**. For on-site intersections the warrant analysis is performed only for the intersections that meet the minimum criteria of 100 vehicles per hour for side street volumes.

Table 4.7-17
Traffic Signal Peak Hour Volume Warrant

Intersection	Approach	No Project AM	No Project PM	With Project AM	With Project PM	With Project Plus Related Projects AM	With Project Plus Related Projects PM	Project Share (Percent)
2007/PROJECT PHASE 1								
110. Chiquito-Long Canyon/SR-126								
Major Approach	Eastbound	722	1,017	724	1,023	896	1,039	
	Westbound	794	1,103	807	1,138	965	1,238	
	Totals	1,516	2,120	1,531	2,161	1,861	2,277	
Minor Approach	Southbound	89	63	92	73	202	161	
	Satisfies Warrant? (Rural)	NO	NO	NO	NO	*YES*	*YES*	17
2008/PROJECT PHASE 2								
110. Chiquito-Long Canyon/SR-126								
Major Approach	Eastbound	736	1,037	753	1,071	1,456	1,220	
	Westbound	808	1,124	864	1,407	1,195	2,004	
	Totals	1,544	2,161	1,617	2,478	2,651	3,224	
Minor Approach	Southbound/ Northbound	90	64	228	167	571	354	
	Satisfies Warrant? (Rural)	NO	NO	*YES*	*YES*	*YES*	*YES*	100
On-Site #2: Long Canyon/A Street								
Major Approach	Eastbound	--	--	63	27	--	--	
	Westbound	--	--	144	92	--	--	
	Totals	--	--	207	119	--	--	
Minor Approach	Southbound	--	--	37	284	--	--	
	Satisfies Warrant? (Urban)			NO	NO			N/A
On-Site #17: School/U Street/A St.								
Major Approach	Eastbound	--	--	200	182	--	--	
	Westbound	--	--	148	167	--	--	
	Totals	--	--	348	349	--	--	
Minor Approach	Southbound	--	--	116	61	--	--	
	Satisfies Warrant? (Urban)			NO	NO			N/A
On-Site #21: M Street/A Street								
Major Approach	Eastbound	--	--	269	223	--	--	
	Westbound	--	--	218	258	--	--	
	Totals	--	--	487	481	--	--	
Minor Approach	Southbound	--	--	27	143	--	--	
	Satisfies Warrant? (Urban)			NO	NO			N/A

Intersection	Approach	No Project AM	No Project PM	With Project AM	With Project PM	With Project Plus Related Projects AM	With Project Plus Related Projects PM	Project Share (Percent)
2010/PROJECT PHASE 3								
96. San Martinez Canyon/SR-126								
Major Approach	Eastbound	742	1,068	829	1,133	1,490	1,232	
	Westbound	752	1,071	774	1,165	1,018	1,283	
	Totals	1,494	2,139	1,603	2,298	2,508	2,515	
Minor Approach	Southbound	7	11	7	11	12	17	
	Satisfies Warrant? (Rural)	NO	NO	NO	NO	NO	NO	N/A
On-Site #2: Long Canyon/A Street								
Major Approach	Northbound	--	--	--	--	1,827	670	
	Southbound	--	--	--	--	496	1,671	
	Totals	--	--	--	--	2,323	2,341	
Minor Approach	Westbound	--	--	--	--	315	816	
	Satisfies Warrant? (Urban)					*YES*	*YES*	100
On-Site #4: Commercial Dwy/A St.								
Major Approach	Eastbound	--	--	436	692	--	--	
	Westbound	--	--	313	444	--	--	
	Totals	--	--	749	1,136	--	--	
Minor Approach	Southbound	--	--	22	214	--	--	
	Satisfies Warrant? (Urban)			NO	NO			N/A
On-Site #6: Commercial Dwy/A St.								
Major Approach	Eastbound	--	--	108	227	--	--	
	Westbound	--	--	405	137	--	--	
	Totals	--	--	513	414	--	--	
Minor Approach	Northbound/ Southbound	--	--	35	154	--	--	
	Satisfies Warrant? (Urban)			NO	NO			N/A
On-Site #17: School/U Street/A St.								
Major Approach	Eastbound	--	--	218	193	--	--	
	Westbound	--	--	318	187	--	--	
	Totals	--	--	536	380	--	--	
Minor Approach	Southbound	--	--	108	52	--	--	
	Satisfies Warrant? (Urban)			NO	NO			N/A
On-Site #21: M Street/A Street								
Major Approach	Eastbound	--	--	238	171	--	--	
	Westbound	--	--	421	207	--	--	
	Totals	--	--	659	378	--	--	
Minor Approach	Southbound	--	--	34	198	--	--	
	Satisfies Warrant? (Urban)			NO	NO			n/a

Source: Austin-Foust Associates (September 2004).
N/A = Not applicable.
*Signal warrant analysis for on-site locations is provided only for locations that meet the minimum site street volume of 100 vehicles per hour. See **Figures 4.7-16** and **4.7-17** for the rural and urban peak hour volume signal warrant criteria, respectively.*



▲ NOTE: THESE CURVES ARE RECOMMENDED FOR USE IN AREAS OF RURAL CLASSIFICATION (i.e. POSTED SPEED LIMIT ON THE MAJOR STREET IS 40 MPH OR HIGHER).

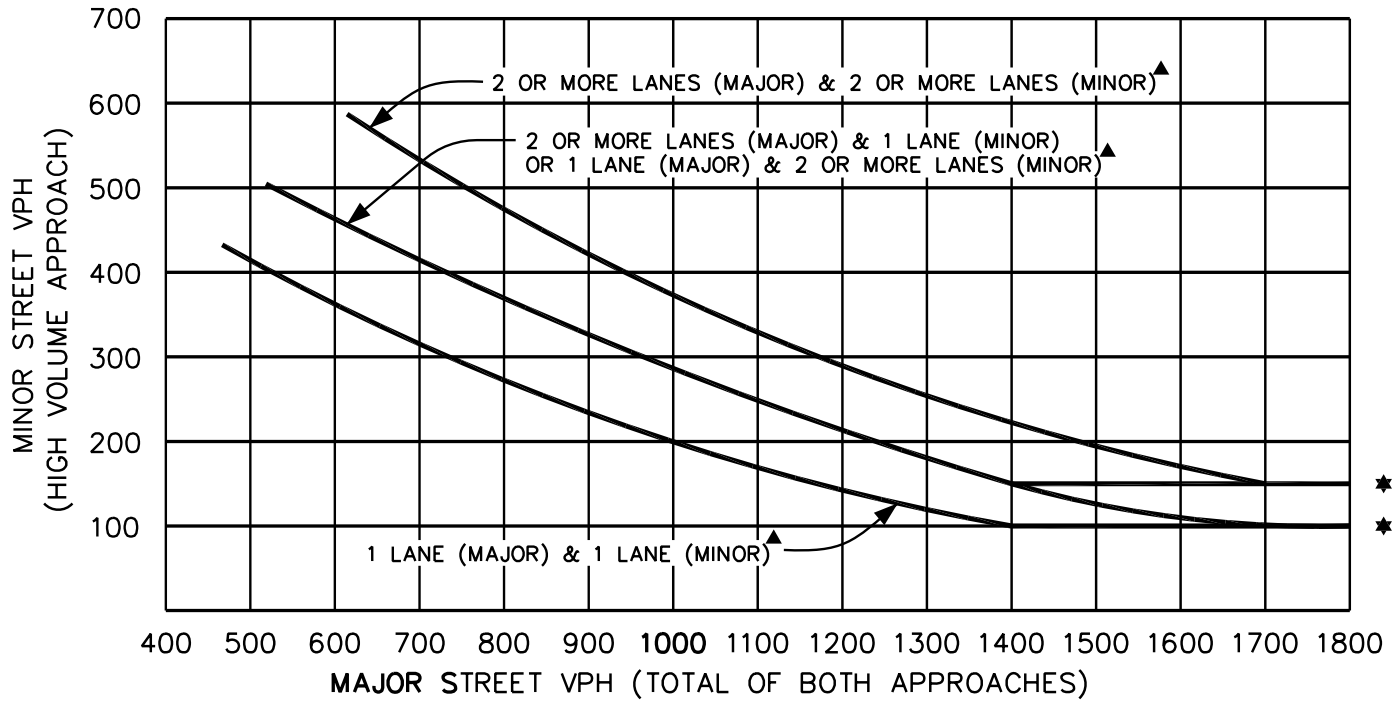
✸ NOTE: 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES, AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE.

NOT TO SCALE

SOURCE: Austin-Foust Associates, Inc. – September 2004

FIGURE **4.7-16**

Peak Hour Volume Signal Warrant — Rural



▲ NOTE: THESE CURVES ARE RECOMMENDED FOR USE IN AREAS OF URBAN CLASSIFICATION (i.e. POSTED SPEED LIMIT ON THE MAJOR STREET IS 35 MPH OR LESS).

✸ NOTE: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES, AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE.

NOT TO SCALE

SOURCE: Austin-Foust Associates, Inc. – September 2004

FIGURE **4.7-17**

Peak Hour Volume Signal Warrant — Urban

At one location, Chiquito Canyon Road-Long Canyon Road/SR-126, the warrant is met for Phase 1 conditions when project traffic and related project traffic is added to background conditions. Within the project site, the warrant is met at the Long Canyon Road/A Street intersection for buildout conditions. Since each location would provide access to the project site, the project is responsible for 100 percent of the cost for installing the signals.

i. Congestion Management Program (CMP)

The CMP is a state-mandated program enacted by the state legislature with the passage of various Assembly Bills. The requirements for the program became effective with voter approval of Proposition 111 in June of 1990.

The CMP highway network, which is evaluated in this analysis, consists of all state highways (both freeways and arterials) and principal arterials that meet the criteria established by the Metropolitan Transportation Authority (MTA). Impacts are evaluated by monitoring LOS performance standards for specific highway segments and key roadway intersections on the CMP highway network, as designated by the MTA.

The CMP for Los Angeles County requires quantification of a proposed development's impacts on the CMP highway system and the local and regional transit systems.

(1) Project Impacts on CMP Highway System

The geographical area examined in a CMP traffic impact analysis (TIA) consists of the CMP monitoring locations that meet the following criteria:

1. CMP intersections where the proposed project would add 50 or more trips during the AM or PM weekday peak hours (of adjacent street traffic); and/or

2. Mainline freeway locations where the project would add 150 or more trips, in either direction, during either the AM or PM weekday peak hours.

(a) CMP Intersections

Combined, Phase 1 and Phase 2 of the project meets the above criteria for analysis at the intersection of Chiquito Canyon Road and SR-126. Buildout of the project site also meets the above criteria for this location and at one additional location, as shown in the following list:

- Chiquito Canyon Road/SR-126 Intersection (Phases 1, 2, and Full Project).

- Valencia Boulevard/Magic Mountain Parkway Intersection (Full Project Only).

Table 4.7-18, ICU and LOS Summary – CMP Monitoring Intersections, shows that no CMP intersection would experience a significant impact due to the project. A comparison of traffic volumes to LOS is provided in **Table 4.7-19, Comparison of Traffic Volumes to LOS**.

Table 4.7-18
ICU and LOS Summary – CMP Monitoring Intersections

Intersection	Without Project				With Project				Increase	
	AM		PM		AM		PM			
	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	AM	PM
2007/PHASE 1										
110. Chiquito Cyn/SR-126	.51	A	.52	A	.52	A	.52	A	.01	.00
2008/PHASE 2										
110. Chiquito Cyn/SR-126	.86	D	.64	B	.78	C	.73	B	-.08	.09
2010/PHASE 3										
57. Valencia/Magic Mtn	.92	E	1.22	F	.93	E	1.23	F	.01	.01
110. Chiquito Cyn/SR-126	.81	D	.57	A	.79	C	.64	B	-.02	.07

Source: Austin-Foust Associates (September 2004).
** Significant Project Impact – CMP Criteria (V/C increase ≥ .02 causing or worsening LOS F)*
ICUs calculated using Los Angeles County CMP methodology. With project scenario includes mitigation measures listed below in Subsection 8., Project Mitigation Measures.

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

Traffic counts taken in April 2006 (post-construction) indicate AM traffic volumes on the off ramp that are higher than the 2003 traffic counts used in the Landmark Traffic Study, The PM peak hour counts taken in April 2006 are similar to the 2003 traffic counts used in the Landmark Traffic Study. Level of service (LOS) at the intersection for post-construction conditions is better than the LOS in 2003 due to the significant amount of capacity that has been added by the interchange reconstruction project. **Table 4.7-19, Comparison of Traffic Volumes to LOS** compares the traffic volumes and the LOS at this location for the conditions shown in the Landmark Traffic Study to the 2006 post-construction conditions. The table shows that LOS improves from LOS C to LOS A after construction. Since the traffic study did not assume the additional capacity from this construction project as part of the background conditions, the traffic study presents a worse-case scenario in comparison to what would be presented if the 2006 counts and the 2006 capacities were used.

Table 4.7-19[1]
Comparison of Traffic Volumes to LOS

Location	Caltrans Volume (2001)	Landmark 2003		2006 (Post-Construction)	
		Volume	ICU/LOS	Volume	ICU/LOS
I-5 NB Off-Ramp at SR-126					
AM Peak Hour	1642	840	.71/C	1292	.43/A
PM Peak Hour	962	656	.77/C	688	.33/A

[1] *An ICU spreadsheet for the 2006 volumes can be found in* ***Appendix 4.7****.*

(b) CMP Freeway Segments

Table 4.7-20, Freeway V/C and LOS Summary – CMP Monitoring Locations, summarizes the CMP freeway segments that meet the criteria for analysis. The table shows that, based on CMP criteria, no significant freeway impacts would occur due to the project.

Table 4.7-20
Freeway V/C and LOS Summary – CMP Monitoring Locations

Location	Without Project				With Project			
	Capacity	Volume	V/C	LOS	Capacity	Volume	V/C	LOS
I. AM PEAK HOUR								
I-5 n/o SR-14, Northbound	10,000	9,000	.90	D	10,000	9,174	.92	D
II. PM PEAK HOUR								
I-5 n/o SR-14, Southbound	10,000	9,000	.90	D	10,000	9,150	.92	D

Source: Austin-Foust Associates (September 2004).
Source of Capacities LOS ranges: 2002 Los Angeles County CMP.
n/o = north of

Level of service ranges:	*.00 – .35*	*A*
	.36 – .54	*B*
	.55 – .77	*C*
	.78 – .93	*D*
	.94 – 1.00	*E*
	Above 1.00	*F*

(2) Project Transit Impacts

Another component of the CMP transportation impact analysis is a review of transit impacts. This review includes evidence that transit operators received the Notice of Preparation for this EIR (provided in **Appendix ES** of this EIR), estimation of the number of project trips assigned to transit, information on facilities and/or programs that would encourage public transit use, and an analysis of project impacts on transit service. Information on existing transit service to the project area was provided earlier in this EIR section.

Buildout of the Landmark Village project is forecast to generate 41,884 ADT (20,669 ADT for Phases 1 and 2 combined). To estimate the number of project trips that would use public transit, the number of project ADT is multiplied by an occupancy factor to determine total person trips, which is then multiplied by the applicable MTA factor. The conversion to person trips is accomplished by using the MTA guidelines (multiplying the ADT by an occupancy factor of 1.4), which results in a total of 58,637 (28,935 for Phases 1 and 2 combined) average daily person trips. Applying the MTA's factor for converting total person trips to transit trips (.035) results in approximately 2,052 (1,013 for Phases 1 and 2 combined) total daily transit trips and approximately 200 (100 for Phases 1 and 2 combined) peak hour transit trips (based on the peak hour representing 10 percent of the total daily trips).

The County of Los Angeles does not have LOS standards for transit service that are applicable to future development, such as the proposed project; however, the substantial demand for transit service that would result from the Landmark Village project (2,052 total daily trips) has the potential to result in a significant impact to transit services. As previously noted, in accordance with Specific Plan approval, the project includes the construction of a park-and-ride lot, as well as the reservation of a right-of-way for future train service. Additionally, transit service is evaluated and funded on an as-needed basis. Coordination with the transit provider to identify appropriate bus stops and the payment of transit mitigation fees, as appropriate, would reduce the potential for transit-related impacts to a less than significant level.

j. State Highways

The project is located south of and adjacent to SR-126, which is a four-lane highway. Approximately 2 miles east of the project site is the I-5 Freeway which provides regional access for residents of the site.

The project site would obtain access from SR-126 via two existing intersections: Chiquito Canyon Road and Wolcott Way.

The I-5/SR-126 interchange reconstruction project is complete and will accommodate the buildout traffic demands of the area.

Phase 2 of the I-5/SR-126 interchange reconstruction project involves construction of a grade-separated interchange at Commerce Center Drive and SR-126. This improvement replaces the existing at-grade intersection with a partial cloverleaf interchange designed to increase capacity and improve access to the Valencia Commerce Center area. **Table 4.7-21, Project Volumes on State Highways**, summarizes the volume of project traffic forecast to use I-5, including the I-5/SR-126 interchange. As previously discussed, the project would cause a significant impact at the SR-126/I-5 interchange at buildout and would be responsible for its fair share of the improvements to this interchange.

Table 4.7-21
Project Volumes on State Highways

Location	Phase 2		Project Buildout	
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
I-5 Mainline				
n/o SR-126/Newhall Ranch Rd - Northbound	21	42	43	126
n/o Magic Mountain Parkway - Northbound	85	200	486	311
n/o SR-14 – Northbound	28	62	174	104
n/o SR-126/Newhall Ranch Road - Southbound	27	35	124	62
n/o Rye Canyon Road – Southbound	170	178	240	497
n/o Magic Mountain Parkway - Southbound	183	166	248	487
n/o SR-14 – Southbound	60	47	84	150
I-5/SR-126 Interchange				
Northbound Off-Ramp	84	200	485	311
Northbound Loop On-Ramp	19	42	42	126
Northbound Direct On-Ramp (future)	0	0	0	0
Southbound Off-Ramp	27	35	124	62
Southbound Loop On-Ramp (future)	0	0	0	0
Southbound Direct On-Ramp	170	178	240	497

Source: Austin-Foust Associates (September 2004).
n/o = north of

k. Ventura County

Table 4.7-22, 2007 Ventura County ADT Traffic Volumes, summarizes the existing traffic volumes together with the 2007 forecasts with Phase 1 of the proposed project. **Table 4.7-23, 2008 Ventura County ADT Traffic Volumes**, provides the 2008 Phases 1 and 2 forecasts and **Table 4.7-24, 2010 Ventura County ADT Traffic Volumes**, provides the 2010 Phase 3 (project buildout) forecasts. The tables show that, with buildout of the Landmark Village project, the highest amount of project traffic on SR-126 in Ventura County (SR-126 west of Center Street in Piru) would be 130 ADT, which is less than one-half of one percent of the total forecast volume for that location. Therefore, it can be concluded that the project would not result in a significant impact at these locations along SR-126 within Ventura County.

Table 4.7-22
2007 Ventura County ADT Traffic Volumes

Location	Average Daily Traffic (ADT)			Newhall Ranch Volume at Buildout	Landmark Village Volume at Buildout	2003 Plus Landmark Village	2007 Plus Landmark Village
	2003	2007	2020				
SR-126							
Ventura Co./Los Angeles Co. Line	25,000	26,000	31,000	1,038	15	25,015	26,015
West of Center Street (Piru)	25,000	26,000	31,000	1,033	15	25,015	26,015
Fillmore East City Limits	26,000	28,000	33,000	1,009	15	26,015	28,015
West of SR-23 (Fillmore)	30,000	31,000	36,000	869	13	30,013	31,013
West of Los Serenos Road (Fillmore)	29,000	31,000	37,000	835	12	29,012	31,012
Little Red School House	33,000	34,000	38,000	835	12	33,012	34,012
SR-23							
North of Casey Road (Moorpark)	8,000	8,000	9,000	78	1	8,001	8,001

Source: Austin-Foust Associates (September 2004).
Newhall Ranch Buildout - Total ADT - 334,000
Landmark Village - Phase 1 ADT - 4,950
Cumulative Growth Factor: - 23.5 percent (2007-2003)/(2020-2003)

Table 4.7-23
2008 Ventura County ADT Traffic Volumes

Location	Average Daily Traffic (ADT)			Newhall Ranch Volume at Buildout	Landmark Village Volume at Buildout	2003 Plus Landmark Village	2008 Plus Landmark Village
	2003	2008	2020				
SR-126							
Ventura Co./Los Angeles Co. Line	25,000	27,000	31,000	1,038	64	25,064	27,064
West of Center Street (Piru)	25,000	27,000	31,000	1,033	64	25,064	27,064
Fillmore East City Limits	26,000	28,000	33,000	1,009	62	26,062	28,062
West of SR-23 (Fillmore)	30,000	32,000	36,000	869	54	30,054	32,054
West of Los Serenos Road (Fillmore)	29,000	31,000	37,000	835	52	29,052	31,052
Little Red School House	33,000	34,000	38,000	835	52	33,052	34,052
SR-23							
North of Casey Road (Moorpark)	8,000	8,000	9,000	78	5	8,005	8,005

Source: Austin-Foust Associates (September 2004).
Newhall Ranch Buildout - Total ADT - 334,000
Landmark Village – Phase 2 ADT - 20,668
Cumulative Growth Factor: - 29.4 percent (2007-2003)/(2020-2003)

Table 4.7-24
2010 Ventura County ADT Traffic Volumes

Location	Average Daily Traffic (ADT)			Newhall Ranch Volume at Buildout	Landmark Village Volume at Buildout	2003 Plus Landmark Village	2010 Plus Landmark Village
	2003	2010	2020				
SR-126							
Ventura Co./Los Angeles Co. Line	25,000	27,000	31,000	1,038	130	25,130	27,130
West of Center Street (Piru)	25,000	27,000	31,000	1,033	130	25,130	27,130
Fillmore East City Limits	26,000	29,000	33,000	1,009	127	26,127	29,127
West of SR-23 (Fillmore)	30,000	32,000	36,000	869	109	30,109	32,109
West of Los Serenos Road (Fillmore)	29,000	32,000	37,000	835	105	29,105	32,105
Little Red School House	33,000	35,000	38,000	835	105	33,105	35,105
SR-23							
North of Casey Road (Moorpark)	8,000	8,000	9,000	78	10	8,010	8,010

Source: Austin-Foust Associates (September 2004).
Newhall Ranch Buildout - Total ADT - 334,000
Landmark Village – Landmark Village Total ADT - 41,884
Cumulative Growth Factor: - 42.2 percent (2007-2003)/(2020-2003)

l. On-Site Circulation Impacts

The Landmark Village circulation plan is characterized by a system of local streets that draw access from a curvilinear spine road (A Street) that traverses the site in an east/west direction. Two north south roadways, Wolcott Way and Long Canyon Road, connect A Street to the off-site highway system.

To evaluate the proposed plan, a special traffic model was developed specifically for the Landmark Village (see Appendix F in the Austin-Foust report in **Appendix 4.7**). A detailed zone system allows for the use of a fine-grain network that can be used to assign traffic to virtually all of the local streets. The overall distribution of on-site traffic was calibrated to match the SCVCTM forecasts used in the off-site impact analysis. The following analyses utilize this local area model to evaluate the proposed plan in greater detail than is capable with a large area model such as the SCVCTM.

(1) Spine Road (A Street)

The primary function of A Street is to provide connectivity between the Landmark Village neighborhoods and to provide access from the local streets to the arterial highway system.

Figure 4.7-18, On-Site ADT and Peak Hour Volumes – Landmark Village Phase 2, illustrates turning movement volumes along A Street that correspond to buildout of Phase 2 of the project. Since some of the side streets represent private driveways without assigned names, each intersection is numbered for reference. For example, intersection 2 is A Street's intersection with Long Canyon Road and the roundabout at Wolcott Way is labeled as location 22. The second proposed roundabout is represented at location 5. Turning movement volumes that correspond to buildout of the project site are shown in **Figure 4.7-19, On-Site ADT and Peak Hour Volumes – Landmark Village Buildout and Newhall Ranch Buildout**. The buildout volumes are also based on buildout of the entire Newhall Ranch site and, thus, include the resulting increase to traffic volumes along Long Canyon Road.

One of the design goals of the spine road is to prevent the need for traffic signals for all locations, other than the intersection with Long Canyon Road, by utilizing roundabouts at the high-volume locations (discussed below). While the traffic volume figures referenced above illustrate the main street and side street volumes, traffic signal warrants have been prepared for each of the conventional intersections in which the side street volumes meet the minimum warrant criteria of 100 vehicles per hour. These warrants (discussed previously) show that only the Long Canyon Road/A Street intersection meets the minimum peak hour volume warrant. The two locations with the heaviest turning movement volumes, Wolcott Way and the main commercial center entrance (location 5), are proposed to be modern roundabouts.

A second design goal of the spine road involves configuring the roadway in such a manner that non-local (through) traffic is discouraged from using the roadway as an alternative to SR-126. This is accomplished by using a curvilinear alignment that lengthens the total distance of the road, as well as traffic calming design features such as curb bulb-outs and on-street parking. **Figure 4.7-20, On-Site Lane Configurations**, illustrates the recommended intersection lane geometry for the spine road.

A 30 percent internal/70 percent external value is a function of the mix of residential and non-residential uses. A detailed breakdown of how the tripends generated by the mix of uses relating to internal and external trips is provided in **Appendix 4.7**, Traffic Study, Appendix F, Table 1.

Table 4.7-25, **Internal Mix of Trip Ends** demonstrates that approximately 75 percent of the residential tripends are off-site trips, approximately 48 percent of the Schools/Parks tripends are off-site trips, and

approximately 63 percent of the commercial tripends are off-site trips. When taken together, this equates to 70 percent of the total tripends as off-site trips.

Table 4.7-25
Internal Mix of Trip Ends

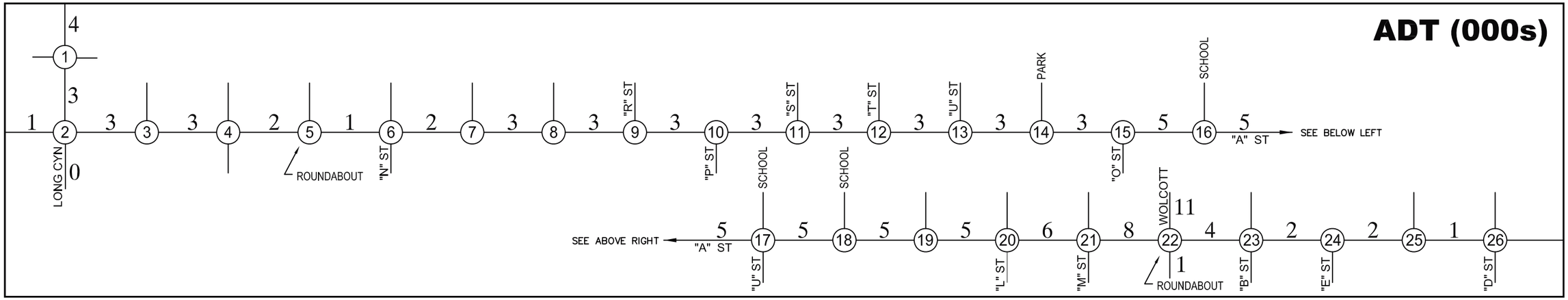
ADT	To:				
	Residential	**Schools/Parks**	**Commercial**	**Off-Site**	**Total**
From:					
Residential	0	275	1,223	4,575 (75%)	6,072
Schools/Parks	214	0	53	295 (52%)	562
Commercial	1,227	53	122	2,366 (63%)	3,767
Off-Site	4,627 (76%)	247 (43%)	2,328 (62%)	0	7,202
Total	6,068	575	3,725	7,235	17,604
Total ADT Off-Site= 14,438 (70%)					

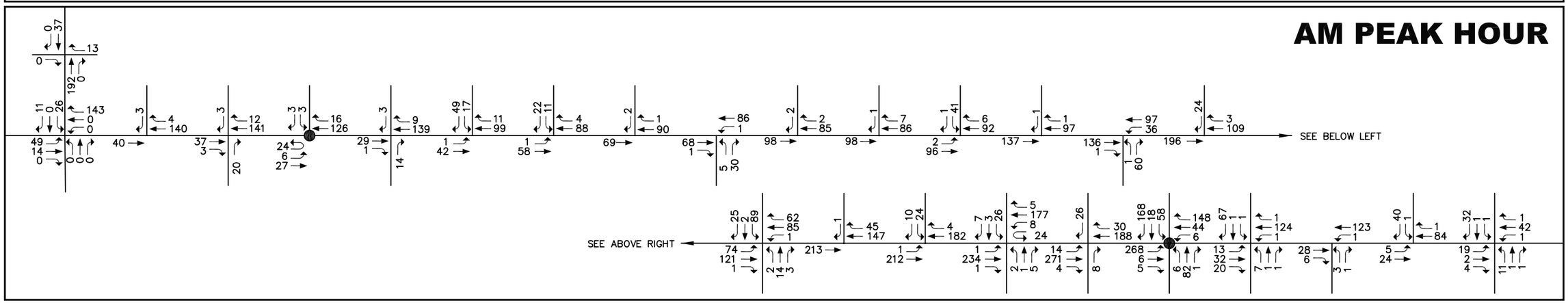
(2) Long Canyon Road

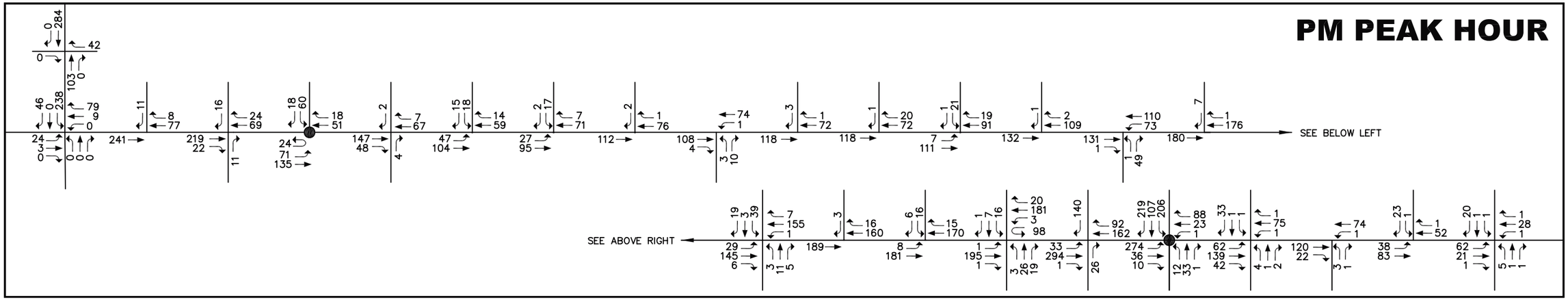
Long Canyon Road, together with Wolcott Way, would provide access to SR-126 from the Landmark Village Project. Ultimately, Long Canyon Road would also be one of the primary north/south roadways through Newhall Ranch.

The Phase 1 and 2 combined traffic forecasts presented previously are based on Long Canyon Road terminating at the spine road. The Landmark Village buildout forecasts used for the on-site analysis conducted above include the full buildout of Newhall Ranch and the corresponding through traffic volumes on Long Canyon Road. Initially, Long Canyon Road would need to be constructed with two lanes (one lane each direction) to serve Phase 1 and 2 traffic volumes.

The Newhall Ranch Specific Plan identifies Long Canyon Road as a Major Highway (six lanes) from just south of the Santa Clara River to SR-126. To allow for the buildout needs of this roadway, sufficient right-of-way should be reserved to accommodate a major class roadway. The buildout traffic forecast volumes for the intersection of Long Canyon Road with the spine road indicate that two through lanes in the north/south direction together with separate turn pockets for right and left turning vehicles would result in LOS C for the AM peak hour and LOS B for the PM peak hour, which would be a less than significant impact (see Appendix A of the Austin-Foust report in **Appendix 4.7** for ICU worksheets).







Legend

(X) Intersection Identification Number

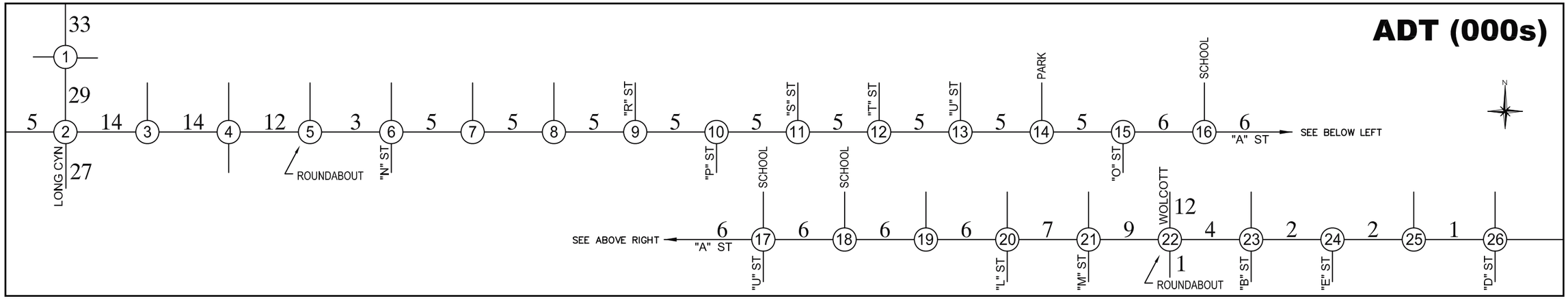
Roundabout

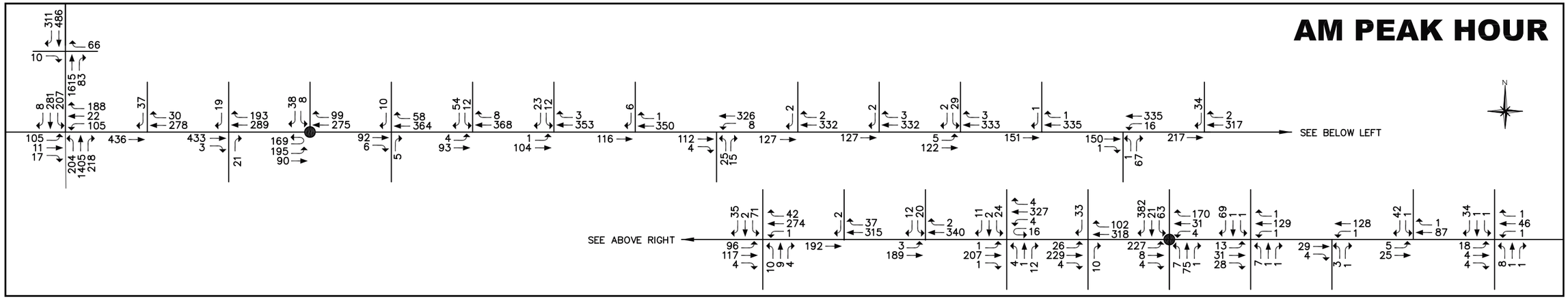
NOT TO SCALE

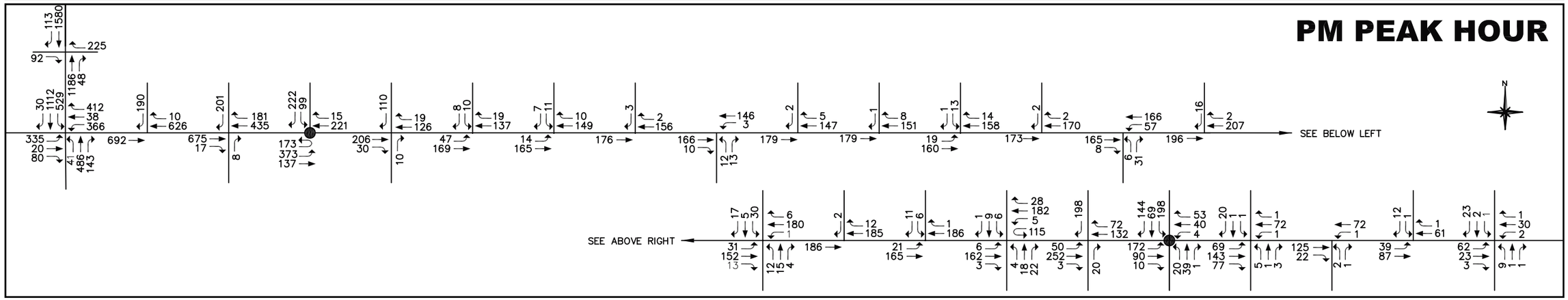
SOURCE: Austin-Foust Associates – September 2004

FIGURE **4.7-18**

On-Site ADT and Peak Hour Volumes — Landmark Village Phase 2







Legend

- (X) Intersection Identification Number
- Roundabout

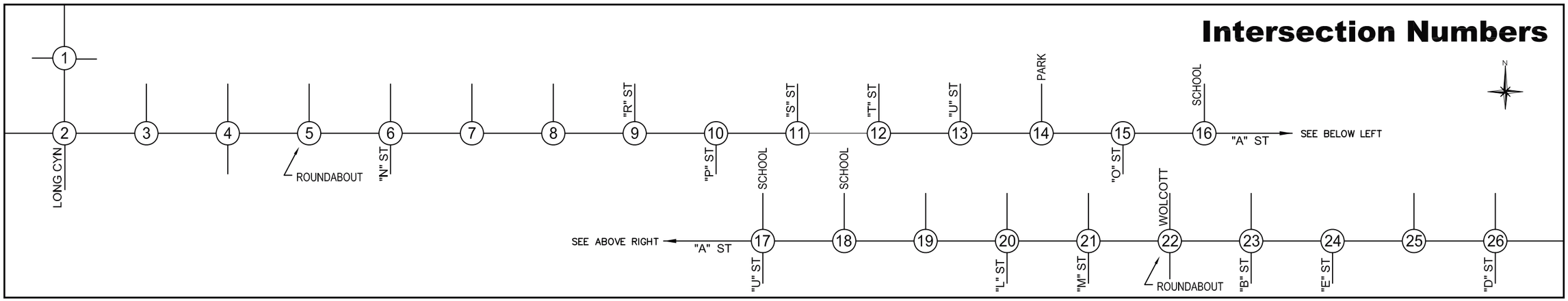
NOT TO SCALE

SOURCE: Austin-Foust Associates – September 2004

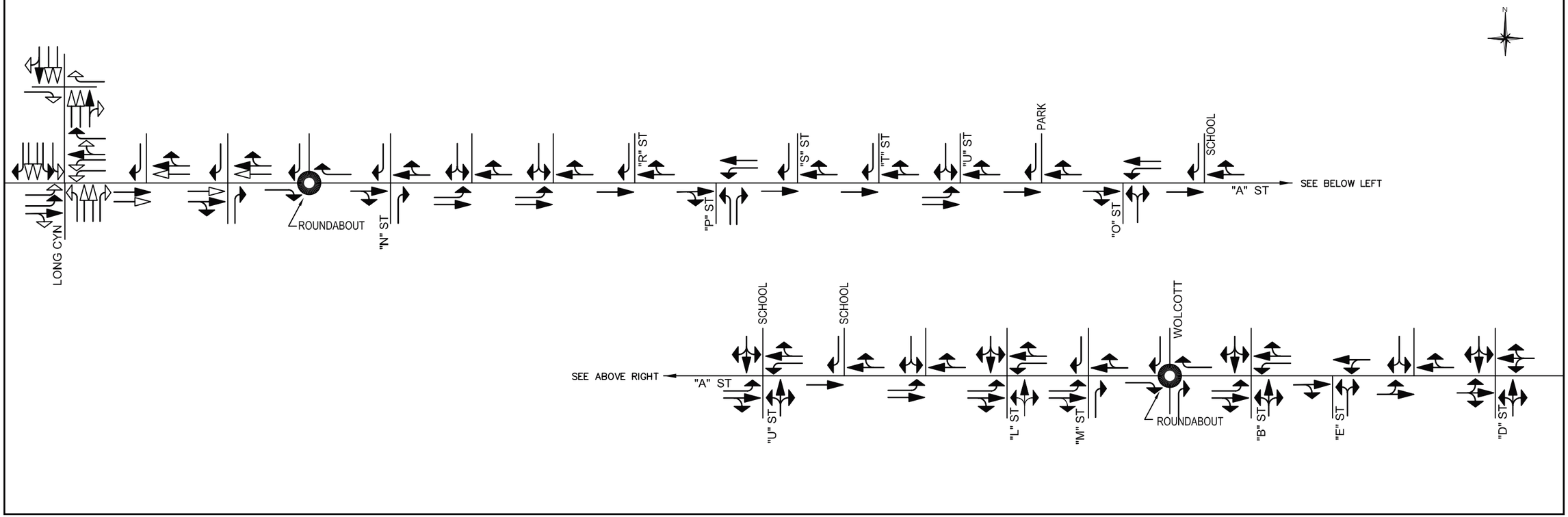
FIGURE **4.7-19**

On-Site ADT and Peak Hour Volumes — Landmark Village Buildout and Newhall Ranch Buildout

Intersection Numbers



Lane Configurations



Legend

- Modern Roundabout
- Phases 1 & 2 Lanes
- Buildout Lanes

NOT TO SCALE

SOURCE: Austin-Foust Associates – September 2004

FIGURE **4.7-20**

On-Site Lane Configurations

(3) Roundabouts

The proposed modern roundabouts on the spine road at Wolcott Way and at the main commercial center entrance (location 5) have been evaluated using the *Sidra* software package, which incorporates the *Highway Capacity Manual* delay and queue models. Results of the evaluation show that each roundabout would operate at LOS A, which would be a less than significant impact. Appendix E of the Austin-Foust report in **Appendix 4.7** contains a complete summary of the *Sidra* calculations.

(4) Elementary School Access

The community's elementary school site is proposed north of A Street near to where it would intersect with U Street. While a site plan for the school has not yet been prepared, evaluation of a conceptual plan indicates potential access to the school parking lot from three driveways along A Street. The center driveway would create a four-way intersection with the spine road and U Street, and the remaining two driveways would be located just east and west of that intersection, respectively.

The school intersections would not meet the traffic warrant for minimum volumes as previously demonstrated.[8] Since it is not possible to precisely predict how drivers will behave at a future location such as this, however, measures would be required to ensure the safety of pedestrians crossing A Street at this location.

m. Rail Corridor Safety

The design of the Landmark Village project reserves 8 acres of land in a 35-foot wide strip along the south side of the SR-126 as a future rail corridor right of way. There is no proposal to construct a rail line along this corridor at the present time. If a rail line is proposed in the future, the future proposal would be responsible for providing adequate engineering and planning of safety improvements for road crossings. Types of safety design features and improvements commonly used at such crossings include:

- Warning devices: Installation of automatic flashing light signals and/or gates and/or signal circuitry improvement at existing at-grade crossings.
- Interconnects: Upgrading the circuitry at grade crossings where warning signals are connected to the adjacent traffic signals so that the two systems operate in a synchronized manner.
- Approaches: Improvements to the portion of the public roadway directly adjacent to the crossing surface.

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8 A traffic signal would also be inconsistent with the overall traffic control system developed for the spine road which consists of modern roundabouts as the control measures at the primary intersections.

- Connecting roads: Construction of a roadway between a closed crossing and an adjacent open, improved crossing.

- Wayside monitoring devices: Sensor devices in the circuitry of grade crossing warning devices which immediately alert the railroad to any failures in warning device operations.

Use of such features would provide sufficient safety for a future crossing.

8. MITIGATION MEASURES

Although the proposed Landmark Village project may result in potential traffic/access impacts absent mitigation, the County has already imposed mitigation measures as part of the Newhall Ranch Specific Plan. These mitigation measures, as they relate to traffic/access, are found in the previously certified Newhall Ranch Specific Plan Program EIR and the adopted Mitigation Monitoring Plan for the Specific Plan (May 2003). In addition, this EIR identifies recommended mitigation measures specific to the Landmark Village project site. The project applicant has committed to implementing the applicable mitigation measures from the Newhall Ranch Specific Plan. The applicant will implement the mitigation measures recommended for the proposed Landmark Village project to ensure that adequate traffic capacity exists to accommodate build out of the Specific Plan, and that future development of the project site would not adversely affect adjacent properties.

a. Mitigation Measures Required by the Adopted Newhall Ranch Specific Plan, as they Relate to the Landmark Village Project

The following mitigation measures (Mitigation Measure Nos. 4.8-1 through 4.8-13, below) were adopted by the County in connection with its approval of the Newhall Ranch Specific Plan (May 2003). The applicable mitigation measures will be implemented to mitigate the potentially significant traffic/access impacts associated with the proposed Landmark Village project. These measures are preceded by "SP," which stands for Specific Plan.

(1) On-Site Mitigation (Except SR-126)

SP 4.8-1 The applicants for future subdivision maps which permit construction shall be responsible for funding and constructing all on-site traffic improvements except as otherwise provided below. The obligation to construct improvements shall not preclude the applicants' ability to seek local, state, or federal funding for these facilities. *(All on-site traffic improvements included as part of the Landmark Village project will be funded and/or constructed by the project applicant.)*

SP 4.8-2 Prior to the approval of each subdivision map which permits construction, the applicant for that map shall prepare a transportation performance evaluation which shall indicate the

specific improvements for all on-site roadways which are necessary to provide adequate roadway and intersection capacity as well as adequate right-of-way for the subdivision and other expected traffic. Transportation performance evaluations shall be approved by Los Angeles County Department of Public Works according to standards and policies in effect at that time. The transportation performance evaluation shall form the basis for specific conditions of approval for the subdivision. *(This EIR, **Section 4.7**, provides the required transportation performance evaluation and, in combination with **Section 1.0, Project Description**, indicates the on-site roadway improvements necessary to provide adequate capacity.)*

SP 4.8-3 The applicants for future subdivisions shall provide the traffic signals at the 15 locations labeled B through P in Figure 4.8-17 [of the Newhall Ranch Specific Plan Final EIR] as well as any additional signals warranted by future subdivision design. Signal warrants shall be prepared as part of the transportation performance evaluations noted in Mitigation 4.8-2 [of the Newhall Ranch Specific Plan Final EIR]. *(Two of the intersections within the Landmark Village site will be signalized intersections, including the one intersection depicted as signalized by Specific Plan Figure 4.8-17, Long Canyon Road/A Street. This EIR, **Section 4.7**, in combination with the traffic report presented in EIR **Appendix 4.7,** provides the required signal warrants.)*

SP 4.8-4 All development within the Specific Plan shall conform to the requirements of the Los Angeles County Transportation Demand Management (TDM) Ordinance. *(The Landmark Village project would conform to the County's TDM Ordinance.)*

SP 4.8-5 The applicants for all future subdivision maps which permit construction shall consult with the local transit provider regarding the need for, and locations of, bus pull-ins on highways within the Specific Plan area. All bus pull-in locations shall be approved by the Department of Public Works, and approved bus pull-ins shall be constructed by the applicant. *(Final locations of bus pull-ins will be coordinated with the local transit provider and the Department of Public Works and constructed in conjunction with the project.)*

(2) Off-Site Arterials

SP 4.8-6 Prior to the recordation of the first subdivision map which permits construction, the applicant for that map shall prepare a transportation performance evaluation which shall determine the specific needed improvements of each off-site arterial and related costs in order to provide adequate roadway and intersection capacity for the expected Specific Plan and General Plan buildout traffic trips. The transportation performance evaluation shall be based on the Master Plan of Highways in effect at that time and shall be approved by the Los

Angeles County Department of Public Works. The applicant shall be required to fund its fair share of improvements to these arterials, as stated on Table 4.8-18 of the Newhall Ranch Specific Plan Final EIR. The applicants total funding obligation shall be equitably distributed over the housing units and non-residential building square footage (i.e., Business Park, Visitor-Serving, Mixed-Use, and Commercial) in the Specific Plan, and shall be a fee to be paid to the County and/or the City at each building permit. For off-site areas within the County unincorporated area, the applicant may construct improvements for credit against or in lieu of paying the fee. (*This EIR, **Section 4.7**, provides the referenced transportation performance evaluation, including a determination of the improvements necessary to each off-site arterial, as well as appropriate fair-share funding requirements.)*

(3) I-5 and SR-126 in Los Angeles County

SP 4.8-7 Each future performance evaluation which shows that a future subdivision map will create significant impacts on SR-126 shall analyze the need for additional travel lanes on SR-126. If adequate lane capacity is not available at the time of subdivision, the applicant of the subdivision shall fund or construct the improvements necessary to serve the proposed increment of development. Construction or funding of any required facilities shall not preclude the applicant's ability to seek state, federal, or local funding for these facilities. (*The future performance evaluation presented in this EIR, **Section 4.7**, determined that the Landmark Village project would cause a significant impact at the SR-126/I-5 interchange at buildout and would be responsible for its fair share of the improvements to this interchange.*). *(This improvement has since been completed.*)

(4) Congestion Management Plan Mitigation

SP 4.8-8 Project-specific environmental analysis for future subdivision maps which allow construction shall comply with the requirements of the *Congestion Management Program* in effect at the time that subdivision map is filed. (*The future performance evaluation presented in this EIR, **Section 4.7**, complies with the requirements of the Congestion Management Program presented in effect.*)

(5) SR-126 in Ventura County

SP 4.8-9 Prior to the recordation of the first subdivision map which permits construction, the applicant for that map shall prepare a transportation evaluation including all of the Specific Plan land uses which shall determine the specific improvements needed to the following intersections with SR-126 in the City of Fillmore and community of Piru in Ventura County: A, B, C, D and E Streets, Old Telegraph, Olive, Central, Santa Clara, Mountain View, El

Dorado Road, and Pole Creek (Fillmore), and Main/Torrey and Center (Piru). The related costs of those intersection improvements and the project's fair share shall be estimated based upon the expected Specific Plan traffic volumes. The transportation performance evaluation shall be based on the Los Angeles *County Master Plan of Highways* in effect at that time and shall be approved by the Los Angeles County Department of Public Works. The applicant's total funding obligation shall be equitably distributed over the housing units and non-residential building square footage (i.e., Business Park, Visitor Center, Mixed Use, and Commercial) in the Specific Plan, and shall be a fee to be paid to the City of Fillmore and the County of Ventura at each building permit. (*This EIR, **Section 4.7**, in combination with the traffic reports presented in EIR **Appendix 4.7**, provides the required transportation evaluation of SR-126 intersections in Ventura County. As discussed in the EIR, Subsection 9.b.(3), buildout of the Newhall Ranch Specific Plan would contribute to potentially significant cumulative impacts at the intersection of Center Street and Telegraph Road (SR-126) in the Ventura County community of Piru. Pursuant to mitigation measure LV-4.7-18, below, the applicant will pay to Ventura County its fair-share of the costs to implement recommended roadway improvements at the Center Street/Telegraph Road intersection. Additionally, as discussed in the EIR, Subsection 9.b.(4), buildout of the Newhall Ranch Specific Plan would contribute to potentially significant cumulative impacts at two intersections in the Ventura County City of Fillmore. Pursuant to **Mitigation Measure LV-4.7-17**, the applicant will pay $300,000 to the City of Fillmore as its agreed-upon fair-share of the costs to construct transportation-related improvements deemed necessary by the City of Fillmore.)*

(6) Freeway/Highway Intersections and Interchanges

SP 4.8-10 The Specific Plan is responsible to construct or fund its fair-share of the intersections and interchange improvements indicated on Table 4.8-18 of the Newhall Ranch Specific Plan Final EIR. Each future transportation performance evaluation required by Mitigation 4.8-2 of the Newhall Ranch Specific Plan Final EIR which identifies a significant impact at these locations due to subdivision map-generated traffic shall address the need for additional capacity at each of these locations. If adequate capacity is not available at the time of subdivision map recordation, the performance evaluation shall determine the improvements necessary to carry Specific Plan generated traffic, as well as the fair share cost to construct such improvements. If the future subdivision is conditioned to construct a phase of improvements which results in an overpayment of the fair-share cost of the improvement, then an appropriate adjustment (offset) to the fees paid to Los Angeles County and/or City of Santa Clarita pursuant to Mitigation Measure 4.8-6 above shall be made. (*The transportation*

*performance evaluation presented in this EIR, **Section 4.7**, fulfills the requirements of this Specific Plan mitigation measure relative to Landmark Village.*)

SP 4.8-11 The applicant of the Newhall Ranch Specific Plan shall participate in an I-5 developer fee program, if adopted by the Board of Supervisors for the Santa Clarita Valley. (*The Board of Supervisors has not adopted a developer fee program for the Santa Clarita Valley. However, the applicant will participate in funding its fair share of mainline improvements in accordance with **Mitigation Measure LV-4.7-16**.*)

SP 4.8-12 The applicant of the Newhall Ranch Specific Plan shall participate in a transit fee program, if adopted for the entire Santa Clarita Valley by Los Angeles County and City of Santa Clarita. (*The applicant will be required to pay the applicable transit fees in place at the time of map recordation.*)

SP 4.8-13 Prior to the approval of each subdivision map which permits construction, the applicant for that map shall prepare a traffic analysis approved by the Los Angeles County Department of Public Works. The analysis will assess project and cumulative development (including an existing plus cumulative development scenario under the County's Traffic Impact Analysis Report Guidelines (TIA) and its Development Monitoring System (DMS)). In response to the traffic analysis, the applicant may construct off-site traffic improvements for credit against, or in lieu of paying, the mitigation fees described in Mitigation Measure 4.8-6 of the Newhall Ranch Specific Plan Final EIR. If future subdivision maps are developed in phases, a traffic study for each phase of the subdivision map may be submitted to determine the improvements needed to be constructed with that phase of development. (*The traffic analysis presented in this EIR, **Section 4.7**, fulfills the requirements of this Specific Plan mitigation measure.*)

b. Additional Mitigation Measures Proposed by this EIR

The following project-specific mitigation measures are recommended to mitigate the potentially significant traffic/access impacts that may occur with implementation of the Landmark Village project. These mitigation measures are in addition to those adopted in the certified Newhall Ranch Specific Plan Program EIR. To reflect that the measures relate specifically to the Landmark Village project, each measure is preceded by "LV," which stands for Landmark Village.

(1) On-Site Mitigation

LV 4.7-1 The project applicant shall construct all on-site local roadways and intersections to County of Los Angeles codes and regulations.

LV 4.7-2 The main access for River [Landmark] Village will be provided from SR-126 via the existing intersections of Wolcott Way and Chiquito Canyon Road. Future phases of the Newhall Ranch Specific Plan (NRSP) will provide access to and from south via Long Canyon Road. Unless an updated long range study is prepared which demonstrates that the intersections will adequately handle the area build-out traffic as at grade intersections, adequate road right of way shall be reserved for future grade separated interchanges at these two locations, as approved in the NRSP.

(2) Off-Site Mitigation

When impacts occur solely due to the addition of project traffic or for when improvements are to provide access to the project site, the project is fully responsible for mitigation. For impacts that are the result of the cumulative effect of project traffic together with related project traffic, the project is responsible for a fair share cost of the mitigation (see Section 6.3 of the Austin-Foust report for the fair share calculations).

The improvements identified for the I-5/SR-126 interchange are consistent with the improvements currently underway at that location and for Phases 2 and 3, and represent the ultimate lane geometry determined in the Project Study Report for the interchange. The improvements identified for the Commerce Center Drive/SR-126 grade separated interchange also represent the configuration determined in that location's Project Study Report and which are currently in the Project Report process.

Under the analysis provided in **Subsection 7(f)**, the Commerce Center Drive/SR-126 intersection (Intersection 94) would experience a significant impact due to project generated traffic under the Phase 2 scenario (Phase 1 + Phase 2 traffic). Similarly, under the analysis provided in **Subsection 7(g)**, the Commerce Center Drive/SR-126 intersection would experience a significant impact due to project generated traffic under the Phase 3/Project Buildout scenario.

However, as discussed in **Subsection 4(f)**, an improvement is planned for the Commerce Center Drive/SR-126 intersection that would reconstruct the intersection into a grade-separated intersection. This improvement is estimated to be in place by the year 2008, the estimated year of Phase 2 occupancy. Because of this significant pending improvement project, an interim improvement to mitigate just the impacts of the project=s traffic would not be feasible. As shown in EIR **Appendix 4.7**, the proposed project would contribute 8 percent of the total traffic to the intersection under the Phase 1 scenario, an additional 11 percent under the Phase 1+2 scenario, and an additional 22 percent under the Phase 3/Project Buildout scenario. (See, Traffic Impact Analysis, Austin-Foust Associates, Inc. (September 2004), Table 6-1.) Therefore, the proposed project's total share of the increased traffic at the intersection is 41 percent. Accordingly, the mitigation measure proposed in this section requires that prior to occupancy of

Phase 2 development, the project applicant is to fund 41 percent of the cost to construct the grade-separated interchange at the Commerce Center Drive/SR-126 intersection. It should also be noted that the project applicant will fund the remaining share of the interchange improvement costs as mitigation for other area projects, including expansion of the Commerce Center commercial development.

(a) Phase 1 Mitigation Measures

LV 4.7-3 80. Wolcott/SR-126 –The project applicant shall add a northbound left turn lane and a northbound right turn lane (resulting in 1 northbound left turn lane, 1 northbound through lane and 1 northbound right turn lane) and shall convert a shared southbound left turn lane/southbound through lane to a dedicated southbound through lane (resulting in 1 southbound left turn lane, 1 southbound through lane, and 1 southbound right turn lane) and shall be completed at their ultimate design locations and operational to the satisfaction of Public Works concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed.

LV 4.7-4 110. Chiquito Canyon-Long Canyon/SR-126 –The project applicant shall add a northbound left turn lane and a northbound right turn lane (resulting in 1 northbound left turn lane, 1 northbound through lane, and 1 northbound right turn lane), shall add a southbound left turn lane (resulting in 1 southbound left turn lane and 1 shared southbound through lane/southbound right turn lane), and shall add a westbound left turn lane (resulting in 1 westbound left turn lane, 2 westbound through lanes, and 1 westbound right turn lane) and shall be completed at their ultimate design locations and operational to the satisfaction of Public Works concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed.

LV 4.7-5 The study is based on the Santa Clarita Valley Consolidated Traffic Model and assumes the following roadway improvements will be in place with Phase I of the project. In accordance with the County of Los Angeles Department of Public Works Traffic Impact Analysis Report Guidelines (TIARG), these improvements shall be made a condition of approval for the project to be completed at their ultimate design locations and operational to the satisfaction of Public Works concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed:

- Reconstruct the Golden State (I-5) Freeway/SR-126 Freeway interchange by adding access to eastbound SR-126 from southbound I-5, access to southbound I-5 from westbound SR-126,

direct access to northbound I-5 from westbound SR-126, and widening bridge to 8 lanes. [This measure has been completed.]

- Construct Newhall Ranch Road segment between Vanderbilt Way and Copper Hill Drive/Rye Canyon Road.

LV 4.7-6 Although the traffic study prepared for the project determined that a traffic signal is not warranted at the school, the project applicant shall be required to monitor for the possible installation of a traffic signal once the school is fully occupied.

(b) Phase 2 Mitigation Measures

LV 4.7-7 80. Wolcott/SR-126 –The project applicant shall add a northbound left turn lane and 2 northbound right turn lanes (resulting in 1 northbound left turn lane, 1 northbound through lane, and 2 northbound right turn lanes), shall add a eastbound right turn lane (resulting in 1 eastbound left turn lane, 2 eastbound through lanes, and 1 eastbound right turn lane), and shall add a second westbound left turn lane (resulting in 2 westbound left turn lanes, 2 westbound through lanes, and 1 westbound right turn lane) and shall be completed at their ultimate design locations and operational to the satisfaction of Public Works concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed. Signals shall be modified to the satisfaction of Public Works.

(c) Phase 3 Mitigation Measures

LV 4.7-8 7. I-5 SB Ramps/SR-126 –The project applicant shall add a third westbound through lane (resulting in 3 westbound through lanes and a free flow westbound right turn lane) and shall be completed at their ultimate design locations and operational to the satisfaction of Public Works concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed. [This measure has been completed.]

LV 4.7-9 80. Wolcott/SR-126 –The project applicant shall add a third east bound through lane (resulting in 1 east bound left turn lane, 3 east bound through lanes, and 1 east bound right turn lane) and shall be completed at their ultimate design locations and operational to the satisfaction of Public Works concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed.

LV 4.7-10 110. Chiquito Canyon/Long Canyon/SR-126 –The project applicant shall add a second northbound through lane and a second northbound right turn lane (resulting in 1 northbound left turn lane, 2 northbound through lanes, and 2 northbound right turn lanes). The project applicant shall also add a southbound right turn lane (resulting in 1 southbound left turn lane, 1 southbound through lane, and 1 southbound right turn lane), shall add 1 eastbound right turn lane (resulting in 1 eastbound left turn lane, 2 eastbound through lanes, and 1 eastbound right turn lane), and shall add a second westbound left turn lane (resulting in 2 westbound left turn lanes, 2 westbound through lanes, and 1 westbound right turn lane) or construct a grade separated crossing to the satisfaction of the County of Los Angeles Department of Public Works and shall be completed at their ultimate design locations and operational to the satisfaction of Public Works concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed. Signals shall be modified to the satisfaction of Public Works.

(d) Project Buildout (Phase 3) with Related Projects Mitigation Measures

LV 4.7-11 7. I-5 SB Ramps/SR-126 –The project applicant shall fund its fair share of the cost to: add a third southbound lane (resulting in 2 southbound lanes, 1 shared southbound left turn lane/1 southbound right turn lane, and 1 dedicated southbound right turn lane); add a third and fourth eastbound through lane (resulting 4 four eastbound through lanes and 1 free flow eastbound right turn lane); and add a fourth westbound through lane (resulting in 4 westbound through lanes and 1 free flow westbound right turn lane). (Project share = 38.3 percent. The project may elect to pay by phase as each phase gets recorded: Phase I= 8.3 percent, Phase II= 8.1 percent and Phase III= 21.9 percent)[9] Said improvements shall be completed at their ultimate design locations and operational to the satisfaction of Public Works concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed. [This measure has been completed.]

LV 4.7-12 8. I-5 NB Ramps/SR-126 –The project applicant shall fund its fair share of the cost to: add a third northbound left turn lane (resulting in 3 northbound left turn lanes and 1 northbound right turn lane); add a third and fourth eastbound through lane (resulting in 4 eastbound through lanes and 1 free flow eastbound right turn lane); and add a third westbound through lane (for 3 westbound through lanes and 1 free flow westbound right turn lane). (Project Share = 20.8 percent. The project may elect to pay by phase as each phase gets recorded:

9 Percentage pro-rata calculation figures were determined by the County of Los Angeles, Department of Public Works, written communication of December 9, 2004.

Phase I= 4.7 percent, Phase II= 4.0 percent and Phase III= 12.1 percent)[10] Said improvements shall be completed at their ultimate design locations and operational to the satisfaction of Public Works concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed. [This measure has been completed.]

LV 4.7-13 80. Wolcott/SR-126 –The project applicant shall fund its fair share of the cost to: add a second southbound left turn lane (resulting in 2 southbound left turn lanes, 1 southbound through lane, and 1 southbound right turn lane); add a second eastbound left turn lane (resulting in 2 eastbound left turn lanes, 3 eastbound through lanes, and 1 eastbound right turn lane); and add a third westbound through lane (resulting in 2 westbound left turn lanes, 3 westbound through lanes, and 1 westbound right turn lane). (Project Share = 62.1 percent. The project may elect to pay by phase as each phase gets recorded: Phase I= 12.2 percent, Phase II= 19.3 percent and Phase III= 30.6 percent)[11] Said improvements shall be completed at their ultimate design locations and operational to the satisfaction of Public Works concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed.

LV 4.7-14 81, 82, 83 and 94. Commerce Center/SR-126 –The project applicant shall finance its fair share of the cost to construct a Grade Separated Interchange. (Project Share = 33.8 percent. The project may elect to pay by phase as each phase gets recorded: Phase I= 6.6 percent, Phase II= 9.1 percent and Phase III= 18.1 percent) Said improvements shall be completed at their ultimate design locations and operational to the satisfaction of Public Works concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed.

LV 4.7-15 110. Chiquito Canyon/Long Canyon Road/SR-126 –The project applicant shall fund its fair share of the cost to: add a second northbound left turn lane (resulting in 2 northbound left turn lanes, 2 northbound through lanes and 2 northbound right turn lanes); add a second southbound left turn lane, and second and third southbound through lanes (resulting in 2 southbound left turn lanes, 3 southbound through lanes and 1 southbound right turn lane); add a second eastbound left turn lane and third eastbound through lane (resulting in 2 eastbound left turn lanes, 3 eastbound through lanes, and 1 eastbound right turn lane); and add a third westbound through lane (resulting in 2 westbound left turn lanes, 3 westbound

10 Ibid.

11 Ibid.

through lanes, and 1 westbound right turn lane) (Project Share = 62 percent) or construct a grade separated crossing to the satisfaction of the County of Los Angeles Department of Public Works. Said improvements shall be completed at their ultimate design locations and operational to the satisfaction of Public Works concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed.

(d) Other Mitigation Measures

LV 4.7-16 Prior to issuance of occupancy permits for the elementary school, a painted school pedestrian crossing with associated signing shall be installed across A Street and across U Street at the elementary school access from A Street. Driver behavior shall be monitored as the community develops and, if necessary, additional treatments shall be installed to further enhance the pedestrian crossing. These may include crossing guards at an intersection, such as the A Street/U Street intersection, and pedestrian activated in-pavement warning lights or overhead flashing lights to identify the pedestrian crossing. These warnings can be configured with automated detection units that would activate the lights automatically given the presence of a pedestrian rather than relying on the children to manually engage the system.

LV 4.7-17 Applicable transit mitigation fees shall be paid by the project applicant at the time of final map recordation, unless modified by an approved development agreement.

LV 4.7-18 Prior to the commencement of project construction activities, the applicant shall institute construction traffic management controls in accordance with the California Department of Transportation (Caltrans) traffic manual. These traffic management controls shall include measures determined on the basis of site-specific conditions including, as appropriate, the use of construction signs (e.g., "Construction Ahead") and delineators, and private driveway and cross-street closures.

LV 4.7-19 The traffic signals shall be installed at the following intersections. The design and the construction of the traffic signals shall be the sole responsibility of the project. The signals shall be completed at their ultimate design locations and operational to the satisfaction of Public Works concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed.

Phase I: Wolcott Way at Henry Mayo Drive (SR-126)

Phase II: Chiquito Canyon Road and Long Canyon Road (Future) at Henry Mayo Drive (SR-126)

Phase III: Long Canyon Road at "Y" Street and "A" Street (TT 53108)

LV 4.7-20 The developer shall coordinate with and notify the Castaic Union School District (CUSD) that traffic circulation plan and the drop-off/pick-up procedures shall be prepared and submitted to Traffic and Lighting Division for review and approval. The Traffic and Lighting Division recommends a mechanism for enforcement and levying of noncompliance penalties be included in the plan. The CUSD shall prepare informational packets containing the approved drop-off/pick-up procedures and provide to the parents/guardians of students of the school. The recordation of the phase containing Lot 345 where the school is proposed shall be withheld until the student drop-off/pick-up procedures, the informational packets or brochures, and the revised school site plan have been received and approved by Public Works.

c. Post-Mitigation Level of Significance

Table 4.7-26, Intersection Average Control Delay with Mitigation, summarizes the average control delay per vehicle and LOS for each intersection by phase. Average control delay ranges from 8.9 seconds per vehicle (s/veh) to 39.1 s/veh, per intersection, and in no case does the LOS exceed the midpoint of LOS D. It can, therefore, be concluded that the mitigation measures recommended in this EIR section would reduce project traffic impacts to less than significant.

Table 4.7-26
Intersection Average Control Delay with Mitigation

Intersection	AM Peak Hour Average Delay (seconds)	AM Peak Hour LOS	PM Peak Hour Average Delay (seconds)	PM Peak Hour LOS
2007/Phase 1 & Related Projects				
7. I-5 SB Ramps/SR-126	12.2	B	10.1	B
8. I-5 NB Ramps/SR-126	12.9	B	9.5	A
80. Wolcott/SR-126	24.6	C	33.1	C
110. Chiquito-Long Canyon/SR-126	33.0	C	31.1	C
2008/Phase 2 & Related Projects				
7. I-5 SB Ramps/SR-126	12.7	B	9.1	A
8. I-5 NB Ramps/SR-126	13.6	B	10.0	B
80. Wolcott/SR-126	36.9	D	38.8	D
110. Chiquito-Long Canyon/SR-126	38.5	D	31.8	C
2010/Phase 3 & Related Projects				
7. I-5 SB Ramps/SR-126	15.9	B	8.9	A
8. I-5 NB Ramps/SR-126	15.6	B	10.4	B
80. Wolcott/SR-126	28.7	C	32.8	C
110. Chiquito-Long Canyon/SR-126	39.1	D	22.3	C

Source: Austin-Foust Associates (September 2004).

Control Delay per Vehicle (s/veh)	*Level of Service*
0.0 – 10.0	*A*
10.– - 20.0	*B*
20.1 – 35.0	*C*
35.1 – 55.0	*D*
55.1 – 80.0	*E*
Above 80.0	*F*

Average Control Delay measured in seconds per vehicle (s/veh) based on Highway Capacity Manual methodology.
See Appendix B of the Austin-Foust report in ***Appendix 4.7*** *for HCM2000 summary worksheets.*

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

To provide a comparison to the ICU based LOS evaluations presented in **Subsection 7., Project Impacts**, post-mitigation ICUs calculated using the County's prescribed methodology are presented in **Table 4.7-27, ICU and LOS Summary With Project Mitigation**.

Table 4.7-27
ICU and LOS Summary with Project Mitigation

Intersection	Without Project				With Project				With Project & Related Projects			
	AM		PM		AM		PM		AM		PM	
	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS
2007/Phase 1												
80. Wolcott & SR-126 Without Mitigation	.36	A	.45	A	.52	A	.69	B				
With Mitigation					.46	A	.62	B				
110. Chiquito/Long Canyon & SR-126 Without Mitigation	.39	A	.46	A	.41	A	.49	A				
With Mitigation					.40	A	.46	A				
2008/Phase 2												
80. Wolcott & SR-126 Without Mitigation	.36	A	.46	A	.80	C	1.00	E				
With Mitigation					.51	A	.72	C				
94. Commerce Center & SR-126 Without Mitigation	.55	A	.74	C	.68	B	.92	E				
With Mitigation							(1)					
110. Chiquito/Long Canyon & SR-126 Without Mitigation	.40	A	.46	A	.56	A	.73	A				
With Mitigation					.50	A	.66	B				
2010/Phase 3												
7. I-5 SB Ramps & SR-126 Without Mitigation	.54	A	.49	A	.79	C	.66	B	1.14	F	1.06	F
With Mitigation					.60	A	.51	A	.88	D	.62	B
8. I-5 NB Ramps & SR-126 Without Mitigation	.52	A	.53	A	.74	C	.73	C	1.40	F	1.34	F
With Mitigation									.88	D	.80	C

Intersection	Without Project				With Project				With Project & Related Projects			
	AM		PM		AM		PM		AM		PM	
	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS
80. Wolcott & SR-126												
Without Mitigation	.37	A	.47	A	1.05	F	1.31	F	.82	D	.90	D
With Mitigation					.62	B	.71	C	.72	C	.75	C
81. Commerce Center & Henry Mayo												
Without Mitigation	--		--		--		--		.66	B	.44	A
With Mitigation												
83. Commerce Center & SR-126 WB												
Without Mitigation	--		--		--		--		.78	C	.64	B
With Mitigation												
94. Commerce Center & SR-126												
Without Mitigation	.58	A	.77	C	.95	E	1.08	F	(1)		(1)	
With Mitigation					(1)		(1)					
110. Chiquito/Long Canyon & SR-126												
Without Mitigation	.40	A	.48	A	1.08	F	1.35	F	1.07	F	.81	D
With Mitigation					.67	B	.73	C	.79	C	.64	B

Source: Austin-Foust Associates (September 2004).

[1] *The Commerce Center Drive/SR-126 grade separation (see intersections 81-83) is required for the Related Project 2008 & 2010 scenarios and serves as mitigation for project stand alone and cumulative impacts.*

Level of service ranges:

.00 – .60	*A*
.61 – .70	*B*
.71 – .80	*C*
.81 – .90	*D*
.91 – 1.00	*E*
Above 1.00	*F*

Figure 4.7-21, Off-Site Improvement Program, illustrates the off-site improvement program developed for this project. For each of the intersections identified with significant impacts due to either the project or the cumulative effect of project plus related projects, the mitigation measures identified above will form the improvement program for the project phases.

9. CUMULATIVE IMPACTS

a. Introduction

As discussed in detail in this EIR, **Section 3.0, Cumulative Impact Analysis Methodology**, Section 15130(b) of the *CEQA Guidelines* allows two methods for identifying the future projects to be considered when assessing cumulative impacts. These two methods involve:

> "(a) List of past, present, and reasonably anticipated future projects producing related or cumulative impacts, including those projects outside the control of the agency, or
>
> (b) Summary of projections contained in an adopted general plan or related planning document which is designed to evaluate regional or areawide conditions."

The first scenario (list method) was utilized above under **Subsection 7(g)(3)** for Phase 3 (Project Buildout), plus related projects in the year 2010. Significant cumulative impacts were identified under the list approach at the following intersections:

- I-5 Southbound Ramps/SR-126
- I-5 Northbound Ramps/SR-126
- Wolcott/SR-126
- Chiquito-Long Canyon/SR-126

b. Plans and Projections Approach

The following provides an analysis of cumulative transportation impacts using a plans/projections approach. The Newhall Ranch Specific Plan Program EIR included a long-range cumulative impacts analysis, which entailed build-out of all lands under the current land use designations in the Los Angeles County Santa Clarita Valley Areawide Plan and the City of Santa Clarita General Plan, plus the proposed Specific Plan, plus all known active pending General Plan Amendment requests for additional urban development in the County unincorporated area of Santa Clarita Valley and the City of Santa Clarita. This section updates that information by presenting long-range cumulative traffic volume forecasts based on the current cumulative land use data for the Santa Clarita Valley.

Long-range cumulative traffic volumes that include trips generated by the Landmark Village project are illustrated in **Figure 4.7-22**. The area depicted corresponds to the study area of the Newhall Ranch Program EIR traffic study. The illustrated volumes have been derived using the SCVCTM Version 4.1, and represent long-range (2030) cumulative conditions. **Appendix 4.7** identifies the traffic analysis zones and land use categories used to compare traffic volumes in the base year (2004) and the long-range cumulative traffic volumes.

An updated capacity analysis was also conducted, which includes the cumulative land uses within the traffic analysis zones in the long-range Los Angeles County Santa Clarita Valley Areawide Plan and the City of Santa Clarita General Plan database. A comparison of tripends with and without the cumulative land uses shows an additional 21,000 ADT (or an increase of 0.7 percent), as shown in **Table 4.7-28**. These additional trips are distributed throughout the model area on both the east and west side of I-5. The resulting updated capacity analysis was then conducted for the Highway Network. (The Highway Network includes the County's Master Plan of Highways, the City's Circulation Plan and the state highways and freeways.)

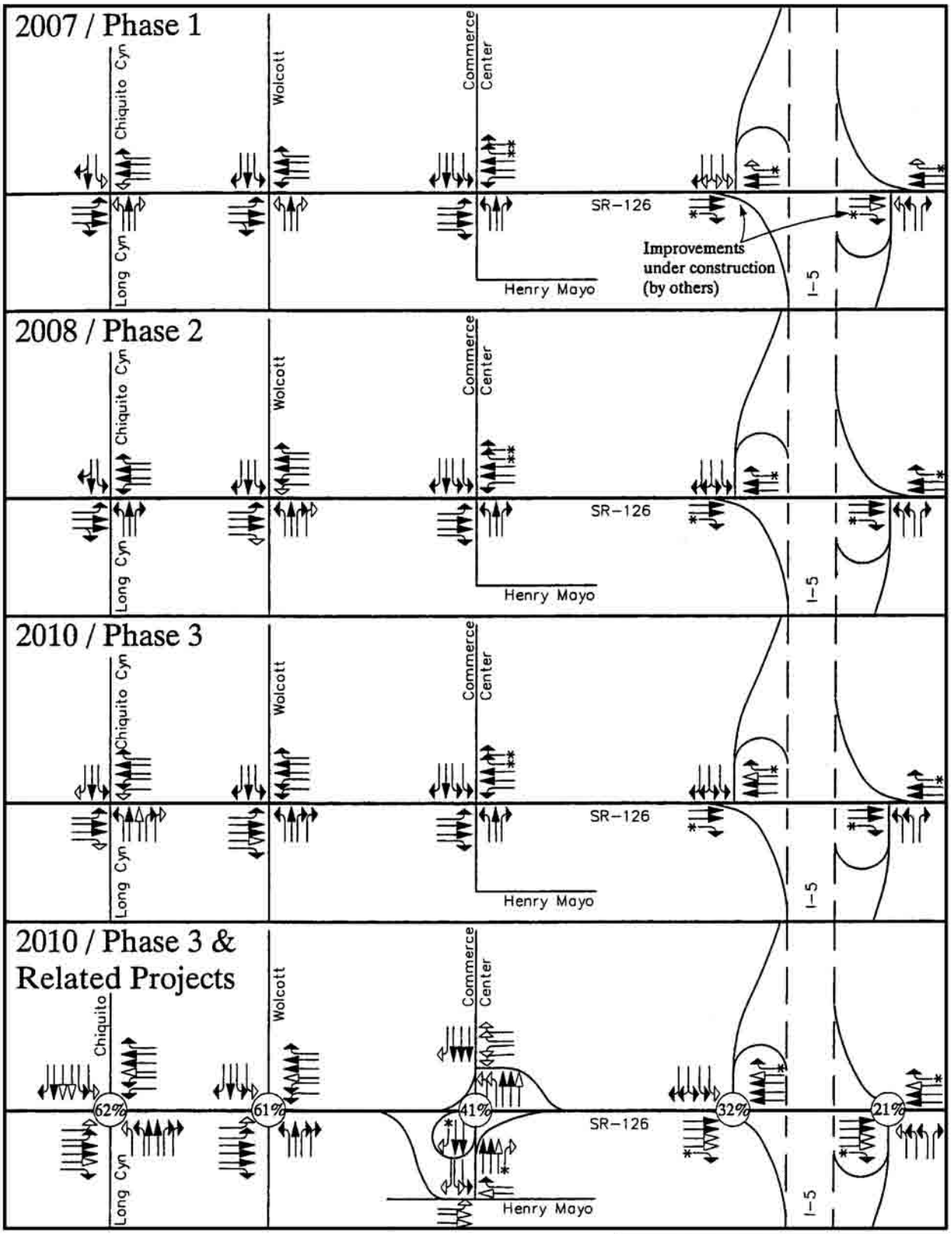
Table 4.7-28
Long-Range Tripend Comparison

		Long-Range General Plan		Long-Range Cumulative		Difference	
Land Use Category	**Units**	**Amount**	**ADT**	**Amount**	**ADT**	**Amount**	**ADT**
1. Single Family Residential	DU	90,924.00	892,468	91,795.00	901,090	871.00	8,622
2. Multi-Family Residential	DU	48,019.00	374,792	55,141.00	425,394	7,122.00	50,602
3. Commercial Square Footage	TSF	82,475.13	1,579,917	81,012.70	1,539,260	-1,462.43	-40,657
4. Other	--	--	247,247	--	250,034	--	2,787
TOTAL	--	--	3,094,424	--	3,115,778	--	21,354

Source: SCVCTM 4.1

(1) Cumulative Impact on Arterial Roadways in Los Angeles County

Figure 4.7-22, Long-Range ADT Volumes with Landmark Project and Cumulative Land Uses, shows the long-range ADT volumes on the Highway Network with the addition of both the Landmark project and the cumulative land uses. The resulting impact of the Landmark project, plus the cumulative land

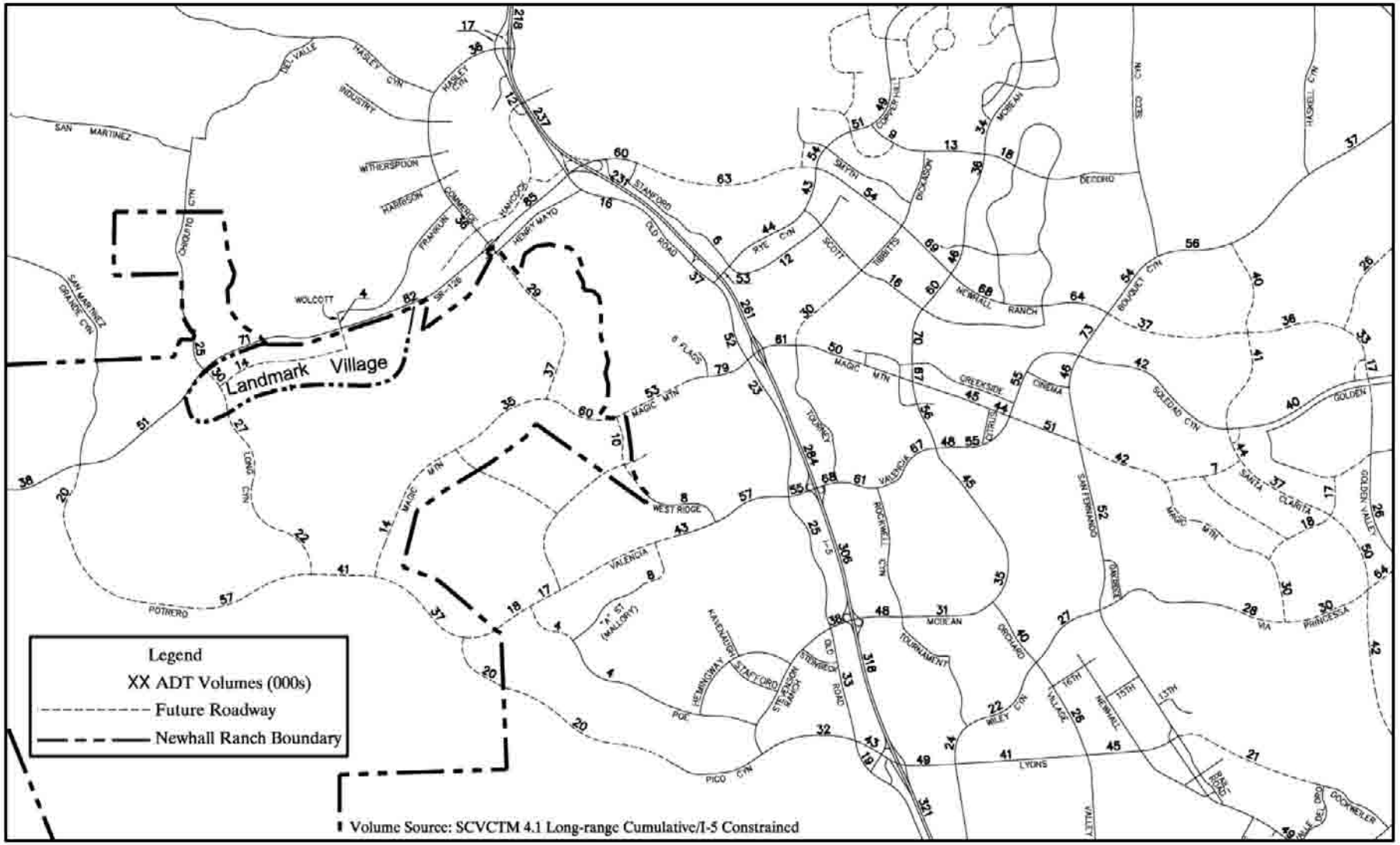


NOT TO SCALE

SOURCE: Austin-Foust Associates – September 2004

FIGURE **4.7-21**

Off-site Improvement Program



NOT TO SCALE

SOURCE: Austin-Foust Associates, Inc. – September 2004

FIGURE **4.7-22**

ADT Volumes — Long Range Cumulative (Constrained)

uses on the Highway Network is shown on **Table 4.7-29**, **Long-Range ADT Volume Summary -- Arterial Highway Network**, which shows those locations with a measurable project impact. This table shows the combined traffic volumes of both the Landmark project and the cumulative land uses, and it includes the project-only contribution.

No arterial locations exceed the acceptable LOS (V/C greater than 1.00) with the addition of the cumulative land uses.

Table 4.7-29
Long-Range ADT Volume Summary, Arterial Highway Network

Location		Lanes	Capacity	ADT Volumes w/out Landmark Village		ADT Volumes w/Landmark Village		Project Cont.
				Volume	V/C	Volume	V/C	
6	Chiquito Cyn n/o SR-126	6	54,000	24,000	.44	25,000	.46	.02
26	Old Road s/o Henry Mayo	6	54,000	14,000	.26	17,000	.31	.06
27	Old Road n/o Rye Cyn	6	54,000	36,000	.67	37,000	.69	.02
37	McBean e/o Rockwell	6	54,000	29,000	.54	30,000	.56	.02
40	McBean n/o Magic Mtn	8	72,000	66,000	.92	67,000	.93	.01
41	McBean s/o Newhall Ranch	8	72,000	59,000	.82	60,000	.83	.01
50	Newhall Ranch e/o I-5	8	72,000	57,000	.79	60,000	.83	.04
51	Newhall Ranch w/o Rye	8	72,000	61,000	.85	63,000	.88	.03
52	Newhall Ranch e/o Rye	8	72,000	52,000	.72	53,000	.74	.01
53	Newhall Ranch w/o Baywood	8a	86,000	68,000	.79	69,000	.80	.01
54	Newhall Ranch e/o McBean	8a	86,000	67,000	.78	68,000	.79	.01
55	Newhall Ranch e/o Bouquet	6	54,000	36,000	.67	37,000	.69	.02
70	Decoro e/o Copper Hill	4	32,000	8,000	.25	9,000	.28	.03
71	Decoro e/o Dickason	4	32,000	12,000	.38	13,000	.41	.03
107	Via Princessa e/o Magic Mtn	6	54,000	30,000	.56	31,000	.57	.02
128	Newhall Ranch w/o Bouquet	8	72,000	64,000	.89	65,000	.90	.01
141	Tibbitts n/o Magic Mtn	6	54,000	29,000	.54	30,000	.56	.02
170	Stanford n/o Rye Cyn	4	32,000	5,000	.16	6,000	.19	.03
197	Magic Mtn n/o Via Princessa	6	54,000	30,000	.56	31,000	.57	.02
222	Santa Clarita s/o Soledad	6	54,000	44,000	.81	45,000	.83	.02
233	Stanford e/o Rye Cyn	4	32,000	11,000	.34	12,000	.38	.03
240	Wolcott n/o SR-126	2	16,000	3,000	.19	4,000	.25	.06
322	McBean s/o Copper Hill	6	54,000	25,000	.46	26,000	.48	.02

Notes:
Volume Source: SCVCTM 4.1
ADT Capacity Source: Newhall Ranch Traffic Analysis
Xa = X Lanes with Augmented Capacity; n/o = north of; s/o = south of; e/o = east of; w/o = west of

(2) Cumulative Impact on State Highways and Freeways in Los Angeles County

Cumulative impacts on state highways and freeways were assessed based on a peak hour analysis as recommended by the California Department of Transportation (Caltrans) and as required by the CMP, which identifies peak hour directional volumes as the basis for the evaluation. The results of the analysis for state highway and freeways in the form of peak hour volumes are summarized in **Table 4.7-30**, **State Highway and Freeway Long-Range Volume Summary – Peak Hour Cumulative Analysis**. This table shows the combined project and cumulative contribution of traffic volumes at each location (by V/C ratio), for conditions with and without the project and based on the anticipated year 2030 roadway network, which will develop concurrently with the buildout of the land use plan. Using the LOS criteria with a V/C ratio of 1.0, the results indicate that under the long-range cumulative setting the freeway segment identified below would operate at deficient conditions:

- 408. I-5 s/o Valencia Boulevard (PM Peak Hour – Southbound Direction)

The segment identified above as operating at future deficient conditions is part of the CMP highway and roadway system. CMP methodology states that a significant project impact occurs when the proposed project increases traffic demand at a CMP monitoring location by two percent of capacity, causing or worsening LOS "F." Applying the threshold to the identified deficient freeway segment, even though it is not one of the CMP monitoring locations, the Landmark Village project would not result in significant cumulative impacts since the project contribution is less than .02.[12]

Although the increase in traffic attributable to the Landmark Village project is not cumulatively considerable, and therefore, would not result in significant cumulative impacts to the I-5 freeway, as shown in **Mitigation Measure LV-4.7-21**, the project applicant has determined to participate in capacity augmentation on a fair-share basis, based upon the project's contribution to increased cumulative traffic levels. The provision of additional capacity can be accomplished through various strategies, including the addition of additional high-occupancy vehicle lanes, truck lanes, and auxiliary lanes.

12 The CMP monitoring locations in the vicinity of the Landmark Village traffic study area are I-5 s/o Hasley and I-5 s/o Calgrove.

Table 4.7-30
State Highway and Freeway Long-Range Volume Summary Peak Hour Cumulative Analysis

	Total	Mixed Flow Lanes				HOV Lanes				Truck Lanes			
Location	Vol	Lanes	Cap/Ln	Vol	V/C	Lanes	Cap/Ln	Vol	V/C	Lanes	Cap/Ln	Vol	V/C
AM Northbound													
404. I-5 s/o Hasley													
without Project	5,905	4	1,950	5,315	0.68	1	2,000	591	0.30	-	-	-	-
with Project	5,961	4	1,950	5,365	0.69	1	2,000	596	0.30	-	-	-	-
Project Increment	56			50	0.01			6	0.00				
405. I-5 s/o SR-126													
without Project	6,551	4	1,950	5,765	0.74	1	2,000	786	0.39	-	-	-	-
with Project	6,723	4	1,950	5,916	0.76	1	2,000	807	0.40	-	-	-	-
Project Increment	172			151	0.02			21	0.01				
406. I-5 s/o Rye Cyn													
without Project	6,551	4	1,950	5,765	0.74	1	2,000	786	0.39	-	-	-	-
with Project	6,723	4	1,950	5,916	0.76	1	2,000	807	0.40	-	-	-	-
Project Increment	172			151	0.02			21	0.01				
407. I-5 s/o Magic Mtn													
without Project	7,065	4	1,950	6,217	0.80	1	2,000	848	0.42	-	-	-	-
with Project	7,190	4	1,950	6,327	0.81	1	2,000	863	0.43	-	-	-	-
Project Increment	125			110	0.01			15	0.01				
408. I-5 s/o Valencia													
without Project	7,730	4	1,950	6,802	0.87	1	2,000	928	0.46	-	-	-	-
with Project	7,848	4	1,950	6,906	0.89	1	2,000	942	0.47	-	-	-	-
Project Increment	118			104	0.02			14	0.01				
409. I-5 s/o McBean													
without Project	7,625	4	1,950	6,710	0.86	1	2,000	915	0.46	-	-	-	-
with Project	7,744	4	1,950	6,815	0.87	1	2,000	929	0.46	-	-	-	-
Project Increment	119			105	0.01			14	0.00				
410. I-5 s/o Lyons													
without Project	7,119	4	1,950	6,265	0.80	1	2,000	854	0.43	-	-	-	-
with Project	7,223	4	1,950	6,356	0.81	1	2,000	867	0.43	-	-	-	-
Project Increment	104			92	0.01			12	0.00				

	Total	Mixed Flow Lanes				HOV Lanes				Truck Lanes			
Location	**Vol**	**Lanes**	**Cap/Ln**	**Vol**	**V/C**	**Lanes**	**Cap/Ln**	**Vol**	**V/C**	**Lanes**	**Cap/Ln**	**Vol**	**V/C**
411. I-5 s/o Calgrove													
without Project	6,562	4	2,000	5,053	0.63	1	2,000	787	0.39	1	1,300	722	0.56
with Project	6,652	4	2,000	5,122	0.64	1	2,000	798	0.40	1	1,300	732	0.56
Project Increment	90			69	0.01			11	0.01			10	0.00
AM Southbound													
404. I-5 s/o Hasley													
without Project	6,612	4	1,950	5,951	0.76	1	2,000	661	0.33	-	-	-	-
with Project	6,619	4	1,950	5,957	0.76	1	2,000	662	0.33	-	-	-	-
Project Increment	7			6	0.00			1	0.00				
405. I-5 s/o SR-126													
without Project	6,550	4	1,950	5,764	0.74	1	2,000	786	0.39	-	-	-	-
with Project	6,625	4	1,950	5,830	0.75	1	2,000	795	0.40	-	-	-	-
Project Increment	75			66	0.01			9	0.01				
406. I-5 s/o Rye Cyn													
without Project	6,814	4	1,950	5,996	0.77	1	2,000	818	0.41	-	-	-	-
with Project	6,854	4	1,950	6,032	0.77	1	2,000	822	0.41	-	-	-	-
Project Increment	40			35	0.00			5	0.00				
407. I-5 s/o Magic Mtn													
without Project	7,160	4	1,950	6,301	0.81	1	2,000	859	0.43	-	-	-	-
with Project	7,160	4	1,950	6,301	0.81	1	2,000	859	0.43	-	-	-	-
Project Increment	0			0	0.00			0	0.00				
408. I-5 s/o Valencia													
without Project	8,045	4	1,950	7,080	0.91	1	2,000	965	0.48	-	-	-	-
with Project	8,040	4	1,950	7,075	0.91	1	2,000	965	0.48	-	-	-	-
Project Increment	-5			-4	0.00			-1	0.00				
409. I-5 s/o McBean													
without Project	7,690	4	1,950	6,767	0.87	1	2,000	923	0.46	-	-	-	-
with Project	7,669	4	1,950	6,749	0.87	1	2,000	920	0.46	-	-	-	-
Project Increment	-21			-18	0.00			-3	0.00				
410. I-5 s/o Lyons													
without Project	7,207	4	2,000	5,549	0.69	1	2,000	865	0.43	1	1,300	793	0.61
with Project	7,195	4	2,000	5,540	0.69	1	2,000	863	0.43	1	1,300	791	0.61
Project Increment	-12			-9	0.00			-1	0.00			-1	0.00

Location	Total Vol	Mixed Flow Lanes				HOV Lanes				Truck Lanes			
		Lanes	Cap/Ln	Vol	V/C	Lanes	Cap/Ln	Vol	V/C	Lanes	Cap/Ln	Vol	V/C
411. I-5 s/o Calgrove													
without Project	7,205	4	2,000	5,548	0.69	1	2,000	865	0.43	1	1,300	793	0.61
with Project	7,177	4	2,000	5,526	0.69	1	2,000	861	0.43	1	1,300	789	0.61
Project Increment	-28			-22	0.00			-3	0.00			-3	0.00
PM Northbound													
404. I-5 s/o Hasley													
without Project	8,271	4	1,950	7,444	0.95	1	2,000	827	0.41	-	-	-	-
with Project	8,334	4	1,950	7,501	0.96	1	2,000	833	0.42	-	-	-	-
Project Increment	63			57	0.01			6	0.01				
405. I-5 s/o SR-126													
without Project	7,556	4	1,950	6,649	0.85	1	2,000	907	0.45	-	-	-	-
with Project	7,624	4	1,950	6,709	0.86	1	2,000	915	0.46	-	-	-	-
Project Increment	68			60	0.01			8	0.01				
406. I-5 s/o Rye Cyn													
without Project	7,556	4	1,950	6,649	0.85	1	2,000	907	0.45	-	-	-	-
with Project	7,624	4	1,950	6,709	0.86	1	2,000	915	0.46	-	-	-	-
Project Increment	68			60	0.01			8	0.01				
407. I-5 s/o Magic Mtn													
without Project	7,923	4	1,950	6,972	0.89	1	2,000	951	0.48	-	-	-	-
with Project	7,959	4	1,950	7,004	0.90	1	2,000	955	0.48	-	-	-	-
Project Increment	36			32	0.01			4	0.00				
408. I-5 s/o Valencia													
without Project	8,251	4	1,950	7,261	0.93	1	2,000	990	0.50	-	-	-	-
with Project	8,297	4	1,950	7,301	0.94	1	2,000	996	0.50	-	-	-	-
Project Increment	46			40	0.01			6	0.00				
409. I-5 s/o McBean													
without Project	8,403	4	1,950	7,395	0.95	1	2,000	1,008	0.50	-	-	-	-
with Project	8,428	4	1,950	7,417	0.95	1	2,000	1,011	0.51	-	-	-	-
Project Increment	25			22	0.00			3	0.01				
410. I-5 s/o Lyons													
without Project	8,380	4	1,950	7,374	0.95	1	2,000	1,006	0.50	-	-	-	-
with Project	8,406	4	1,950	7,397	0.95	1	2,000	1,009	0.50	-	-	-	-
Project Increment	26			23	0.00			3	0.00				

	Total	Mixed Flow Lanes				HOV Lanes				Truck Lanes			
Location	**Vol**	**Lanes**	**Cap/Ln**	**Vol**	**V/C**	**Lanes**	**Cap/Ln**	**Vol**	**V/C**	**Lanes**	**Cap/Ln**	**Vol**	**V/C**
411. I-5 s/o Calgrove													
without Project	8,233	4	2,000	7,245	0.91	1	2,000	988	0.49	1	1,300	906	0.70
with Project	8,252	4	2,000	7,262	0.91	1	2,000	990	0.50	1	1,300	908	0.70
Project Increment	19			17	0.00			2	0.01			2	0.00
PM Southbound													
404. I-5 s/o Hasley													
without Project	7,900	4	1,950	6,952	0.89	1	2,000	948	0.47	-	-	-	-
with Project	7,957	4	1,950	7,002	0.90	1	2,000	955	0.48	-	-	-	-
Project Increment	57			50	0.01			7	0.01				
405. I-5 s/o SR-126													
without Project	8,277	4	1,950	6,539	0.84	1	2,000	1,738	0.87	-	-	-	-
with Project	8,439	4	1,950	6,667	0.85	1	2,000	1,772	0.89	-	-	-	-
Project Increment	162			128	0.01			34	0.02				
406. I-5 s/o Rye Cyn													
without Project	9,562	4	1,950	7,640	0.98	1	2,000	1,922	0.96	-	-	-	-
with Project	9,808	4	1,950	7,837	1.00	1	2,000	1,971	0.99	-	-	-	-
Project Increment	246			197	0.02			49	0.03				
407. I-5 s/o Magic Mtn													
without Project	9,413	4	1,950	7,512	0.96	1	2,000	1,901	0.95	-	-	-	-
with Project	9,621	4	1,950	7,649	0.98	1	2,000	1,972	0.99	-	-	-	-
Project Increment	208			137	0.02			71	0.04				
408. I-5 s/o Valencia													
without Project	9,738	4	1,950	7,839	1.01	1	2,000	1,899	0.95	-	-	-	-
with Project	9,922	4	1,950	7,967	1.02	1	2,000	1,955	0.98	-	-	-	-
Project Increment	184			128	0.01			56	0.03				
409. I-5 s/o McBean													
without Project	9,262	4	1,950	7,410	0.95	1	2,000	1,852	0.93	-	-	-	-
with Project	9,416	4	1,950	7,486	0.96	1	2,000	1,930	0.97	-	-	-	-
Project Increment	154			76	0.01			78	0.04				
410. I-5 s/o Lyons													
without Project	8,604	4	2,000	5,937	0.74	1	2,000	1,721	0.86	1	1,300	946	0.73
with Project	8,749	4	2,000	6,037	0.75	1	2,000	1,750	0.87	1	1,300	962	0.74
Project Increment	145			100	0.01			29	0.01			16	0.01

Location	Total Vol	Mixed Flow Lanes				HOV Lanes				Truck Lanes			
		Lanes	Cap/Ln	Vol	V/C	Lanes	Cap/Ln	Vol	V/C	Lanes	Cap/Ln	Vol	V/C
411. I-5 s/o Calgrove													
without Project	8,411	4	2,000	5,804	0.73	1	2,000	1,682	0.84	1	1,300	925	0.71
with Project	8,537	4	2,000	5,891	0.74	1	2,000	1,707	0.85	1	1,300	939	0.72
Project Increment	126			87	0.01			25	0.01			14	0.01

Source: Landmark Village, Long-Range Cumulative (Build-out) Conditions Traffic Forecasts, Austin-Foust Associates, Inc., October 2, 2006.

(3) Cumulative Impacts-Ventura County Community of Piru

Mitigation Measure 4.8-9 from the Newhall Ranch Specific Plan Program EIR requires that, prior to recordation of the first subdivision map, a transportation evaluation is to be prepared for two SR-126 intersections in the Ventura County community of Piru in order to calculate the cost of fair share funding of improvements needed to accommodate Specific Plan generated traffic growth in the community. The two intersections to be evaluated are Main Street/Torrey Road and Telegraph Road (SR-126), and Center Street and Telegraph Road. The following summarizes the findings of the analysis undertaken for the two intersections, and is based upon the traffic report, SR-126 Traffic Analysis for the Community of Piru in Ventura County, Austin-Foust, April 2006 contained in this EIR (**Appendix 4.7**).

To determine Specific Plan impacts in the community of Piru, long-range (2025) peak hour buildout volumes were obtained by factoring side street volumes and deriving through-traffic volumes on Telegraph Road (SR-126) from the Ventura County Traffic Model (VCTM), which includes Newhall Ranch Specific Plan buildout traffic. To determine side street volumes, demographic data from the VCTM was utilized, comparing existing trip generation data with Specific Plan buildout (Year 2020) forecasts. The comparison yields a 2.6 percent annual growth rate, which equates to 42 percent growth over the period 2004–2020. These projected future side street volumes were then added to the projected through volumes on Telegraph Road (SR-126), and the resulting turning movements were used to calculate Year 2020 LOS and ICU conditions. These buildout conditions, which include Specific Plan generated traffic growth, were then compared to existing conditions to assess cumulative impacts. **Table 4.7-31** summarizes the existing and forecast levels of service and ICU for Year 2020 traffic conditions, including Specific Plan buildout, for the two SR-126 intersections located in the community of Piru.

Table 4.7-31
ICU Summary – Long-Range (Year 2020) Traffic Conditions Including Specific Plan Buildout-Piru

Intersection	Existing				Buildout			
	AM		PM		AM		PM	
Main St./Torrey & Telegraph Rds								
ICU/LOS	.38	A	.43	A	.60	B	.73	C
Average Delay (s)/LOS	16.9	B	16.3	B	20.6	C	34.6	C
Center St. & Telegraph Road								
SB Approach Delay/LOS	22.2	C	26.4	D	55.0	F*	199.2	F*

Source: Austin-Foust Associates (October 2005).
**Significant Cumulative Impact*

Level of service ranges:

.00 – .60	*A*
.61 – .70	*B*
.71 – .80	*C*
.81 – .90	*D*
.91 – 1.00	*E*
Above 1.00	*F*

As shown on **Table 4.7-31**, the intersection of Main Street/Torrey Road at Telegraph Road would operate at acceptable levels of service (LOS B and C in the AM and PM peak hours, respectively) under Year 2020 conditions that include Specific Plan buildout traffic. Using the HCM delay analysis methodology produces similar results, acceptable LOS C conditions in both the AM and PM peak hour at this intersection. At the intersection of Center Street and Telegraph Road, however, using the HCM delay analysis methodology for unsignalized intersections, the intersection would operate at LOS F conditions for the southbound approach in both the AM and PM peak hours, respectively, under Year 2020 conditions. Therefore, Specific Plan buildout would contribute to significant cumulative impacts at this intersection.

The intersection of Center Street and Telegraph Road (SR-126) is presently stop sign controlled on Center Street, while the intersection of Main Street/Torrey Road is signalized. A signal warrant analysis conducted for the Center Street and Telegraph Road intersection determined that projected future peak hour traffic volumes would not meet the criteria for intersection signalization based on present forecasts of side street (Center Street) traffic. However, the volume of Telegraph Road traffic will warrant the installation of a traffic signal with just a slight increase in side street traffic. As this analysis is based upon the conceptual buildout of the community of Piru and long-term projected future traffic levels in Ventura County, a small increase in future traffic volumes above those presently forecast would trigger the requirement that a traffic signal be installed at this location. Therefore, the future installation of a traffic signal at this intersection can be reasonably anticipated as a necessary future intersection improvement.

Table 4.7-32, Buildout Signal Warrant Volumes, summarizes the signal warrant volumes at buildout of the Specific Plan.

Table 4.7-32
Buildout Signal Warrant Volumes

Intersection	Direction of Travel	AM	PM
Center St. & Telegraph Rd. Major Approach	East bound Westbound	1420 1080	1460 1460
Minor Approach	Southbound	30	40
	Satisfies Warrants?	No	No

Based on the results of this analysis, three intersection improvements have been identified to enhance safety and reduce delay at the Center Street and Telegraph Road intersection. These improvements are:

1. Re-stripe the Center Street southbound approach resulting in separate left and right turn lanes;
2. Add a westbound right turn deceleration lane to Telegraph Road; and
3. Install a traffic signal at the intersection when warranted.

The roadway improvements would reduce delay in the AM from 55.0 seconds to 52.9 seconds, and would reduce delay in the PM from 199.2 seconds to 170.1 seconds. In combination, there is a 12 percent reduction in delay associated with these improvements. This reduction is to be compared with the nine percent increase in ADT forecast for the year 2020 on Telegraph Road in Piru that is attributable to Specific Plan buildout.[13] Additionally, the installation of a traffic signal at this location would result in LOS A conditions in both the AM and PM peak hour, with average vehicle delays of 4.6 and 5.6 seconds, respectively. Therefore, implementation of the recommended improvements at the intersection of Center Street and Telegraph Road would reduce the identified potentially significant cumulative impacts to a level below significant.

13 See, Newhall Ranch Supplemental Traffic Analysis, Ventura County Impact Analysis (Austin Foust Associates, February 2001), which determined that existing volumes on Telegraph Road in Piru are approximately 20,000 ADT, that 31,000 ADT are forecast for that location by the year 2020, and that the Newhall Ranch Specific Plan would contribute approximately 1,000 vehicles per day to the 31,000 forecast. Based on the projected increase of 11,000 ADT for this location by the year 2020 (31,000-20,000), the Newhall Ranch Specific Plan share of increased traffic would be approximately nine percent (1,000 divided by 11,000 = .09).

(4) Cumulative Impacts-Ventura County Community of Fillmore

Newhall Ranch Specific Plan Program EIR Mitigation Measure 4.8-9 requires the preparation of a transportation evaluation to determine the specific improvements made necessary by the addition of Newhall Ranch buildout traffic at designated SR-126 intersections in the Ventura County City of Fillmore. (Please see **Appendix 4.7** Newhall Ranch Traffic Analysis, Fillmore Traffic Impacts, Austin-Foust, Inc, April 2006). **Figure 4.7-23, Intersection Locations**, depicts the twelve SR-126 intersections to be evaluated by the analysis.

To evaluate the potential impacts of Newhall Ranch traffic on the City's designated intersections, Newhall Ranch buildout traffic levels through the City were estimated for each of the three affected roadway sections -- SR-23 (A Street), and SR-126 (Ventura Street) east and west of SR-23. These peak hour volumes are shown on **Table 4.7-33, Peak Hour Newhall Ranch Buildout Volumes - City of Fillmore**.

Table 4.7-33
Peak Hour Newhall Ranch Buildout Volumes - City of Fillmore

	AM Peak Hour				PM Peak Hour		
Location	**EB/NB**	**WB/SB**	**Total**		**EB/NB**	**WB/SB**	**Total**
Ventura Street (SR-126)							
East of A Street	25	54	79		53	35	88
West of A Street	22	49	71		48	31	79
A Street (SR-23)							
South of Ventura Street	3	5	8		5	4	9

Source: Austin-Foust Associates (April 2006).

These peak hour volumes were then deducted from the year 2020 peak hour intersection data provided in the City's Citywide Traffic and Circulation Impact Study (Wildan, 2002) ("City Traffic Study") in order to determine LOS conditions with and without Newhall Ranch buildout traffic. The City Traffic Study, which includes Newhall Ranch buildout traffic volumes, was conducted to determine the City's long-range traffic needs relative to build-out of its General Plan. A copy of the City Traffic Study is provided in **Appendix 4.7** of this EIR.

To assess significant impacts, the analysis applied the same significance criteria identified in the Newhall Ranch Specific Plan Program EIR for traffic impacts on state highways in Ventura County. (See, specifically, Newhall Ranch Revised Additional Analysis, Volume VIII (May 2003) in, Section 2.1, Table 2.1-3 [significance threshold criteria for state highways and freeways] **Appendix 4.10**.) Under the

applicable significance criteria, build-out of Newhall Ranch Specific Plan would result in a significant cumulative impact at the City's intersections if the addition of project traffic increases the ICU by more than .01, and the additional traffic results in deficient conditions.

As shown on **Table 4.7-34, 2020 PM Peak Hour ICU Values – City of Fillmore**, build-out of the Newhall Ranch Specific Plan would result in ICU increases greater than .01 at the following five SR-126 intersections:

- Intersection No. 2 E Street & Ventura Street (SR-126);
- Intersection No. 3 D Street & Ventura Street;
- Intersection No. 5 B Street & Ventura Street;
- Intersection No. 10 Pole Creek Road & Ventura Street; and
- Intersection No. 12 El Dorado Road & Ventura Street.

Table 4.7-34
2020 PM Peak Hour ICU Values – City of Fillmore

Intersection	PM Peak Hour				Difference
	Without Project		With Project		
	ICU	LOS	ICU	LOS	
1. Old Telegraph & SR-126	.47	A	.48	A	.01
2. E Street & Ventura Street (SR-126)	.66	B	.68	B	.02*
3. D Street & Ventura Street (SR-126)	.78	C	.80	C	.02
4. C Street & Ventura Street (SR-126)	.75	C	.76	C	.01
5. B Street & Ventura Street (SR-126)	.83	D	.85	D	.02
6. A Street & Ventura Street (SR-126)	.88	D	.89	D	.01
7. Olive Street & Ventura Street (SR-126)	.61	B	.62	B	.01
8. Central & Ventura Street (SR-126)	.86	D	.86	D	.00
9. Mountain View Street & Ventura Street (SR-126)	.68	B	.69	B	.01
10. Pole Creek Road & Ventura Street (SR-126)	.50	A	.52	A	.02
11. Santa Clara Street & Ventura Street (SR-126)	.71	C	.72	C	.01
12. El Dorado Road & Ventura Street (SR-126)	.78	C	.80	C	.02*

**Project Impact (ICU increment > .01 and the intersection is deficient)*
Level of service ranges: *.00 – .60 A* *.81 – .90 D*
.61 – .70 B *.91 – 1.00 E*
.71 – .80 C *Above 1.00 F*
Source: Austin-Foust Associates (April 2006).

NOT TO SCALE

SOURCE: Austin-Foust Associates, Inc. – March 2006

FIGURE **4.7-23**

Intersection Locations

As shown on **Figure 4.7-24, Intersection Lane Configurations – Existing and Year 2020 Circulation System Improvements**, of these five intersections, the City Traffic Study proposes intersection improvements, indicative of deficient conditions, at two of the intersections in order to maintain acceptable LOS conditions in the year 2020. The two deficient intersections identified by the City, and the improvements proposed for each intersection, are:

- Intersection No. 2: E Street & Ventura Street (SR-126) (add a traffic signal); and,
- Intersection No. 12: El Dorado Road & Ventura Street (add a left-turn lane on SR-126 westbound, add a left-turn lane on SR-126 eastbound, add a new southbound intersecting road, and add a new northbound intersecting road).

As shown on **Figure 4.7-24**, the proposed roadway improvements would create a new intersection at El Dorado Road and Ventura Street made necessary, in part, due to the construction of new roadways that will intersect with SR-126. The proposed improvements at this intersection, therefore, are not necessary to maintain acceptable LOS conditions solely due to projected increases in future traffic volumes on SR-126.

In March 2000, the City of Fillmore and The Newhall Land and Farming Company (Newhall) entered into a Settlement and Mutual Release (agreement) relating to traffic impacts within the City. Under the agreement, Newhall will pay $300,000 to the City, at or before the time the first Newhall Ranch Specific Plan building permit is issued, to fund transportation-related improvements within the City of Fillmore. Therefore, the agreement will result in the accelerated payment of Newhall's obligation to fund transportation-related improvements in the City because the City will receive the funds in one lump sum payment 10-15 years in advance of Newhall Ranch buildout, rather than receiving the funds on a building permit-by-building permit basis over the next 15 years.

Under the agreement, the City deemed Newhall's payment of $300,000 as adequately representing the costs of constructing the transportation improvements needed within the City as a result of buildout of the Newhall Ranch Specific Plan, as those costs are identified in both this and prior traffic analyses. Accordingly, the $300,000 payment fully satisfies the mitigation improvements required by the Newhall Ranch Specific Plan for all transportation-related improvements within the City of Fillmore, and no further mitigation is necessary to address the potentially significant impacts identified by this analysis. See **Appendix 4.7** of this EIR for the fully-executed Settlement and Mutual Release agreement.

10. CUMULATIVE MITIGATION MEASURES

If all of the related projects were approved, each would be required to construct or finance its fair share of the improvements to these intersections and arterial roadways or freeway segments significantly

impacted by each respective project. Although the Landmark Village project would not result in significant cumulative impacts to the I-5 freeway, the following mitigation is proposed to reduce the traffic-related impacts attributable to the project's share of increased cumulative traffic levels:

LV-4.7-21 The project applicant shall fund fair share capacity augmentation of the segment of I-5 south of Valencia Boulevard in an amount commensurate with the project's incremental increase in cumulative traffic levels, as shown on **Table 4.7-30**. All other development that would impact the affected freeway segment shall also pay a fair share of required funding.

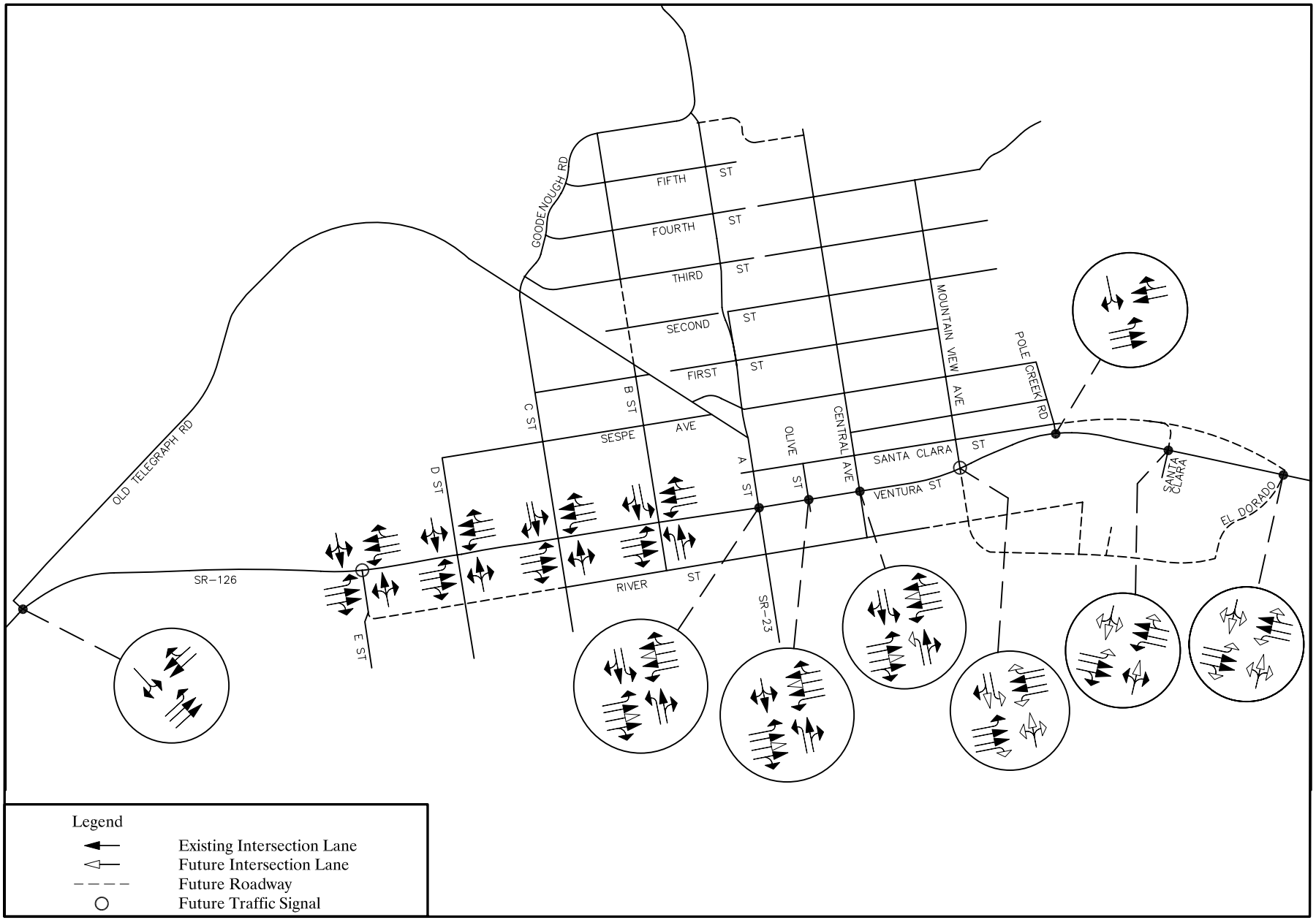
With respect to impacts on the regional transportation system, project-specific environmental analysis for other cumulative projects shall comply with the requirements of the CMP, which provides lead agencies with the opportunity to assess each project's improvement program to ensure that it meets its mitigation goal.

The following mitigation measure implements the March 2000 agreement entered into between Newhall and the City of Fillmore relating to transportation improvements in the City, and would reduce the Newhall Ranch Specific Plan's contribution to potentially significant cumulative impacts in the City to a level below significant:

LV-4.7-22 Concurrent with issuance of the first building permit for Landmark Village, the project applicant shall submit a one-time payment of $300,000 to the City of Fillmore (City) in Ventura County to fund transportation-related improvements in the City consistent with the March 2000 agreement entered into between The Newhall Land and Farming Company and the City.

The following mitigation measure is proposed to reduce the Newhall Ranch Specific Plan's contribution to potentially significant cumulative impacts at the intersection of Center Street and Telegraph Road (SR-126) in the Ventura County community of Piru to a level below significant:

LV 4.7-23 Concurrent with the issuance of each Newhall Ranch Specific Plan building permit, the project applicant shall pay to the County of Ventura that development's pro-rata share of the entire Newhall Ranch Specific Plan's fair-share (nine percent) of the costs to implement the following roadway improvements at the intersection of Center Street and Telegraph Road (SR-126) in the Ventura County community of Piru: (1) Re-stripe the Center Street southbound approach lane resulting in separate left and right turn lanes; (2) Add a westbound right turn deceleration lane to Telegraph Road; and (3) Install a traffic signal at the intersection when warranted.



SOURCE: Austin-Foust Associates, Inc. – March 2006

FIGURE **4.7-24**

Intersection Configurations – Existing and Year 2020 Circulation Systems Improvements

11. SIGNIFICANT UNAVOIDABLE IMPACTS

a. Project Impacts

Significant project traffic/access impacts would be reduced to less than significant levels with implementation of the mitigation measures recommended in this EIR section and there would be no significant unavoidable traffic/access impacts.

b. Cumulative Impacts

By implementing the mitigation measures discussed above that are attributable to the proposed project and provided that the County requires fair-share participation of the mitigation measures by other projects, no significant unavoidable project or cumulative traffic/access impacts would occur at any evaluated intersection in the project study area.

4.8 NOISE

1. SUMMARY

Development of the Landmark Village site over a 54-month period would involve clearing and grading of the ground surface, trucks importing approximately 5.8 million cubic yards of fill material, and the building of the proposed improvements. These activities typically involve the temporary use of heavy equipment, smaller equipment, and motor vehicles, which generate both continuous and episodic noise. This noise would primarily affect the occupants of on-site uses constructed in the earlier phases of the development (assuming that the site is occupied in sections as other portions are still under construction) and would be audible to occupants of the off-site Travel Village Recreational Vehicle (RV) Park when construction activities occur.

Grading operations at the site and the off-site borrow sites would occur over a 46-week period. Because the Adobe Canyon borrow site is not in close proximity to existing sensitive receptors, grading operations at this site would not result in a significant noise impact. The construction noise would not be audible within the community of Val Verde due to intervening distances and topography.

On-site occupants who would have an uninterrupted line of sight to the construction noise sources could be exposed to increased noise levels during construction, resulting in potentially significant impacts unless mitigated. Noise impacts from these construction activities would be less than significant at the Travel Village RV Park. However, occupants of the RV Park could be exposed to excessive noise levels during utility corridor construction, resulting in significant impacts as construction activity occurs adjacent to the Park. Although mitigation is recommended to reduce these impacts, the resulting noise levels may continue to exceed the applicable thresholds, resulting in a significant and unavoidable impact. On-site construction noise would not be audible at the community of Val Verde due to distances between the site and the community of Val Verde, the intervening topography that would attenuate on-site noise, and traffic noise along State Route 126 (SR-126) that would "drown out" on-site construction noise to the south.

In the event construction of the Long Canyon Road Bridge requires pile driving into the bed of the Santa Clara River, the noise levels associated with these activities would be audible to occupants of on-site uses constructed prior to the bridge, and would exceed Los Angeles County (County) noise thresholds within 5,000 feet of the pile-driving activities. Therefore, if it is not feasible to complete the pile driving prior to occupancy of on-site noise sensitive residential uses located within 5,000 feet of the pile-driving activities, a short-term significant and unavoidable construction noise impact would occur. If pile drilling were utilized instead of pile driving, short-term noise impacts would be significant and unavoidable at noise sensitive uses located within 1,600 feet of the pile-drilling activities.

Sound levels from long-range traffic volumes along SR-126 and on proposed "A" Street would exceed the thresholds of significance for noise sensitive uses proposed along these roadways within the project boundaries. With implementation of the recommended mitigation measures, noise impacts at these noise sensitive uses would be reduced to levels below significant.

The project would construct a fire station which would result in periodic use of sirens and air horns during emergency responses. However, given that the fire station is located in a commercial land use location (not adjacent to residential uses) and sirens and air horns are intermittent noise sources, no significant noise impacts are expected with the construction and operation of the fire station.

Upon buildout, the project would not result in mobile or point-source noise impacts to off-site locations. However, future traffic along SR-126, with and without the project, would cause mobile source noise levels at the Travel Village RV Park to exceed 70.0 decibels on an A-weighted scale (dB(A)) community noise equivalent level (CNEL) by 2010. Pursuant to Mitigation Measure 4.9-14 from the Newhall Ranch Specific Plan Program EIR, once noise levels reach 70 dB(A) CNEL at certain locations on the RV Park site, the project applicant will be required to mitigate highway noise levels at Travel Village to 70 dB(A) or less.

Point sources of noise from the proposed on-site parks would include ball fields used during evening hours by the school and/or intramural events that could last for more than several hours. Noises typical of such uses would be from parking lots, participants and observers, loud speakers, etc. Noise levels from these activities could exceed the County Noise Ordinance at residences within Landmark Village that are proposed in close proximity to the school and the public parks, resulting in a significant impact on the residents unless mitigated.

2. BACKGROUND

a. Relationship of Project to Newhall Ranch Specific Plan Program EIR

Section 4.9 of the Newhall Ranch Specific Plan Program EIR identified and analyzed the existing conditions, potential impacts, and mitigation measures associated with noise for the entire Newhall Ranch Specific Plan. The County in findings and in the revised Mitigation Monitoring Plan adopted the Newhall Ranch mitigation program for the Specific Plan. The Newhall Ranch Specific Plan Program EIR concluded that Specific Plan implementation would result in significant impacts, but that the identified mitigation measures would reduce the impacts to below a level of significance. All subsequent project-specific development plans and tentative subdivision maps must be consistent with both the Newhall Ranch Specific Plan, adopted May 2003, and the County of Los Angeles General Plan and Santa Clarita Valley Areawide Plan.

This project-level EIR is tiering from the previously certified Newhall Ranch Specific Plan Program EIR. **Section 4.8** discusses the existing noise conditions within the Landmark Village site, the project's potential noise impacts, and the applicable mitigation measures from the Newhall Ranch Specific Plan Program EIR, as well as additional mitigation measures recommended by this EIR for the Landmark Village project.

3. SUMMARY OF THE NEWHALL RANCH SPECIFIC PLAN PROGRAM EIR FINDINGS

The Newhall Ranch Specific Plan Program EIR identified certain potentially significant impacts related to noise that would occur with implementation of the Specific Plan. Specifically, the Newhall Ranch Specific Plan Program EIR, and related findings, determined that implementation of the adopted Specific Plan could expose on-site sensitive receptors to roadway and stationary noise levels that exceed County standards.

Development of the proposed Specific Plan would occur on a tract-by-tract basis over an estimated 25-year period and would involve grading of the ground surface, and the building of proposed uses. Noise generated by this construction activity would primarily affect the occupants of on-site uses constructed in the earlier phases of development. Off-site residential uses that would be most sensitive to construction noise are located along the northern border of the Specific Plan site in the southern portion of Val Verde. The Newhall Ranch Specific Plan Program EIR concluded that any residential areas which would have an uninterrupted line-of-sight to the construction activity could be exposed to noise levels which would exceed the County's Noise Ordinance standards for residential land uses during that time. This was considered to be a significant impact if unmitigated.

The Program EIR also concluded that noise impacts would result from ongoing activities including vehicular traffic generated by future uses, as well as the human activity on the site itself. Depending on future tract map design, on-site residences, and schools could be exposed to roadway and stationary noise levels that would exceed County standards, thereby potentially creating significant on-site noise impacts. At off-site locations in the local vicinity, traffic generated by the Specific Plan would cause a significant increase in noise levels at the Travel Village RV Park along SR-126. The analysis concluded that no other significant off-site noise impacts would occur at locations within the City of Santa Clarita or the Counties of Los Angeles or Ventura as a result of traffic volumes generated by the Specific Plan or on-site activities within the Specific Plan site.

On a cumulative basis, the Program EIR determined that increased traffic on local roadways due to the proposed Specific Plan and other developments in the Santa Clarita Valley would cause a cumulatively

considerable increase in noise levels at the Travel Village RV Park. This impact was considered to be significant.

A number of feasible mitigation measures were identified that would mitigate the Specific Plan's noise impacts to a level below significant. These measures include a requirement for all future subdivisions to prepare an acoustical analysis assessing project and cumulative conditions. Based on the Newhall Ranch Specific Plan Program EIR and the entire record, the County's Board of Supervisors found that the significant impacts relating to noise identified in the Program EIR were mitigated to below a level of significance by adoption of the specified mitigation measures.[1]

4. INTRODUCTION TO NOISE AND METHODOLOGY

a. Introduction to Noise

Noise is usually defined as unwanted sound. It is an undesirable by-product of society's normal day-to-day activities. Sound becomes unwanted when it interferes with normal activities, when it causes actual physical harm, or when it has adverse effects on health. The definition of noise as unwanted sound implies that it has an adverse effect on people and their environment.

Noise is measured on a logarithmic scale of sound pressure level known as a decibel (dB). The human ear does not respond uniformly to sounds at all frequencies; for example, it is less sensitive to low and high frequencies than it is to medium frequencies that more closely correspond with human speech. In response to the sensitivity of the human ear to different frequencies, the A-weighted noise level (or scale), which corresponds more closely with people's subjective judgment of sound levels, has been developed. This A-weighted sound level, referenced in units of dB(A), is measured on a logarithmic scale such that a doubling of sound energy results in a 3.0 dB(A) increase in noise level. In general, changes in a CNEL of less than 3.0 dB(A) are not typically noticed by the human ear.[2] Changes from 3.0 to 5.0 dB(A) may be noticed by some individuals who are extremely sensitive to changes in noise. A greater than 5.0 dB(A) increase is readily noticeable, while the human ear perceives a 10.0 dB(A) increase in sound level to be a doubling of sound.

Noise sources occur in two forms: (1) point sources, such as stationary equipment or individual motor vehicles; and (2) line sources, such as a roadway with a large number of point sources (motor vehicles). Sound generated by a point source typically diminishes (attenuates) at a rate of 6.0 dB(A) for each doubling of distance from the source to the receptor at acoustically "hard" sites and 7.5 dB at acoustically

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1 See, Mitigation Measures 4.9-1 through 4.9-17 in both the certified Newhall Ranch Specific Plan Program EIR (March 9, 1999) and the adopted Mitigation Monitoring Plan for the Specific Plan (May 2003).

2 U.S. Department of Transportation, Federal Highway Administration, *Highway Noise Fundamentals*, (Springfield, Virginia: U.S. Department of Transportation, Federal Highway Administration, September 1980), p. 81.

"soft" sites.[3] For example, a 60 dB(A) noise level measured at 50 feet from a point source at an acoustically hard site would be 54 dB(A) at 100 feet from the source and 48 dB(A) at 200 feet from the source. Sound generated by a line source typically attenuates at a rate of 3.0 dB(A) and 4.5 dB(A) per doubling of distance from the source to the receptor for hard and soft sites, respectively.[4] Sound levels can also be attenuated by man-made or natural barriers (e.g., sound walls, berms, ridges), as well as elevational differences, as illustrated in **Figure 4.8-1, Noise Attenuation by Barriers and Elevation Differences**.

Wall/berm combinations may reduce noise levels by as much as 10.0 dB(A) depending on their height and distance relative to the noise source and the noise receptor.[5] Sound levels may also be attenuated 3.0 to 5.0 dB(A) by a first row of houses and 1.5 dB(A) for each additional row of houses.[6] The minimum noise attenuation provided by typical building construction in California is provided in **Table 4.8-1, Outside to Inside Noise Attenuation**.

Table 4.8-1
Outside to Inside Noise Attenuation (dB(A))

Building Type	Open Windows	Closed Windows
Residences	17	25
Schools	17	25
Churches	20	30
Hospitals/Convalescent Homes	17	25
Offices	17	25
Theaters	20	30
Hotels/Motels	17	25

Source: Transportation Research Board, National Research Council, Highway Noise: A Design Guide for Highway Engineers, *National Cooperative Highway Research Program Report 117.*

3 U.S. Department of Transportation, Federal Highway Administration, *Highway Noise Fundamentals*, (Springfield, Virginia: U.S. Department of Transportation, Federal Highway Administration, September 1980), p. 97. Examples of "hard" or reflective sites include asphalt, concrete, and hard and sparsely-vegetated soils. Examples of acoustically "soft" or absorptive sites include soft, sand, plowed farmland, grass, crops, heavy ground cover, etc.

4 U.S. Department of Transportation, Federal Highway Administration, *Highway Noise Fundamentals*, (Springfield, Virginia: U.S. Department of Transportation, Federal Highway Administration, September 1980), p. 97.

5 U.S. Department of Transportation, Federal Highway Administration, *Highway Noise Mitigation*, (Springfield, Virginia: U.S. Department of Transportation, Federal Highway Administration, September 1980), p. 18.

6 T. M. Barry and J. A. Reagan, *FHWA Highway Traffic Noise Prediction Model*, (Washington D.C.: U.S. Department of Transportation, Federal Highway Administration, Office of Research, Office of Environmental Policy, December 1978), NTIS, FHWA-RD-77-108, p. 33.

When assessing community reaction to noise, there is an obvious need for a scale that averages varying noise exposures over time and that quantifies the result in terms of a single number descriptor. Several scales have been developed that address community noise level. Those that are applicable to this analysis are the Equivalent Noise Level (L_{eq}) and the CNEL.[7] L_{eq} is the average A-weighted sound level measured over a given time interval. L_{eq} can be measured over any time period, but is typically measured for 1-minute, 15-minute, 1-hour, or 24-hour periods. CNEL is another average A-weighted sound level measured over a 24-hour time period. However, the CNEL noise scale is adjusted to account for some individuals' increased sensitivity to noise levels during the evening and nighttime hours. A CNEL noise measurement is obtained after adding 5.0 decibels to sound levels occurring during the evening from 7 PM to 10 PM, and 10.0 decibels to sound levels occurring during the nighttime from 10 PM to 7 AM. The 5.0- and 10.0-decibel penalties are applied to account for most people's increased noise sensitivity during the evening and nighttime hours.[8]

b. Methodology

The primary concern regarding on-site noise is the potential for proposed on-site and existing off-site noise sensitive land uses to be exposed to noise levels that exceed adopted or recommended thresholds (discussed later in this EIR section). In essence, the analysis of point and mobile source noise levels deals with the noise-related compatibility of proposed on-site and existing off-site land uses and activities with other on-site and nearby off-site land uses and activities.

(1) Point Source Noise

Determination of future point source noise levels on the project site and in its vicinity is based on available technical reports and literature that are cited throughout this EIR section. Point source noise associated with the project includes project construction and day-to-day activities at the site once it is built out.

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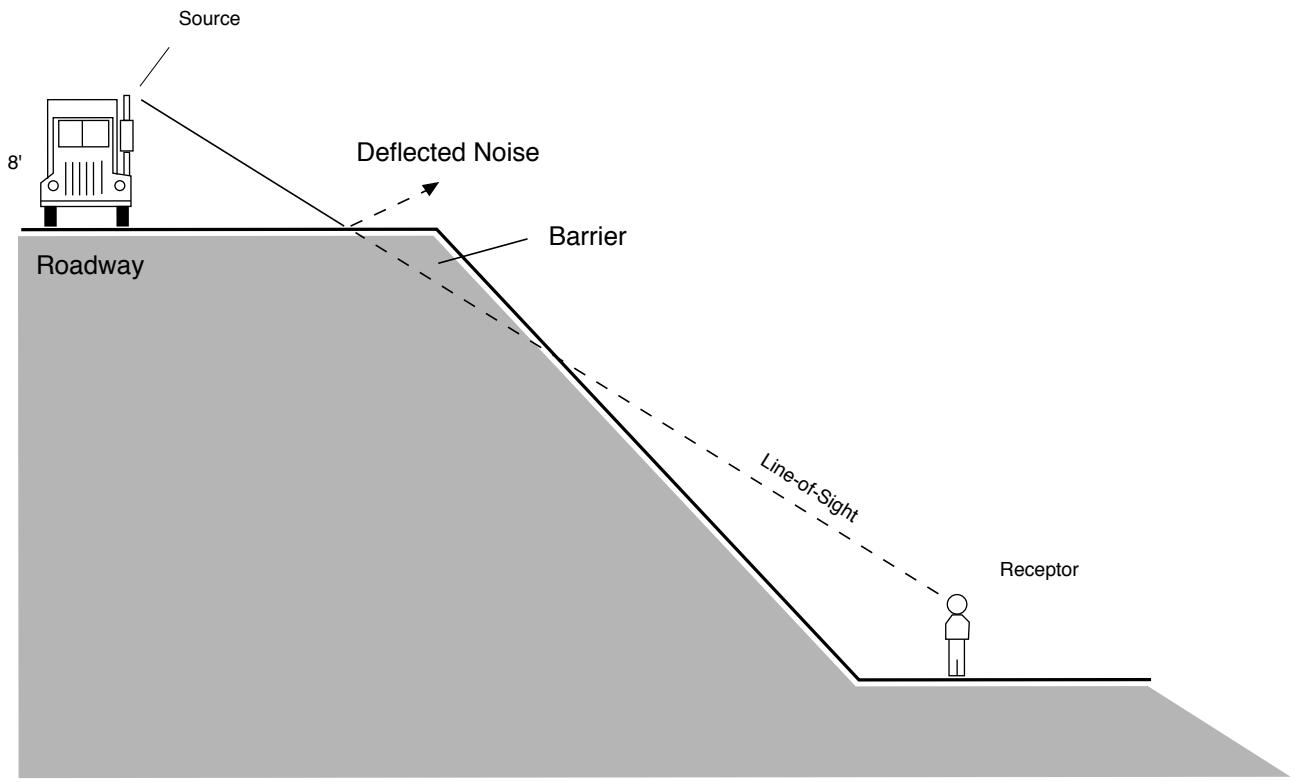
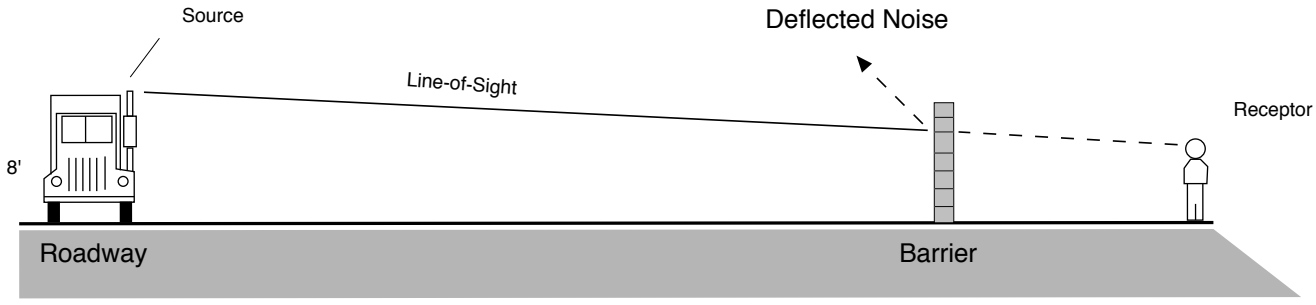
7 The Noise Element indicates considers both CNEL and L_{dn} equivalent for purposes of analysis. CNEL, however, is used for the noise impact analysis because it is more conservative than the L_{dn} and portrays a worst-case noise scenario, and it is commonly used throughout the State of California in noise impact analysis prepared for EIRs.

8 The logarithmic effect of adding these penalties to the peak-hour L_{eq} measurement results in a CNEL measurement that is within approximately 3 dB(A) (plus or minus) of the peak-hour L_{eq}. California Department of Transportation, *Technical Noise Supplement; A Technical Supplement to the Traffic Noise Analysis Protocol*, (Sacramento, California: October 1998), pp. N51-N54.



"Barrier Effect" Resulting from Differences in Elevation.



"Barrier Effect" Resulting from Typical Soundwall.

SOURCE: Impact Sciences, Inc. – October 2004

FIGURE **4.8-1**

Noise Attenuation by Barriers and Elevation Differences

(2) Mobile Source Noise

(a) On-Site Mobile Source Noise

Future on-site mobile-source noise levels were calculated using the Federal Highway Administration (FHWA) Traffic Noise Model (TNM)Version 2.5. TNM is based on a three-dimensional grid created for the modeled area (in this case, the modeled area includes the Landmark Village site and SR-126). In general, model inputs include future peak-hour speeds, volumes, and traffic mix on SR-126 along and through the site; elevations and geometrics of roadways; distances of proposed on-site sensitive uses from roadway centerlines and their estimated elevations; "hard" or "soft" site conditions that would affect noise drop off rates; any existing natural or proposed man-made barriers and terrain lines between the roadways and proposed sensitive uses that may attenuate noise; and roadway grade corrections, if necessary.[9] On-site highway traffic noise impacts were calculated for future traffic volumes on SR-126 at Santa Clarita Valley buildout in order to represent and mitigate for a worst-case scenario.

All existing and future roadways, barriers, and sensitive noise receptors for Landmark Village were defined in x, y, and z coordinates using a topographic map with a scale of 1 inch = 100 feet. Future roadway traffic volume data was obtained from the Landmark Village traffic report prepared by Austin-Foust Associates, Inc. (see **Appendix 4.7**). The project traffic engineer provided peak-hour volumes on all roadways at project and Santa Clarita Valley buildout. Peak-hour speeds based on level of service (LOS) C for all roadways, factoring in roadway geometrics, were also provided by the project traffic engineer. More realistic peak-hour speeds would not necessarily be at LOS C and would be slower than under free-flowing conditions. The slower the traffic, the lower the noise volumes; therefore, this noise impact analysis conservatively assumes worst-case conditions by assuming peak-hour traffic volumes traveling under free-flow conditions. Peak-hour vehicle mix in the project study area was derived from the California Department of Transportation's (Caltrans) data base and is assumed to be 85.7 percent passenger vehicles, 4.0 percent medium trucks, and 10.3 percent heavy trucks.[10] Finally, TNM was calibrated using data obtained from on-site noise measurements.[11]

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9 Sound32 does not account for pavement types and conditions; atypical vehicular noise conditions that do not reflect statewide averages per California Vehicle Noise Reference Energy Mean Emission Levels (Calveno); "transparent" shielding such as wood fences and heavy brush or trees; reflections off nearby buildings or structures; and meteorological conditions.

10 State of California Department of Transportation, *2001 Annual Average Daily Truck Traffic on the California State Highway System*, (Sacramento, California: California Department of Transportation, December 2002), p. 195. Heavy trucks are all vehicles with three or more axles designed for the transportation of cargo; generally, the gross weight if greater than 12,000 kilograms (26,500 pounds [lbs.]). Medium trucks are all vehicles with two axles and six wheels designed for transportation of cargo. Generally, the gross vehicle weight is greater than 4,500 kg (10,000 lbs.) and less than 12,000 kg (26,500 lbs.). Finally, passenger vehicles are all vehicles with two axles and four wheels designed primarily for transportation of nine or fewer passengers (automobiles). Lightweight trucks with a gross vehicular weight of less than 4,500 kg (10,000 lbs.) also fall into this passenger vehicle category.

11 Model calibration was performed algebraically by adding a calibration constant derived from the difference between actual noise measurements taken at the site and noise levels at these locations as calculated by TNM.

(b) Off-Site Mobile Source Noise

Future off-site vehicular noise levels at Travel Village RV Park were calculated using the Caltrans highway noise prediction model, SOUND32, PC Version 1.41. This model was developed using the highway traffic noise prediction method specified in the FHWA *Highway Traffic Noise Prediction Model* (FHWA-RD-77-108). SOUND32 is based on a three-dimensional grid created for the modeled area (in this case, the modeled area includes the Landmark Village site and its immediate environs). In general, model inputs include future peak-hour speeds, volumes, and traffic mix on SR-126 through the modeled area[12]; elevations and geometrics of roadways; distances of proposed on-site noise-sensitive receptors from roadway centerlines and their estimated elevations; "hard" or "soft" site conditions that would affect noise drop off rates; any existing natural or proposed constructed barriers between the roadways and proposed noise-sensitive uses that may attenuate noise; and roadway grade corrections, if necessary.[13] The average vehicle noise rates (energy rates) utilized in the FHWA model have been modified by Caltrans to reflect average vehicle noise rates identified for California. The Caltrans data show that California automobile noise is 0.8 to 1.0 dB(A) higher than national levels and that medium and heavy truck noise is 0.3 to 3.0 dB(A) lower than national levels.[14]

5. PLANS AND POLICIES FOR NOISE CONTROL

Plans and policies that pertain to the noise conditions affecting and affected by the proposed project include (1) the County of Los Angeles Noise Ordinance, and (2) the State of California, Department of Health Services, Environmental Health Division *Guidelines for Noise and Land Use Compatibility* (the *Guidelines*).

a. County of Los Angeles Noise Ordinance

The County of Los Angeles Noise Ordinance identifies exterior noise standards for noise point sources, specific noise restrictions, exemptions, and variances for exterior point and stationary noise sources. Several of these are applicable to the proposed project and are discussed below.

The County Noise Ordinance states that exterior noise levels caused by noise point sources shall not exceed the levels identified in **Table 4.8-2, County of Los Angeles Exterior Noise Standards for**

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12 Future roadway traffic volume data are from the May 2004 Landmark Village traffic report prepared by Austin-Foust Associates, Inc. (see **Appendix 4.7**).

13 Sound32 does not account for pavement types and conditions; atypical vehicular noise conditions that do not reflect statewide averages per Calveno; "transparent" shielding such as wood fences and heavy brush or trees; reflections off nearby buildings or structures; and meteorological conditions.

14 Rudolf W. Hendriks, *California Vehicle Noise Emission Levels*, (Sacramento, California: California Department of Transportation, January 1987), NTIS, FHWA/CA/TL-87/03.

Stationary and Point Noise Sources, or the ambient noise level,[15] whichever is greater, when the ambient noise level is determined without the noise source operating. The Noise Ordinance also states that interior noise levels resulting from outside point or stationary sources within multi-family residential units shall not exceed 45 dB(A) L_{eq} between 7 AM and 10 PM, and 40 dB(A) L_{eq} between 10 PM and 7 AM.[16] These standards would apply to the future residents and business owners within the Landmark Village project site.

Table 4.8-2
County of Los Angeles Exterior Noise Standards
for Stationary and Point Noise Sources

Noise Zone	Designated Noise Zone Land Use (Receptor Property)	Time Interval	Exterior Noise Level dB(A) L_{eq}[1]
I	Noise Sensitive Area[2]	Anytime	45
II	Residential Properties	10:00 PM to 7:00 AM 7:00 AM to 10:00 PM	45 50
III	Commercial Properties	10:00 PM to 7:00 AM 7:00 AM to 10:00 PM	55 60
IV	Industrial Properties	Anytime	70

Source: County of Los Angeles Ordinance No. 11743, Section 12.08.390.

[1] ***Standard No. 1*** *shall be the exterior noise level which may not be exceeded for a cumulative period of more than 30 minutes in any hour. Standard No. 1 shall be the applicable noise level; or, if the ambient L_{50} exceeds the forgoing level, then the ambient L_{50} becomes the exterior noise level for Standard No. 1.*

Standard No. 2 *shall be the exterior noise level which may not be exceeded for a cumulative period of more than 15 minutes in any hour. Standard No. 2 shall be the applicable noise level from Standard 1 plus 5 dB(A); or, if the ambient L_{25} exceeds the forgoing level, then the ambient L_{25} becomes the exterior noise level for Standard No. 2.*

Standard No. 3 *shall be the exterior noise level which may not be exceeded for a cumulative period of more than five minutes in any hour. Standard No. 3 shall be the applicable noise level from Standard 1 plus 10 dB(A); or, if the ambient $L_{8.3}$ exceeds the forgoing level, then the ambient $L_{8.3}$ becomes the exterior noise level for Standard No. 3.*

Standard No. 4 *shall be the exterior noise level which may not be exceeded for a cumulative period of more than one minute in any hour. Standard No. 4 shall be the applicable noise level from Standard 1 plus 15 dB(A); or, if the ambient $L_{1.7}$ exceeds the forgoing level, then the ambient $L_{1.7}$ becomes the exterior noise level for Standard No. 4.*

Standard No. 5 *shall be the exterior noise level which may not be exceeded for any period of time. Standard No. 5 shall be the applicable noise level from Standard 1 plus 20 dB(A); or, if the ambient L_0 exceeds the forgoing level, then the ambient L_0 becomes the exterior noise level for Standard No. 4.*

[2] *Not defined in the County Noise Ordinance. To be designated by the County Health Officer.*

15 The existing background noise level at the time of measurement or prediction.

16 This requirement is consistent with the California Noise Insulation Standards of 1988 (California Building Code Title 24, Section 3501 et seq.), which establishes inter-dwelling (between units in a building) and exterior sound transmission control measures. It requires that interior noise levels from the exterior source be reduced to 45 decibels (dB) or less in any habitable room of a multi-residential use facility (e.g., hotels, motels, dormitories, long-term care facilities, and apartment houses and other dwellings, except detached single-family dwellings. Measurements are based on a day/night average sound level (L_{dn}) or the community noise equivalent level (CNEL). Both L_{dn} and CNEL utilize averaging, not single-event exposure.

The County Noise Ordinance identifies specific restrictions regarding construction noise. The operation of equipment used in construction, drilling, repair, alteration or demolition work is prohibited between weekday hours of 7:00 PM to 7:00 AM and anytime on Sundays or legal holidays if such noise would create a noise disturbance across a residential or commercial real-property line.[17] The Noise Ordinance further states that the contractor shall conduct construction activities in such a manner that the maximum noise levels at the affected buildings will not exceed those listed in **Table 4.8-3, County of Los Angeles Construction Equipment Noise Restrictions**. All mobile and stationary internal-combustion-powered equipment and machinery is also required to be equipped with suitable exhaust and air-intake silencers in proper working order.

Table 4.8-3
County of Los Angeles Construction Equipment Noise Restrictions

Residential Structures			
	Single Family Residential	**Multi-Family Residential**	**Semi-Residential/ Commercial[1]**
Mobile Equipment: Maximum noise levels for nonscheduled, intermittent, short-term operation (less than 10 days) of mobile equipment:			
Daily, except Sundays and legal holidays, 7:00 AM to 8:00 PM	75 dB(A) L_{eq}	80 dB(A) L_{eq}	85 dB(A) L_{eq}
Daily, 8:00 PM to 7:00 AM and all day Sunday and legal holidays	60 dB(A) L_{eq}	64 dB(A) L_{eq}	70 dB(A) L_{eq}
Stationary Equipment: Maximum noise level for repetitively scheduled and relatively long-term operation (periods of 10 days or more) of stationary equipment:			
Daily, except Sundays and legal holidays, 7:00 AM to 8:00 PM	60 dB(A) L_{eq}	65 dB(A) L_{eq}	70 dB(A) L_{eq}
Daily, 8:00 PM to 7:00 AM and all day Sunday and legal holidays	50 dB(A) L_{eq}	55 dB(A) L_{eq}	60 dB(A) L_{eq}
Business Structures			
	All Structures		
Mobile Equipment; Maximum noise levels for nonscheduled, intermittent, short-term operation of mobile equipment:			
Daily, including Sunday and legal holidays, all hours	85 dB(A) L_{eq}		

Source: County of Los Angeles Ordinance No. 11743, Section 12.08.440.

[1] *Refers to residential structures within a commercial area. This standard does not apply to commercial structures.*

17 County of Los Angeles Ordinance No. 11743, Section 12.08.440. Noise disturbance is not defined in the noise ordinance. The County Health Officer has the authority to define and determine the extent of a noise disturbance on a case-by-case basis.

The County exempts all vehicles of transportation (with a few exemptions) that operate in a legal manner within the public right-of-way, railway, or air space, or on private property, from the standards of the Noise Ordinance. The County has no adopted ordinance regulating individual motor vehicle noise levels. These are regulated by the state.

b. California Department of Health Services

The State of California, Department of Health Services, Environmental Health Division, has published recommended guidelines for noise and land use compatibility, referred to as the *Guidelines*. The *Guidelines*, illustrated in **Figure 4.8-2, Land Use Compatibility Guidelines for Noise**, indicate that residential land uses and other noise sensitive receptors generally should locate in areas where outdoor ambient noise levels do not exceed 65 to 70 dB(A) (CNEL or Day-Night Average Sound Level [L_{dn}]). The Department of Health Services does not mandate application of this compatibility matrix to development projects; however, each jurisdiction is required to consider the *Guidelines* when developing its general plan noise element and when determining acceptable noise levels within its community.[18]

According to the *Guidelines*, an exterior noise level of 60 dB(A) CNEL is considered to be a "normally acceptable" noise level for single family, duplex, and mobile homes involving normal, conventional construction, without any special noise insulation requirements. Exterior noise levels up to 65 dB(A) CNEL are typically considered "normally acceptable" for multi-family units and transient lodging without any special noise insulation requirements. Between these values and 70 dB(A) CNEL, exterior noise levels are typically considered "conditionally acceptable," and residential construction should only occur after a detailed analysis of the noise reduction requirements is made and needed noise attenuation features are included in the project design. Exterior noise attenuation features include, but are not limited to, setbacks to place structures outside the conditionally acceptable noise contour, orienting structures so no windows open to the noise source, and/or installing noise barriers, such as berms and/or solid walls. Within a 65 dB(A) exterior noise environment, interior noise levels will typically be reduced to acceptable levels (to at least 45 dB(A) CNEL) through conventional construction, but with closed windows and fresh air supply systems or air conditioning in order to maintain a comfortable living environment.

Under the *Guidelines*, an exterior noise level of 70 dB(A) CNEL is typically the dividing line between an acceptable and unacceptable exterior noise environment for all noise sensitive uses, including schools, libraries, churches, hospitals, day care centers, and nursing homes of conventional construction. Noise levels below 75 dB(A) CNEL are typically acceptable for office and commercial buildings, while levels up to 75 dB(A) CNEL are typically acceptable for industrial uses (for the purposes of this analysis, however, noise impacts will only be evaluated for the noise sensitive uses that are proposed on the site). In

18 These Guidelines are also published by the Governor's Office and Planning and Research in the *State of California General Plan Guidelines* (2003).

unacceptable interior noise environments, additional noise insulation features, such as extra batting or resilient channels[19] in exterior walls, double paned windows, air conditioners to enable occupants to keep their windows closed without compromising their comfort, solid wood doors, noise baffles on exterior vents, etc., are typically needed to provide acceptable interior noise levels. The best type of noise insulation is based on detailed acoustical analyses that identifies all practical noise insulation features and that confirms their effectiveness.

6. EXISTING CONDITIONS

a. Roadway Line Source Noise

(1) On-Site Roadway Noise Levels

The Landmark Village tract map site is undeveloped and maintains no roadways open to the public. Private unpaved roadways traverse the site in order to provide access to the few agriculture-related structures on the site, to other portions of the Newhall Ranch Specific Plan site, and to the field crops currently cultivated on the site. These roadways carry small amounts of vehicular traffic and, therefore, do not generate an appreciable amount of roadway noise. Vehicular traffic on SR-126 is the dominant existing source of noise on, and in the vicinity of the tract map site. Noise from the small amount of traffic noise that is generated on the site, however, is masked by traffic noise on SR-126. Other sources of noise include agricultural activities on the northern portion of the site when equipment and workers are present.

Existing ambient noise levels at the tract map site were measured at four locations along the northern periphery of the site just south of SR-126 between 12:20 and 2:00 PM on November 24, 2003 using a Brüel and Kjaer Type 1 (Model 2238) sound level meter, which satisfies the American National Standards Institute (ANSI) for general environmental noise measurement instrumentation. Monitoring locations varied between 150 and 250 feet from the centerline of SR-126 and are shown in **Figure 4.8-3, On-Site Noise Monitoring Locations**. The sound meter was equipped with an omni-directional microphone, calibrated before the day's measurements, and set at 5 feet above ground. Weather conditions were cool and clear with little to no wind. Noise levels were monitored for 15 minutes at each location, with the average noise level ranging from 59.3 dB(A) L_{eq} to 68.9 dB(A) L_{eq}.[20] Maximum existing noise levels at the monitoring locations ranged from 68 dB(A) L_{eq} to 78 dB(A) L_{eq}. **Table 4.8-4**, **On-Site Noise Levels**, presents the findings of the monitoring at each location.

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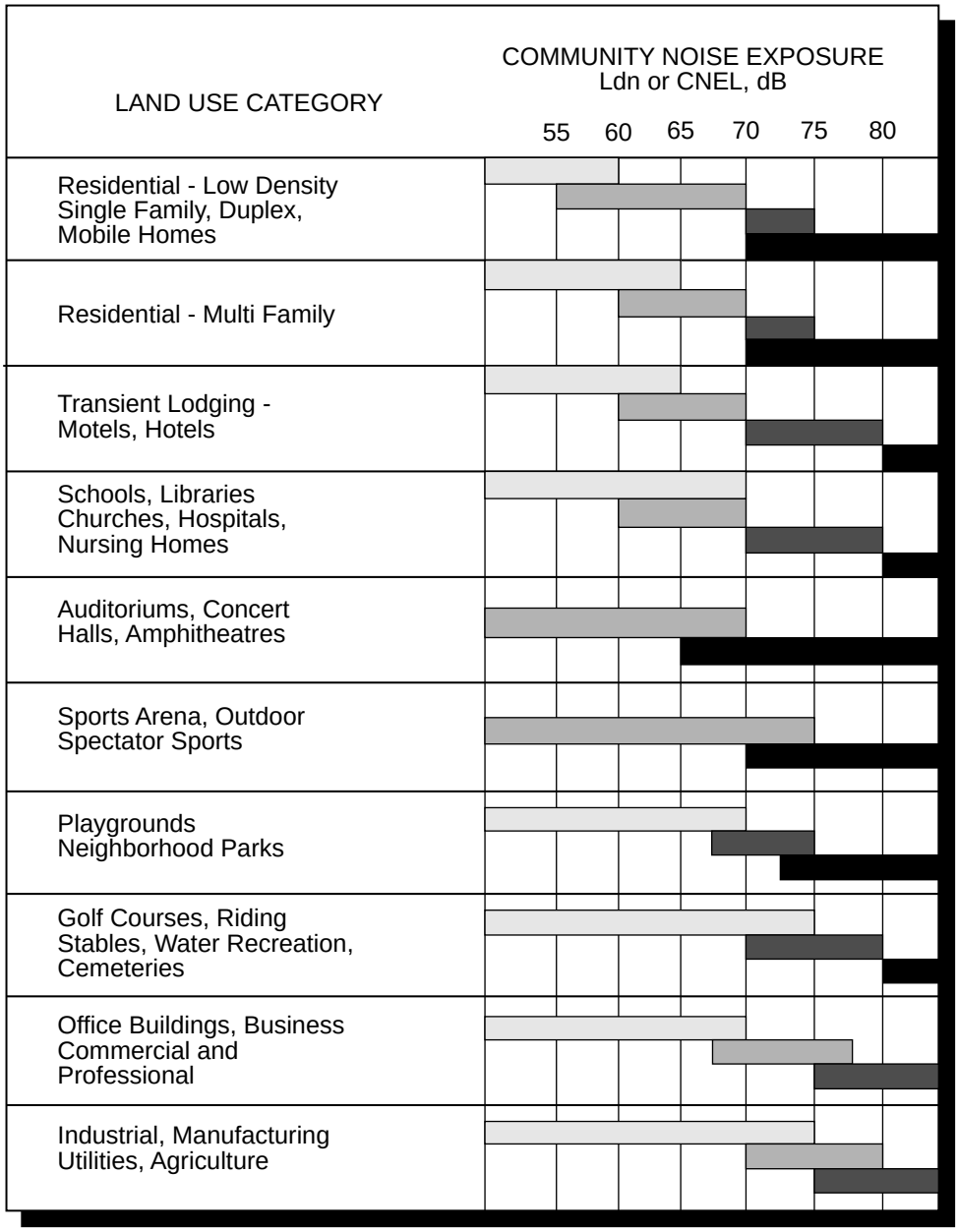
19 A resilient channel is a pre-formed section of sheet metal approximately 0.5-inch deep by 2.5 inches wide by 12 inches long that is installed between wallboard panels and framing to reduce sound transmission through walls. By preventing the wallboard from lying against the studs, the channel inhibits the transmission of sound through the framing.

20 The noise exposure on the site depends upon the location of the receptor. For example, noise levels across from the intersection of Wolcott Way and SR-126 with a direct line of sight to the highway are greater than those taken approximately 2,000 feet to the west where the site is shielded by a natural berm just south of SR-126.



NORMALLY ACCEPTABLE

Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

CONDITIONALLY ACCEPTABLE

New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

NORMALLY UNACCEPTABLE

New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise reduction features included in the design.

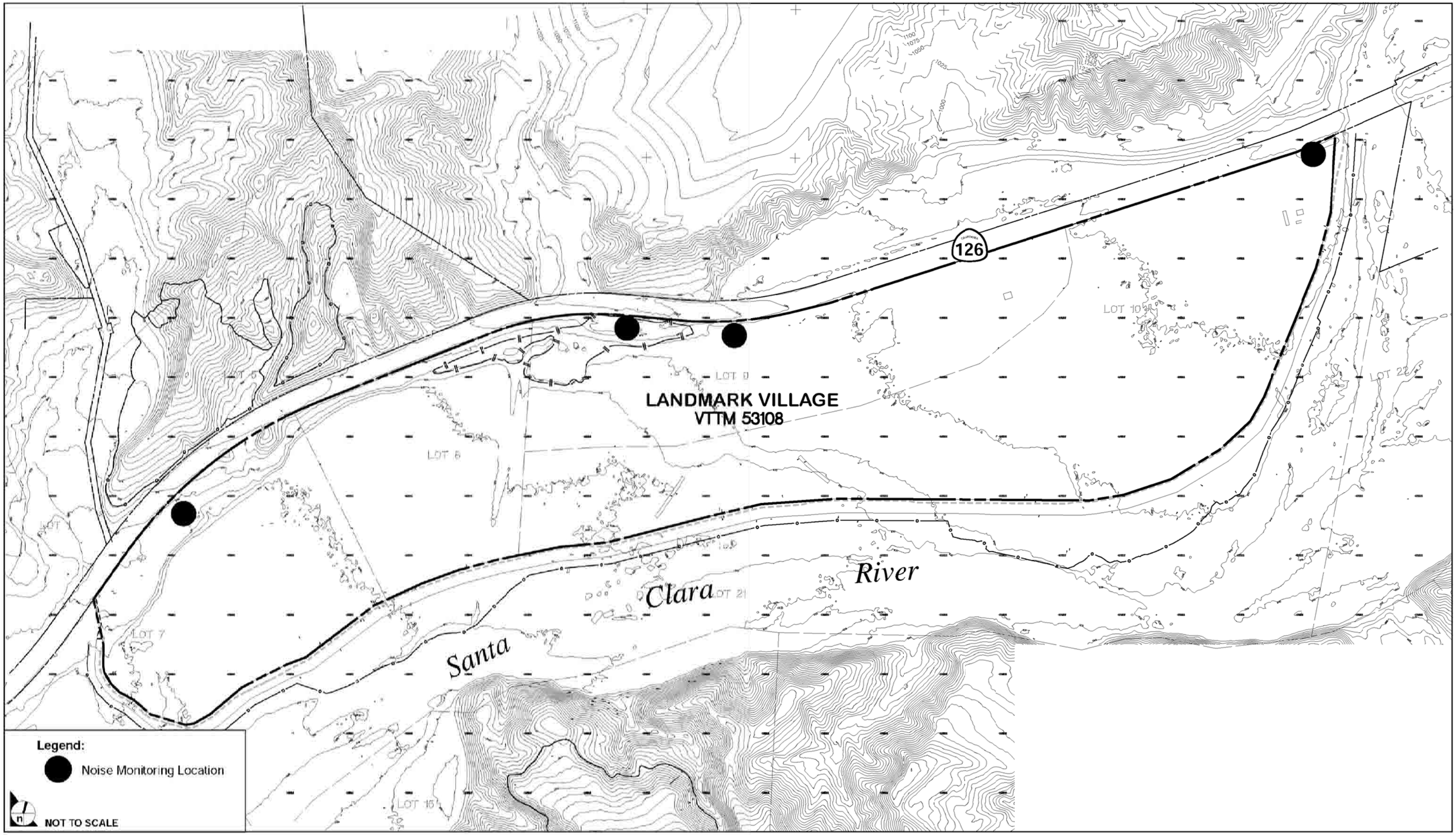
CLEARLY UNACCEPTABLE

New construction or development should generally not be undertaken.

SOURCE: California Department of Health, Office of Noise Control, Guidelines for the Preparation and Content of Noise Elements of The General Plan, February 1976.

FIGURE **4.8-2**

Land Use Compatibility Guidelines for Noise



SOURCE: Impact Sciences, Inc. – October 2004

FIGURE **4.8-3**

On-Site Noise Monitoring Locations

32-92•05/06

Table 4.8-4
On-Site Noise Levels

Monitoring Location	Maximum dB(A) L_{eq}[1]	Average dB(A) L_{eq}
1	78.0	68.9
2	71.0	59.2
3	68.0	61.3
4	70.0	59.3

Source: Impact Sciences, Inc. Results of on-site monitoring are provided in ***Appendix 4.8****.*

[1] *Results of maximum L_{eq} are rounded to the nearest decibel.*

These noise levels do not represent peak noise hour conditions. Measurements during peak noise hour conditions would be represented by higher noise values.

(2) Off-Site Roadway Noise Levels

The off-site noise-sensitive uses in the project study area include the Travel Village RV Park, which fronts SR-126 and is located to the east of the Landmark Village site, and the Val Verde community located just north of the Newhall Ranch Specific Plan site along Chiquito Canyon Road. Twenty-four hour noise measurements at Travel Village RV Park demonstrate that the existing noise level at the RV Park is approximately 68.5 dB(A) CNEL (see **Appendix 4.8** for noise measurement output data). Locations further from the roadway, such as the residences in the Val Verde community, would have substantially lower noise levels.

b. Point Sources of Noise

(1) On-Site Point Sources of Noise

With the exception of the few agricultural buildings and the agricultural activities on the site, there are no other point sources of noise on the tract map site. Existing agricultural operations generate very little noise. What noise is generated by equipment, when it is operating on the tract map site, is largely masked by highway noise. Equipment that may be operating on the eastern edge of the Landmark Village site may be temporarily audible at Travel Village RV Park.

(2) Off-Site Point Sources of Noise

Due to the dominance of highway noise on the project site, there are no point sources of noise in the vicinity that are audible on the project site. This includes noise generated at the Chiquita Canyon Landfill located north of the proposed project site. Noise levels generated by operations at the Chiquita Canyon Landfill are very low (50 dB(A) or less) at the landfill property boundary and are imperceptible on the Landmark Village site. Most of the noise associated with landfill operations that affect noise levels on the Landmark Village site is generated by truck traffic to and from the landfill. This traffic noise is already included in the measured and calculated on-site traffic noise levels in this impact analysis.

7. PROJECT IMPACTS

a. Significance Threshold Criteria

According to Appendix G of the 2005 *California Environmental Quality Act (CEQA) Guidelines*, a project would have a significant noise impact if it would result in:

- Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels;
- A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;
- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;
- For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels; or
- For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels.[21]

The following thresholds of significance were developed for this noise impact analysis based on the *CEQA Guidelines* criteria set forth above and the plans and policies identified previously in this EIR section. These thresholds are consistent with those used in the Newhall Ranch Specific Plan Program EIR, and apply to both project and cumulative project impacts.

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21 The proposed project site is not located within an airport land use plan or within 2 miles of a public airport, nor is it located within the vicinity of a private airstrip. Therefore, *Guidelines* criteria (e) and (f) are not applicable to this project or this EIR's analysis of noise impacts.

(1) Construction Noise Significance Thresholds

If occupants of the proposed project or occupants of off-site uses were subject to project-related construction noise levels in excess of the County's Noise Ordinance standards for construction noise, a significant construction noise impact would occur. For mobile source equipment this threshold is 75 dB(A) L_{eq} for single family residences, 80 dB(A) L_{eq} for multi-family residences and 85 dB(A) L_{eq} for residences in commercial areas every day, except Sundays and legal holidays, between 7:00 AM to 8:00 PM. At all other times, the noise thresholds for these uses would be 60, 64, and 70 dB(A) L_{eq}, respectively. For stationary source equipment, the threshold is 60 dB(A) L_{eq} for single-family residences, 65 dB(A) L_{eq} for multi-family residences and 70 dB(A) L_{eq} for residences in commercial areas every day, except Sundays and legal holidays, between 7:00 AM to 8:00 PM. At all other times, the noise thresholds for these uses would be 50, 55, and 60 dB(A) L_{eq}, respectively. Because the duration of most construction activities at on- and off-site locations is unknown (e.g., the length of time construction equipment would operate west of Travel Village RV Park is unknown), the noise thresholds are applied to all construction activities assuming long-term duration, whether the activities are considered short or long term under the Noise Ordinance.

(2) Operational Noise Significance Thresholds

(a) On-Site Significance Thresholds

A significant on-site mobile source noise impact would occur if exterior frequent use areas[22] for noise-sensitive land uses on the tract map site were exposed to noise levels above the normally acceptable guidelines utilized by the County. These threshold levels are 60 dB(A) CNEL for single family, 65 dB(A) CNEL for multi-family, and 70 dB(A) CNEL for schools and parks uses as identified in **Figure 4.8-2**. Residences located within mixed use/commercial areas would not have an exterior frequent use area (e.g., parks); therefore, the interior standard of 45 dB(A) would apply as a threshold of significance for those uses. Finally, if occupants of the proposed project were to be subject to point source noise levels originating on or off the site, which are above County Noise Ordinance standards identified in **Tables 4.8-2** and **4.8-3** for the types of uses proposed, a significant on-site noise impact would occur.

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22 A frequent use area is an exterior location in which people would congregate for recreation or other purposes. Frequent use areas include backyards of single-family residences, recreation areas in condominium and apartment complexes, active or passive recreational areas in parks, play areas at schools, and specified areas of other uses, such as churches.

(b) Off-Site Significance Thresholds

Off-site noise impacts consider both the guidelines identified in **Figure 4.8-2**, and community responses to changes in noise levels. Changes in a noise level of less than 3 dB(A) are not typically noticed by the human ear. Changes from 3 to 5 dB(A) may be noticed by some individuals who are extremely sensitive to changes in noise. A 5 dB(A) increase is readily noticeable. Based on this information, a significant off-site noise impact would occur if:

1. An increase of 5 dB(A) or greater in noise level occurs from project-related activities, even if levels remain within the same land use compatibility classification (e.g., noise levels remain within the normally acceptable range); or

2. An increase of 3 dB(A) or greater in noise level occurs from project-related activities which results in a change in land use compatibility classification (e.g., noise levels change from normally acceptable to conditionally acceptable); or

3. Any increase in noise levels occur where existing noise levels are already considered unacceptable under the *Guidelines*.

b. Construction Noise Impacts

Construction activities associated with the proposed project would generate noise from three locational sources —the Landmark Village tract map site, the off-site borrow and grading sites, and the proposed utility corridor. The noise generated by activities at each source, and the potential impacts to future on-site and existing off-site noise sensitive uses relative to each source, is addressed separately for each below.

(1) Landmark Village Tract Map Site

As discussed below, noise generated in connection with construction on the Landmark Village tract map site would be attributable to either stationary or mobile construction equipment.

(a) Stationary Construction Equipment Source Noise

Project development activities would primarily include site preparation (grading and excavation), and construction of internal roadways and other infrastructure, driveways, and structures. Up to 5.8 million cubic yards of earthen material would be excavated from the Adobe Canyon borrow site located within the Specific Plan boundary and hauled by truck to the tract map site where it would be compacted and graded. Additional earthwork is required at the mouth of Chiquito Canyon. These activities typically involve the use of heavy equipment, such as haul trucks, scrapers, tractors, loaders, concrete mixers, cranes, etc. Trucks would also be used to deliver equipment and building materials, and to haul away

waste materials. Smaller equipment, such as jackhammers, pneumatic tools, saws, and hammers would also be used throughout the site during the construction phases. In addition, piles may be driven into the Santa Clara riverbed during the construction of the Long Canyon Road Bridge. This equipment would generate both steady state and episodic noise that would be heard both on and off the project site.

The U.S. Environmental Protection Agency (U.S. EPA) has compiled data on the noise-generating characteristics of specific types of construction equipment. These data are presented in **Figure 4.8-4, Noise Levels of Typical Construction Equipment**. As shown, noise levels generated by heavy equipment can range from approximately 68 dB(A) to noise levels in excess of 100 dB(A) when measured at 50 feet. However, as previously noted, these noise levels would diminish rapidly with distance from the construction site at a rate of approximately 6.0 to 7.5 dB(A) per doubling of distance for hard and soft sites, respectively. For example, assuming a "hard" site, a noise level of 68 dB(A) measured at 50 feet from the noise source to the receptor would reduce to 62 dB(A) at 100 feet from the source to the receptor, and further reduce by another 6.0 dB(A) to 56 dB(A) at 200 feet from the source to the receptor.

In general, the first and noisiest stage of construction is site preparation, which usually involves importing soil from off-site locations, earth moving, and compaction of soils. High noise levels created during this phase would be associated with the operation of heavy-duty trucks, scrapers, graders, backhoes, and front-end loaders. When construction equipment is operating, noise levels can range from 73 to 96 dB(A) at a distance of 50 feet from individual pieces of equipment. During the second stage of construction, foundation forms are constructed and concrete foundations are poured. Primary noise sources include heavy concrete trucks and mixers, cranes, and pneumatic drills. At 50 feet from the source, noise levels in the 70 to 90 dB(A) range are common.

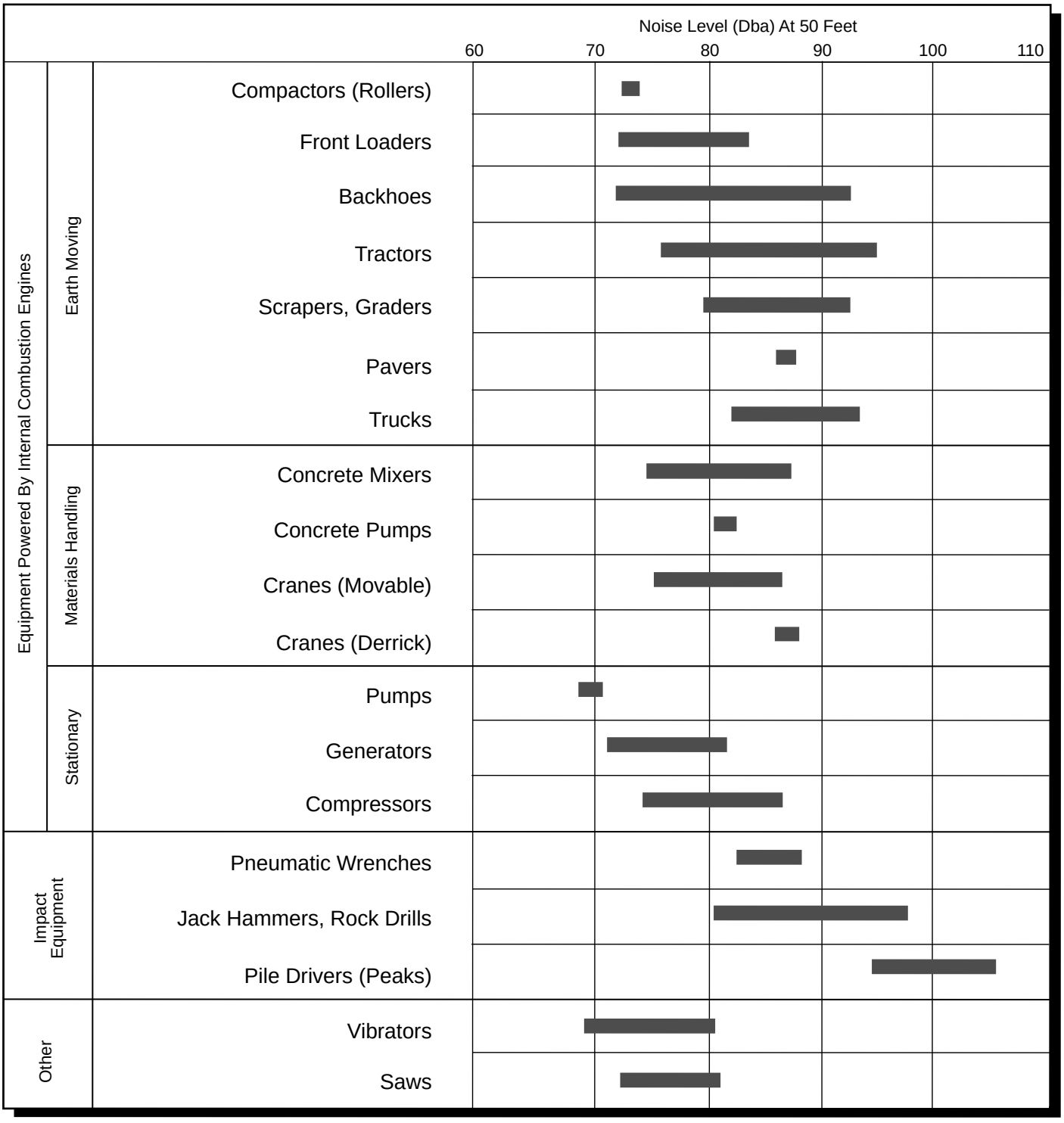
The third and fourth stages of construction consist of interior and exterior building construction, and site cleanup. Primary noise sources associated with the third phase include hammering, diesel generators, compressors, and light truck traffic. During this stage noise levels are typically in the 60 to 80 dB(A) range at a distance of 50 feet. The final stages typically involve the use of trucks, landscape rollers and compactors, with noise levels in the 65 to 75 dB(A) range.

Noise levels generated during the construction stages would primarily affect the occupants of on-site uses constructed in the project's earlier development stages and possibly occupants of Travel Village RV Park. Travel Village is located approximately 925 feet from the nearest proposed graded area on the tract map site (the location of Lot 391). Assuming the operation of a tractor with a decibel level of 95 dB(A) at 50 feet at the eastern boundary of the site (approximate location of Lot 391), the noise level at the westernmost boundary of Travel Village would be approximately 70 dB(A) assuming a drop-off rate of 6.0 decibels per doubling of distance. Occupants of Travel Village, located further away, would

experience less noise due to their greater distance from the construction operations and any intervening structures that may exist between them and the noise source. With regard to other off-site noise sensitive uses located within the project vicinity, at its closest point, the Landmark Village site is over 1 mile from the nearest residence located north of the Specific Plan site along Chiquito Canyon Road in the community of Val Verde. On-site construction noise would not likely be audible at this location because of the distance between the site and this area, traffic noise along SR-126 that would "drown" out construction noise, and intervening topography.

The Noise Ordinance (as presented in **Table 4.8-3**) does not include maximum construction noise levels for transient occupancy (i.e., Travel Village RV Park), but does specify a maximum daily construction noise level for semi-residential/commercial uses (i.e., residential used within a commercial area [see **Table 4.8-3**, above]) of 85 dB(A) for mobile equipment and 70 dB(A) for stationary equipment between the hours of 7:00 AM and 8:00 PM, except on Sundays. Given that the Noise Ordinance maximum noise levels are greater or equal to projected construction noise levels at Travel Village, no significant construction noise impacts to the RV park are anticipated. However, because on-site construction activities could cause the Noise Ordinance standards to be exceeded during short-term construction periods at future on-site residential uses, construction noise impacts are considered potentially significant without mitigation for such on-site areas.

Construction of the proposed Long Canyon Road Bridge may involve pile driving, which is considered a stationary source and subject to stationary source standards of the County Noise Ordinance (i.e., 60 and 65 dB(A) L_{eq} for single and multi-family residences, respectively, and 70 dB(A) for semi-residential, commercial uses, daily from 7:00 AM to 8:00 PM. except Sundays and legal holidays). Pile driving could generate short-term noise levels of approximately 105 dB(A) at 50 feet. If pile driving occurs after occupancy of proposed uses on the western side of the project site, it would cause noise levels to exceed 99.0 dB(A) at the residences closest to the activity (i.e., the apartment complex on Lot 354) for the duration of the pile driving. Residences located further away from the pile driving would experience less noise due to the greater distance from the construction, as well as to the shielding effect of future intervening structures; however, the noise levels could exceed 65 dB(A) and the County's noise ordinance for as much as 5,000 feet away from the source assuming no noise attenuation due to intervening terrain or structures. Because the Landmark Village tract map site is expected to develop in a pattern from east to west, with the western portion of the site nearest the pile-driving activity, the pile-driving activity is expected to be completed prior to the occupancy of dwelling units proposed nearest the Long Canyon Road Bridge. Therefore, no dwelling units located within 5,000 feet of the pile-driving site are anticipated to be occupied during the pile-driving activities. Consequently, no significant noise impacts



Note: Based On Limited Available Data Samples.

SOURCE: United States Environmental Protection Agency, 1971, "Noise From Construction Equipment And Operations, Building Equipment, And Home Appliances," Ntid 300-1.

FIGURE **4.8-4**

Noise Levels of Typical Construction Equipment

on future site residents from pile driving are expected. Pile driving may also be audible at off-site locations, such as Val Verde and the Travel Village RV Park. However, noise levels would not exceed applicable thresholds at Travel Village or the community of Val Verde. Pile-driving noise impacts, should they occur, would be significant within a 5,000-foot radius for the duration of the pile driving unless mitigated. Both the Travel Village and the Val Verde community are located more than 5,000 feet from the pile-driving site. Temporarily, vibration from the use of pile drivers could also be noticed by future residents of the Landmark Village project. If Landmark Village homes were to be occupied prior to bridge construction, impacts caused by vibration would be considered less than significant because of the relatively brief time period the pile drivers would be used, and the distance between the bridge site and the proposed homes. However, because the Landmark Village site is expected to develop in a pattern from east to west, with the western portion of the site nearest the pile-driving activity, the pile-driving activity is expected to be completed prior to the occupancy of dwelling units proposed nearest the Long Canyon Bridge. Consequently, no significant vibration impacts on future site residents from pile driving are expected. No other sources of excessive groundborne vibration are expected to occur as a result of the proposed project.

In order to reduce the potential impacts associated with construction activities, the County Department of Public Works, Construction Division typically limits construction activities to between the hours of 6:30 AM and 8:00 PM daily and prohibits work on Sundays and legal holidays. The County Department of Health Services has the authority to further restrict construction activities to between the hours of 7:00 AM and 7:00 PM and any time on Sundays or legal holidays if such noise would create a noise disturbance across a residential or commercial real-property line.[23] These restrictions do not, however, necessarily mitigate construction noise that would be in excess of the Noise Ordinance.

(b) Mobile Construction Equipment Source Noise

Heavy-duty trucks that would be used to move construction equipment onto the project site typically have a noise level of approximately 93 dB(A) at 50 feet.[24] Off-site sensitive receptors along the truck routes that would have a direct line of sight to the trucks would experience temporary, instantaneous noise levels up to 93 dB(A) at 50 feet from the roadway. Receptors located further away would experience less noise due to their greater distance from the roadway and to any intervening topography

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23 County of Los Angeles Ordinance No. 11743, Section 12.08.440. Noise disturbance is not defined in the noise ordinance. The County Health Officer has the authority to define and determine the extent of a noise disturbance on a case-by-case basis.

24 United States Environmental Protection Agency, *Noise From Construction Equipment and Operations, Building Equipment, and Home Appliances* (NTID 300-1), (Washington, D.C.: United States Environmental Protection Agency), 1971.

and/or structures that may exist between them and the noise source. Because the main pieces of heavy equipment would be moved onto the site just once for each construction phase, this noise impact would be temporary and instantaneous in nature as the trucks pass by these receptors. Furthermore, truck traffic noise experienced at the receptor locations would diminish rapidly as the trucks travel away from them. In short, heavy-duty truck traffic associated with this project would be periodic and restricted to daytime hours, is expected to travel along highways and major arterials where less noise sensitive uses are located, is not expected to traverse through residential areas or past sensitive receptors, and is similar in nature to existing vehicle noise along SR-126. As such, short-term construction truck traffic would not result in a significant noise impact.

Although the daily transportation of construction workers is expected to cause some increases in noise levels along roadways in the project study area, this traffic, which would be largely comprised of passenger vehicles and pick-up trucks, would not represent a substantial percentage of daily volumes in the area and would increase levels less than the 3 dB(A) threshold. Therefore, construction-worker traffic noise would be less than significant.

(2) Borrow Site Grading Activities

Because the Adobe Canyon borrow site is not in close proximity to existing sensitive receptors, grading operations at this site would not result in a significant noise impact. As stated above, when heavy construction equipment is operating, noise levels can range from 73 to 96 dB(A) at a distance of 50 feet from individual pieces of equipment. A 96 dB(A) noise level would attenuate to 72 dB(A) at 800 feet, which would be a less than significant mobile source noise impact under the County's Noise Ordinance. Noise from grading operations in Chiquito Canyon would likely not be audible at the community of Val Verde except to individuals with the most sensitive hearing. However, given the distance between the grading area and Val Verde, no significant impacts are expected from this source.

Approximately 145,000 heavy-truck trips would be required to haul up to 5.8 million cubic yards of fill material to the project site from Adobe Canyon. The number of truck trips traveling along the haul route will vary daily, depending on the nature of the construction activity. The haul route would traverse Long Canyon and cross the Santa Clara River at an existing agricultural crossing. These trucks would have noise levels up to 93 dB(A) along the route.[25] However, no significant impact would occur along this haul route as no sensitive receptors exist in this area.

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25 Noise measurements of double capacity haul trucks at intersections are based on in-field measurements by Impact Sciences, Inc. staff at similar project locations.

(3) Utility Corridor and Tank Sites

The utility corridor for the proposed project would extend from the existing Water Reclamation Plant on the Old Road located east of the Newhall Ranch Specific Plan to the proposed water reclamation plant, located west of the Landmark Village site within the Specific Plan. The corridor would also extend north of SR-126 up Chiquito Canyon and Wolcott Road to the proposed tank sites. Within Landmark Village, the utility corridor would follow the easternmost tract boundary from SR-126 to the location of proposed Lot 323 (open space). From this point, the utility corridor would follow the alignment of proposed "A" Street to Long Canyon Road where it would turn southerly and then follow the southern and western perimeters of proposed Lots 403 (park), 354 (apartment), and 357 (mixed use commercial) to SR-126 where it would extend westerly south of SR-126 to the proposed water reclamation plant. The utility corridor through Landmark Village would be constructed prior to occupancy of the site, so noise from its construction would not have a noise impact on future uses on the project site. Its on- and off-site construction, however, would be audible at off-site locations.

Construction activity occurring within the utility corridor is expected to utilize concrete saws, scrapers, excavators/trenchers, cranes, pavers and other paving equipment, rollers, heavy-duty trucks, water and other heavy-duty trucks, signal boards (possibly diesel-fueled), and other construction equipment. The loudest of this equipment could generate noise levels up to 93 dB(A) at 50 feet.

Occupants of the RV park would be as close as 75 feet from that segment of the utility corridor located south of SR-126 and north of the RV Park. Guests of this facility could be exposed to noise levels of up to 93 dB(A) during utility corridor construction, which would be a significant mobile source construction noise impact absent mitigation. This noise level would be clearly audible over the traffic noise generated along SR-126 and would "drown out" the traffic noise during hours of corridor construction at this location.[26]

Within the Landmark Village site to the west of the RV Park, the corridor along the eastern tract boundary would be 950 feet from the closest inhabitable location within the RV Park. At 950 feet, a 93 dB(A) noise level would attenuate to approximately 65 dB(A). This noise level, when combined with the existing highway traffic noise level of 68.5 dB(A) CNEL in the RV Park, could be as high as 70.5 dB(A) during hours of corridor construction at this location, which would be a less than significant mobile

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26 When two noise sources have a 10-decibel or greater difference in noise levels, the higher noise level drowns out the lower noise level. California Department of Transportation, *Technical Noise Supplement; A Technical Supplement to the Traffic Noise Analysis Protocol*, (Sacramento, California: October 1998), p. N15.

source construction noise impact.[27] Given the distance from the utility corridor and Val Verde, no significant impacts would occur due to the noise source.

c. Operational Noise Impacts

As the project builds out, on- and off-site noise impacts would result from project-generated traffic, as well as from human activity on the project site itself. This would result in potential impacts to proposed on-site uses from roadway noise, potential impacts to existing off-site uses from roadway noise, and potential impacts to on- and off-site uses from the project's point source noise. Each of these potential noise impacts is discussed separately below.

(1) Impacts to On-Site Uses from Roadway Noise

As stated in **Section 4.5, Traffic/Access**, of this EIR, the proposed project is projected to generate approximately 41,900 average daily trips when completed and fully operational. Post-project on-site traffic noise levels were calculated using TNM Version 2.5, while off-site traffic noise levels for Travel Village were calculated using the FHWA *Highway Traffic Noise Prediction Model*.[28] Roadway noise impacts on the Landmark Village site were calculated for the worst-case noise conditions. For SR-126 and proposed Wolcott Road, the worst-case noise conditions are represented by Santa Clarita Valley build-out traffic volumes and distribution conditions. For proposed Long Canyon Road and "A" Street, the worst-case conditions are represented by project build-out volumes and distribution conditions in Year 2010 rather than Santa Clarita Valley buildout. As Newhall Ranch builds out, traffic that would normally occur on these roadways would be redistributed on other future Newhall Ranch roadways, thereby reducing traffic volumes on Long Canyon Road and "A" Street.

Findings of the TNM analysis for proposed project conditions are presented in **Table 4.8-5, On-Site Noise Levels under Proposed Plan at Santa Clarita Valley Buildout**. Multiple noise receptors were plotted on most lots along SR-126 through Landmark Village and along proposed Wolcott Road, Long Canyon Road, and "A" and "C" Streets within Landmark Village. Therefore, the modeling analyzes a range of locations along studied roadways. Wherever multiple sound levels were calculated in one lot,

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27 When two noise sources have a 2 to 3 decibel difference in noise levels, 2 decibels are added to the higher noise level. California Department of Transportation, *Technical Noise Supplement; A Technical Supplement to the Traffic Noise Analysis Protocol*, (Sacramento, California: October 1998), p. N15.

28 As previously discussed, the FHWA *Noise Prediction Model* calculates the average noise level at specific locations based on traffic volumes, average speeds, roadway geometry, and site environmental conditions. The average vehicle noise rates (energy rates) utilized in the FHWA Model have been modified by the California Department of Transportation (Caltrans) to reflect average vehicle noise rates identified for California.

the sound levels were logarhythmically averaged. The averaged sound levels are presented in **Table 4.8-5**. All of the calculated sound levels are available for review in **Appendix 4.8** of this EIR.

Findings of the TNM analysis indicate that certain single- and multi-family residential land uses proposed along or in close proximity to SR-126 and along "A" Street[29] would be exposed to traffic noise levels in excess of the *Guidelines* (i.e., traffic noise levels would exceed 60 dB(A) CNEL for single family residences and 65 dB(A) for multi-family residences), and, therefore, these uses would be significantly impacted. With respect to the proposed Mixed Use/Commercial lots, as indicated on **Table 4.8-5**, because development of these lots would not include exterior frequent use areas, any residential uses that may be constructed within this designation would be significantly impacted only if interior noise levels exceed 45 dB(A) between 7:00 AM and 10:00 PM.

Table 4.8-5
On-Site Noise Levels under Proposed Plan
at Santa Clarita Valley Buildout

Lot No.	Proposed Land Use	TOS (CNEL)[1]	Predominant Vehicular Noise Source	CNEL SCV Buildout	Exceeds TOS By (dB)[3]
11*	Single Family	60	"A" Street	61	2
22*	Single Family	60	"A" Street	63	3
92	Single Family	60	SR-126	53	-7
98	Single Family	60	SR-126	54	-6
103	Single Family	60	SR-126	56	-4
105	Single Family	60	SR-126	57	-3
107	Single Family	60	SR-126	57	-3
110	Single Family	60	SR-126	58	-2
112	Single Family	60	SR-126	60	0
114	Single Family	60	SR-126	57	-3
115	Single Family	60	"A" Street	60	0
119*	Single Family	60	"A" Street	61	1
122*	Single Family	60	"A" Street	62	2
126*	Single Family	60	"A" Street	62	2
128*	Single Family	60	"A" Street	62	2
146*	Single Family	60	"A" Street	61	1
152*	Single Family	60	"A" Street	62	2

29 As Newhall Ranch Specific Plan builds out, traffic volumes along "A" Street would decrease as traffic becomes redistributed throughout the Specific Plan site; however, the noise impacts on these uses are based on 2007 traffic conditions on this roadway.

Lot No.	Proposed Land Use	TOS (CNEL)[1]	Predominant Vehicular Noise Source	CNEL SCV Buildout	Exceeds TOS By (dB)[3]
188*	Single Family	60	"A" Street	61	1
315*	Single Family	60	"A" Street	61	1
325*	Condominium	65	SR-126	70	5
326*	Condominium	65	SR-126	71	5
329	Condominium	65	"A" Street	63	-2
330	Recreation	70	"A" Street	66	-4
331	Condominium	65	"A" Street	65	0
332/333**	Mixed Use/ Commercial	45	Comb.	63	--
337	Park	70	"A" Street	63	-7
338*	Condominium	65	"A" Street	65	0
339	Condominium	65	"A" Street	64	-1
340	Recreation	70	"A" Street	65	-5
341*	Condominium	65	"A" Street	65	0
342	Condominium	65	"A" Street	64	-1
343*	Condominium	65	SR-126	68	3
343	Condominium	65	"A" Street	63	-2
344	Park	70	SR-126	66	-4
344	Park	70	"A" Street	62	-8
345	School	70	SR-126	67	-3
345	School	70	"A" Street	61	-9
346*	Condominium	65	SR-126	68	3
346	Condominium	65	"A" Street	63	-2
347**	Mixed Use	45	Combin.[2]	64	--
349	Apartment	65	"A" Street	65	0
349*	Apartment	65	SR-126	66	1
350	Condominium	65	"A" Street	65	0
350*	Condominium	65	SR-126	68	3
351**	Mixed Use/ Commercial	45	Long Canyon Rd	66	--
352**	Mixed Use/ Commercial	45	Long Canyon Rd	68	--
354	Apartment	65	SR-126 (facing River)	61	-4
354*	Apartment	65	SR-126	67	2
357**	Mixed Use/ Commercial	45	SR-126	68	--
361**	Mixed Use/ Commercial	45	SR-126	66	--
367**	Mixed Use/ Commercial	45	Long Canyon Rd	67	--

Lot No.	Proposed Land Use	TOS (CNEL)[1]	Predominant Vehicular Noise Source	CNEL SCV Buildout	Exceeds TOS By (dB)[3]
370**	Mixed Use/ Commercial	45	Long Canyon Rd	66	--
371**	Mixed Use/ Commercial	45	SR-126	65	--
375**	Mixed Use/ Commercial	45	"A" Street	61	--
376	Apartment	65	SR-126	67	2
376*	Apartment	65	"A" Street	64	-1
377*	Condominium	65	SR-126	69	4
377*	Condominium	65	"A" Street	67	2
384**	Mixed Use/ Commercial	45	SR-126	71	--
385**	Mixed Use/ Commercial	45	SR-126	72	--
388**	Mixed Use/ Commercial	45	SR-126	71	--
389**	Mixed Use/ Commercial	45	SR-126	71	--
403	Park	70	Long Canyon Rd	62	-8
416	Condominium	65	"A" Street	62	-3

Source: Impact Sciences, Inc. Noise calculations are presented in ***Appendix 4.8*** *of this EIR.*
TOS = threshold of significance

[1] *The interior threshold of significance for mixed use commercial is 45 dB(A) CNEL because there is potential for multi-family uses to occur within this category.*

[2] *Vehicular noise source is a combination of SR-126, Wolcott Road, and "A" Street.*

[3] *No numeric value is given for Mixed Use Commercial uses because interior noise levels are based upon building construction and location of residences within the commercial centers.*

* *Noise level would exceed the normally acceptable levels of the* Guidelines for Noise and Land Use Compatibility, *unless mitigated.*

** *No exterior frequent use areas for sensitive receptors (e.g., parks) would be provided in lots designated for mixed use commercial; therefore, residential units that may occur on these lots would be significantly impacted only if interior noise levels would exceed 45 dB(A) between 7:00 AM and 10:00 PM, unless mitigated.*

(2) Impacts to Off-Site Uses from Roadway Noise

Travel Village RV Park is the only noise-sensitive use in the Project Study Area[30] that could potentially be significantly impacted by project-generated noise. Potential noise increases at this location due to future on-site activities and the addition of project-related traffic along SR-126 were modeled both with and

[30] The geographic limits of the Project Study Area are defined in the *Landmark Village Traffic Impact Analysis* (May 2004) provided in **Appendix 4.7** of this EIR.

without the project's traffic volumes to determine if the project would cause a significant noise impact at this location.

The impact of Landmark Village traffic on the existing Travel Village RV Park is represented by the difference between noise generated by the traffic volumes on SR-126 east of proposed Wolcott Road under existing conditions and at project buildout in year 2010. Approximately 22,200 project trips[31] would pass by the RV Park at project buildout. The addition of the project's 22,200 trips to this roadway segment would increase the existing noise level at the RV Park from 68.5 dB(A) CNEL to 71.8 dB(A) CNEL, which would be a 3.3-decibel increase and is considered to be a significant impact.

Without the proposed project, the Year 2010 noise level at Travel Village would be 71.0 dB(A) CNEL at 100 feet from the highway centerline. Adding the project's 22,200 trips to this segment of SR-126 would increase the noise level at this location to 73.1 dB(A) CNEL, which represents a 2.1-decibel increase. Because noise levels at the RV park would be in excess of normally acceptable noise levels under the *Guidelines* without the project, the 2-decibel project-related noise increase at the RV park would also be considered a significant impact. Because the noise level at the RV park would be greater than 70 dB(A) CNEL by 2010, the project is required to mitigate the noise impact on the RV park under Mitigation Measure 4.9-14 of the Newhall Ranch Specific Plan Program EIR.

Approximately 0.3 percent of Landmark Village traffic (130 average daily trips [ADT]) would travel to and from Ventura County (130 trips at the Los Angeles/Ventura County line/41,900 project ADTs = 0.003) on SR-126 between the County line and the City of Fillmore. West of the City of Fillmore, project traffic would be primarily distributed further along SR-126 and along State Route 23 (SR-23), with less than 10 of the 130 Landmark Village ADT traveling south from Fillmore on SR-23 to the City of Moorpark.[32] The Newhall Ranch Specific Plan Program EIR examined two noise sensitive locations within 100 feet of these roadways in Ventura County: the Santa Clara School (the Little Red School House) and single-family homes north of Casey Road in Moorpark. While there are other sensitive locations along these roadways, these are worst-case representations of all noise sensitive receptors located in proximity to these highway segments. The Program EIR indicates that the 1,038 ADTs of the Specific Plan's traffic along this roadway would increase future noise levels along SR-126 between Newhall Ranch and Fillmore by 0.9 dB(A) CNEL, which is less than the threshold of significance of 3.0 dB(A) and barely perceptible. Given that Landmark Village traffic volumes would represent 12.5 percent (130/1,038 = 0.125) of Newhall Ranch's

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31 This number is derived by multiplying total project trips by 53 percent, which is the percentage of project trips assumed to travel east on SR-126 (41,900 * .53 = 22,207).

32 See, EIR **Section 4.7**, **Traffic/Access, Table 4.7-23**, **2010 Ventura County ADT Volumes**. Any project-related contribution of traffic to roadways other than SR-126 and SR-23 in Ventura County would be extremely limited and would not have the potential to result in a significant traffic noise impact.

traffic volumes, the noise impact of Landmark Village traffic along this roadway segment would be considerably less and is similarly considered to be less than significant. Nonetheless, Landmark Village is required to mitigate noise impacts on specific sensitive receptors in Ventura County under Mitigation Measures 4.9-15 and 4.9-16 of the Newhall Ranch Specific Plan Program EIR.

In conclusion, if the Landmark Village project were to be constructed and fully occupied today, it would result in a significant noise impact at the RV Park because it would increase noise levels at the RV Park by more than 3 decibels and would result in a change in land use compatibility classification at the RV Park from normally acceptable to conditionally acceptable. Project-related traffic noise would cause a 2-decibel noise increase at the RV Park in year 2010 which would normally be less than significant; however, because noise levels at the RV Park would be greater than 70 dB(A) CNEL and greater than normally acceptable noise levels for transient lodging, project-related noise impacts would be significant. Because year 2010 noise levels at the RV Park would exceed 70 dB(A) CNEL, the project is required to construct a noise abatement barrier to reduce noise levels at the RV Park to 70 dB(A) CNEL or less under Mitigation Measure 4.9-14 contained in the Newhall Ranch Specific Plan Program EIR.

The project would cause a less than significant noise impact at residences in Val Verde and in Ventura County under existing and year 2010 conditions. However, under Mitigation Measures 4.9-15 and 4.9-16 of the Program EIR, the project is required to mitigate its contribution to cumulative noise impacts at specific sensitive receptors in Ventura County.

(3) Point Source Noise Impacts on On-Site and Off-Site Uses

Future residents of Landmark Village would generate and be exposed to point source noise, including people talking, doors slamming, parking lot cleaning, air conditioning units, lawn care equipment, stereos, domestic animals, etc. These noise sources contribute to the ambient noise levels experienced in all similarly-developed areas and typically do not exceed the noise standards for the types of land uses proposed. Furthermore, given their distances from Travel Village, it is unlikely that point source noise at Landmark Village would be audible at that location.

Future residents with direct lines-of-sight to the proposed mixed use/commercial, school, park and other recreational uses would detect short-term and instantaneous noise associated with human activity, such as people talking, children playing, school bells, car doors slamming, auto alarms, tires squealing, etc. These noise levels could be considered an annoyance if they were to occur at odd hours (i.e., between 10:00 PM and 7:00 AM); however, most of these activities are not expected to occur at these hours, and would not typically exceed the County Noise Ordinance standards identified in **Table 4.8-2**. As a result, they are considered less than significant at locations on or off the Landmark Village site.

Other point source noises from the mixed use/commercial uses proposed on the site and the school would be from air conditioning units, delivery trucks, garbage trucks, and employee parking in close proximity to residential uses. Loading dock activities at the mixed use/commercial uses would also occur briefly and intermittently throughout most days, including during early morning hours. In addition, noise would be generated through the use of parking lot vacuums and other facility-cleaning activities. Section 12.08.460 of the County Noise Ordinance prohibits the loading, unloading, opening, closing, or other handling of boxes, crates, containers, building materials, garbage cans or similar objects between the hours of 10:00 PM and 6:00 AM in such a manner as to cause a noise disturbance; however, parking lot and facility cleaning can occur during the late night or early morning hours when parking lots are empty. As a result, cleaning operations are activities that could be heard by nearby residents during nighttime hours and could be considered an annoyance, or even significant impacts if they exceed the County Noise Ordinance standards identified in **Table 4.8-2** and are not mitigated.

Fire trucks and paramedic units leaving the fire station site will use, on occasion, sirens and air horns. Information provided by the Los Angeles County Fire Department indicates that sirens are typically sounded when fire apparatus leave the fire stations and continue until they arrive at their destination. Sirens currently utilized by the Fire District are manufactured by Federal Signal, Model Q2B. This siren has been measured to have a noise level of 123 dB at 10 feet. Los Angeles County Noise Ordinance No. 11743, Section 12.08.570 exempts warning devices necessary for the protection of public safety, as for example police, fire and ambulance sirens, and train horns from standard noise decibel thresholds. Consequently, there would be no significant impacts from noise sources associated with the fire station and associated vehicles.

Point sources of noise from the parks could be from ball fields used during evening hours by the school and/or intramural events that could last for more than several hours. Noises typical of such uses would be from parking lots, participants and observers, loud speakers, etc. Noise levels from these activities could exceed the County Noise Ordinance at residences within Landmark Village that are proposed in close proximity to the school and the public parks, resulting in a significant impact on the residents unless mitigated.

Specific residential lots that could be adversely affected by commercial and recreational activities on the site are depicted on **Table 4.8-6, On-Site Uses Potentially Impacted By On-Site Commercial and Recreational Activities**.

Table 4.8-6
On-Site Uses Potentially Impacted
By On-Site Commercial and Recreational Activities

Lots	Proposed Use	Point-Source Noise Generator
188–192, 310–315	Single Family Residential	Public Park on Lot 337
339, 343	Condominiums	Public Park on Lot 344
346	Condominiums	Mixed Use/Commercial uses proposed west of Wolcott Road
349	Apartments	Mixed Use/Commercial uses proposed west of Wolcott Road
354	Apartments	Mixed Use/Commercial uses proposed west of Long Canyon Road
376	Apartments	Mixed Use/Commercial uses proposed east of Long Canyon Road
416	Condominiums	Mixed Use/Commercial uses proposed east of Long Canyon Road

As previously mentioned, noise levels generated by operations at the Chiquita Canyon Landfill are very low (50 dB(A) or less) at the landfill property boundary and are imperceptible on the Landmark Village site. No other off-site point source noises would be audible at the Landmark Village site due to the on-site traffic noise from SR-126.

8. MITIGATION MEASURES

Although the proposed Landmark Village project may result in potential noise impacts absent mitigation, the County already has imposed mitigation measures required to be implemented as part of the Newhall Ranch Specific Plan. These mitigation measures, as they relate to noise, are found in the previously certified Newhall Ranch Specific Plan Program EIR (March 8, 1999) and the adopted Mitigation Monitoring Plan for the Specific Plan (May 2003). In addition, this EIR identifies recommended mitigation measures specific to the Landmark Village project site. The project applicant has committed to implementing the applicable mitigation measures from the Newhall Ranch Specific Plan, and will implement the mitigation measures recommended for the proposed Landmark Village project to ensure that future development of the project site would not result in noise impacts, and would not adversely affect adjacent properties.

a. Mitigation Measures Required by the Adopted Newhall Ranch Specific Plan, as they Relate to the Landmark Village Project

The following mitigation measures (Mitigation Measure Nos. 4.9-1 through 4.9-17, below) were adopted by the County in connection with its approval of the Newhall Ranch Specific Plan (May 2003). The applicable mitigation measures will be implemented to mitigate the potentially significant noise impacts associated with the proposed Landmark Village project. These measures are preceded by "SP," which stands for Specific Plan.

(1) Construction Mitigation Measures

SP 4.9-1 All construction activity occurring on the Newhall Ranch Specific Plan site shall adhere to the requirements of the "County of Los Angeles Construction Equipment Noise Standards," County of Los Angeles Ordinance No. 11743, Section 12.08.440 as identified in [Newhall Ranch Specific Plan Program EIR] Table 4.9-3.

SP 4.9-2 Limit all construction activities near occupied residences to between the hours of 6:30 AM and 8:00 PM, and exclude all Sundays and legal holidays pursuant to County Department of Public Works, Construction Division standards.

SP 4.9-3 When construction operations occur adjacent to occupied residential areas, implement appropriate additional noise reduction measures that include changing the location of stationary construction equipment, shutting off idling equipment, notifying adjacent residences in advance of construction work, and installing temporary acoustic barriers around stationary construction noise sources.

SP 4.9-4 Locate construction staging areas on-site to maximize the distance between staging areas and occupied residential areas.

(2) Operational Mitigation Measures

SP 4.9-5 Where new single family residential buildings are to be constructed within an exterior noise contour of 60 dB(A) CNEL or greater, or where any multi-family buildings are to be constructed within an exterior noise contour of 65 dB(A) CNEL or greater, an acoustic analysis shall be completed prior to approval of building permits. The acoustical analysis shall show that the building is designed so that interior noise levels resulting from outside sources will be no greater than 45 dB(A) CNEL.

SP 4.9-6 For single-family residential lots located within the 60 dB(A) CNEL or greater noise contour, an acoustic analysis shall be submitted prior to tentative approval of the subdivision. The acoustic analysis shall show that exterior noise in outdoor living areas (e.g., back yards, patios, etc.) will be reduced to 60 dB(A) CNEL or less. *(The noise impacts analysis presented in this EIR* ***Section 4.8****, and the accompanying technical report presented in* ***Appendix 4.8****, provide the acoustic analysis required by this mitigation measure.)*

SP 4.9-7 For multi-family residential lots located within the 65 dB(A) CNEL or greater noise contour, an acoustic analysis shall be submitted prior to tentative approval of the subdivision. The acoustic analysis shall show that exterior noise in outdoor living areas (e.g., back yards, patios, etc.) will be reduced to 65 dB(A) CNEL or less. *(The noise impacts analysis presented in this EIR* ***Section 4.8****, and the accompanying technical report presented in* ***Appendix 4.8****, provide the acoustic analysis required by this mitigation measure.)*

SP 4.9-8 For school sites located within the 70 dB(A) CNEL or greater noise contour, an acoustic analysis shall be submitted prior to tentative approval of the subdivision. The acoustic analysis shall show that noise at exterior play areas will be reduced to 70 dB(A) CNEL or less. *(The noise impacts analysis presented in this EIR* ***Section 4.8****, and the accompanying technical report presented in* ***Appendix 4.8****, provide the acoustic analysis required by this mitigation measure.)*

SP 4.9-9 All residential air conditioning equipment installed within the Newhall Ranch Specific Plan site shall adhere to the requirements of the County of Los Angeles Residential Air Conditioning and Refrigeration Noise Standards, County of Los Angeles Ordinance No. 11743, Section 12.08.530.

SP 4.9-10 All stationary and point sources of noise occurring on the Newhall Ranch Specific Plan site shall adhere to the requirements of the County of Los Angeles Ordinance No. 11743, Section 12.08.390 as identified in Table 4.9-2, County of Los Angeles Exterior Noise Standards for Stationary and Point Noise Sources.

SP 4.9-11 Loading, unloading, opening, closing, or other handling of boxes, crates, containers, building materials, garbage cans or similar objects between the hours of 10:00 PM and 6:00 AM in such a manner as to cause a noise disturbance is prohibited in accordance with the County of Los Angeles Ordinance No. 11743, Section 12.08.460.

SP 4.9-12 Loading zones and trash receptacles in commercial and Business Park areas shall be located away from adjacent residential areas, or provide attenuation so that noise levels at

residential uses do not exceed the standards identified in Section 12.08.460 of the Ordinance No. 11743.

SP 4.9-13 Where residential lots are located with direct lines of sight to the Magic Mountain Theme Park, an acoustic analysis shall be submitted to show that exterior noise on the residential lots generated by activities at the park do not exceed the standards identified in Section 12.08.390 of the Ordinance No. 11743 as identified in Table 4.9-2, County of Los Angeles Exterior Noise Standards for Stationary and Point Noise Sources. (*This mitigation measure is not applicable to the Landmark Village project because the project does not include lots located with direct lines-of-sight to the Magic Mountain Theme Park.*)

SP 4.9-14 After the time that occupancy of uses on the Newhall Ranch Specific Plan site occurs, AND when noise levels at the Travel Village RV Park reach 70 dB(A) CNEL at locations where recreational vehicles are inhabited, the applicant shall construct a noise abatement barrier to reduce noise levels at the RV Park to 70 dB(A) CNEL or less.

SP 4.9-15 Despite the absence of a significant impact, applicants for all building permits of Residential, Mixed-Use, Commercial, and Business Park land uses (Project) shall pay to the Santa Clara Elementary School District, prior to issuance of building permits, the project's pro rata share of the cost of a sound wall to be located between SR-126 and the Little Red School House. The project's pro rata share shall be determined by multiplying the estimated cost of the sound wall by the ratio of the project's estimated contribution of ADTs on SR-126 at the Little Red School House (numerator) to the total projected cumulative ADT increase at that location (denominator).[33] The total projected cumulative ADT increase shall be determined by subtracting the existing trips on SR-126[34] from the projected cumulative trips as shown in Table 1 of Topical Response 5 – Traffic Impacts to State and Local Roads in Ventura County after adding the total Newhall Ranch ADT traveling west of the City of Fillmore. (Prior to the issuance of building permits for Landmark Village, the project applicant shall calculate and pay to the Santa Clara Elementary School District the pro-rata share of the cost to construct the subject sound wall.) See, EIR Section 4.5, which determined that the Landmark Village project at buildout in 2010 would generate 105 ADTs on SR-126 at the Little Red School House (EIR **Table 4.7-22**). Section 4.5 also determined that the 2010 ADT on SR-126 at the Little Red School House would be 35,000 (EIR **Table 4.7-22**).

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33 Cost of Sound Wall X (Project ADT on SR-126 @ LRSH*/Total Projected Cumulative ADT Increase on SR-126 @ LRSH*) * LRSH = Little Red School House.

34 25,165 ADT using linear extrapolation from Table 1 of Topical Response 5 – Traffic Impacts to State and Local Roads in Ventura County.

SP 4.9-16 Despite the absence of a significant impact, the applicant for all building permits of Residential, Mixed-Use, Commercial and Business Park land uses (Project) shall participate on a fair-share basis in noise attenuation programs developed and implemented by the City of Moorpark to attenuate vehicular noise on SR-23 just north of Casey Road for the existing single-family homes which front SR-23. The mitigation criteria shall be to reduce noise levels to satisfy state noise compatibility standards. The project's pro rata share shall be determined by multiplying the estimated cost of attenuation by the ratio of the project's estimated contribution of ADTs on SR-23 north of the intersection of SR-23 and Casey Road (numerator) to the total projected cumulative ADT increase at that location (denominator).[35] The total projected cumulative ADT increase shall be determined by subtracting the existing trips on SR-23 north of Casey Road[36] from the projected cumulative trips as shown in Topical Response 5 – Traffic Impacts of the Program EIR to State and Local Roads in Ventura County after adding the total Newhall Ranch ADT traveling south of the City of Fillmore. *(Prior to the issuance of building permits for Landmark Village, the project applicant shall calculate and pay to the City of Moorpark noise attenuation program the project's pro rata share of the estimated cost of attenuation.) See, EIR Section 4.5, which determined that the Landmark Village project at buildout in 2010 would generate 10 ADTs on SR-23 north of Casey Road (EIR* ***Table 4.7-22****). Section 4.5 also determined that the 2010 ADT on SR-23 at north of Casey Road would be 8,000 (EIR* ***Table 4.7-22****).*

SP 4.9-17 Prior to the approval of any subdivision map which permits construction within the Specific Plan area, the applicant for that map shall prepare an acoustical analysis assessing project and cumulative development (including an existing plus project analysis, and an existing plus cumulative development analysis including the project). The acoustical analysis shall be based upon state noise land use compatibility criteria and shall be approved by the Los Angeles County Department of Health Services. *(****Section 4.8*** *of this EIR and the accompanying technical report (****Appendix 4.8****) provide the acoustical analysis required by this mitigation measure.)*

In order to mitigate any future impacts resulting from the project's contribution to significant cumulative noise impacts to development in existence as of the adoption of the Newhall Ranch Specific Plan and caused by vehicular traffic on off-site roadways, the applicant for building permits of Residential, Mixed-Use, Commercial, Visitor Serving and

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35 Cost of mitigation x (Project ADT on SR-23 north of Casey Road/Total Projected cumulative ADT Increase on SR-23 north of Casey Road).

36 ADT using linear extrapolation from Table 1 of Topical Response 5 – Traffic Impacts to State and Local Roads in Ventura County.

Business Park land uses shall, prior to issuance of building permits, pay a fee to Los Angeles County, Ventura County, the City of Fillmore or the City of Santa Clarita. The amount of the fee shall be the project's fair-share under any jurisdiction-wide or Santa Clarita Valley-wide noise programs adopted by any of the above jurisdictions. (*This mitigation measure is not applicable to the Landmark Village project because the project site does not contribute to significant unmitigated cumulative noise impacts and no jurisdiction-wide noise programs have been adopted by the County.*)

b. Additional Mitigation Measures Proposed by this EIR

The following project-specific mitigation measures are recommended to mitigate the potentially significant noise impacts that may occur with implementation of the Landmark Village project. These mitigation measures are in addition to those adopted in the previously certified Newhall Ranch Specific Plan Program EIR. To indicate that the measures relate specifically to the Landmark Village project, each measure is preceded by "LV," which stands for Landmark Village.

(1) Construction Mitigation Measures

LV-4.8-1 The project applicant, or its designee, shall not undertake construction activities that can generate noise levels in excess of the County's Noise Ordinance on Sundays or legal holidays.

LV-4.8-2 When construction operations occur in close proximity to on- or off-site occupied residences, and if it is determined by County staff during routine construction site inspections that the construction equipment could generate a noise level at the residences that would be in excess of the Noise Ordinance, the project applicant or its designee shall implement appropriate additional noise reduction measures. These measures shall include, among other things, changing the location of stationary construction equipment, shutting off idling equipment, notifying residents in advance of construction work, and installing temporary acoustic barriers around stationary construction noise sources.

LV-4.8-3 Prior to construction of the utility corridor north of the Travel Village RV Park, the project applicant or its designee shall erect solid construction and continuous temporary noise barriers south of the utility corridor north of the RV Park without blocking ingress/egress at the Park. Prior to issuance of the construction permit for the utility corridor, a qualified acoustic consultant shall be retained to specify the placement and height of the noise barriers in order to maximize their effectiveness in attenuating noise levels. Construction activities north of the RV Park shall comply with the Los Angeles County Noise Ordinance; stationary

construction equipment shall be placed as far away from occupied spaces within the RV Park, and equipment shall not be permitted to idle. A qualified acoustic consultant shall be retained to monitor construction noise once a month at occupied RV spaces to ensure noise levels are in compliance with the County's Noise Ordinance for the duration of the construction.

LV-4.8-4 To the extent feasible, the project developer shall utilize cast-in-drilled-hole piles in lieu of pile driving if residential units are constructed within 5,000 feet of the Long Canyon Bridge prior to any pile-driving activity.

Pile drilling is an alternate method of pile installation where a hole is drilled into the ground up to the required elevations and concrete is then cast into it. The estimated noise level of pile drilling at 50 feet is 80 to 95 dB(A) L_{eq} compared to 90 to 105 dB(A) L_{eq} of conventional pile driving.37 Therefore, pile drilling generally produces noise levels approximately 10 to 15 decibels lower than pile driving.

(2) Operational Mitigation Measures

LV-4.8-5 To mitigate noise impacts on Lots 8 to 12 and Lots 20 to 24 from traffic along "A" Street, the project applicant or its designee shall, prior to occupancy, construct a minimum 6-foot wall along the northern property lines of these lots.

LV-4.8-6 To mitigate noise impacts on Lots 115 to 128, 146 to 152, 188, and 313 from traffic along "A" Street, the project applicant or its designee shall, prior to occupancy, construct a minimum 5-foot wall along the northern property lines of these lots. The 5-foot wall shall wrap around the entire length of the eastern boundary of Lot 152.

LV-4.8-7 To mitigate noise impacts on Lots 325, 326, 349, and 350 (condominiums and apartments east of Wolcott Road) from traffic along SR-126, the project applicant or its designee shall, prior to occupancy, construct a 7-foot berm/solid wall at top of slope along northern edge of Lots 326, 325, 349 and350, to the northwestern corner of Lot 349. The berm/wall shall be continuous with no breaks or gaps.

LV-4.8-8 To mitigate noise impacts on Lots 343 and 377 (condominium) and on Lot 376 (apartment east of Long Canyon Road) from SR-126, the project applicant or its designee shall, prior to

37 U.S. Environmental Protection Agency, *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances*, December 1971.

occupancy, construct an 8-foot berm/solid wall along the northern edge of Lots 380, 381, 379, and 360. The berm/wall shall be continuous with no openings or gaps.

LV-4.8-9 Prior to occupancy of Lot 346 (condominiums), the project applicant or its designee shall construct an 8-foot berm/solid wall along the eastern boundary of Lot 345 (school) to mitigate any delivery truck/garbage truck/school bus noise impacts on Lot 346 to the east.

LV-4.8-10 To mitigate noise impacts on Lot 346 (condominiums west of Wolcott Road) from SR-126 the project applicant or its designee shall, prior to occupancy, construct a 10-foot berm/solid wall along the northern edge of Lot 346 from its northeastern corner to a point approximately 325 feet to the west along the lot line. From this point, a 10-foot berm/ solid wall shall be constructed through Lot 383 (open space) to the edge of the Caltrans right-of-way where the wall shall continue westerly to the northwestern corner of Open Space Lot 383. The wall shall be continuous with no openings or gaps.

LV-4.8-11 Prior to occupancy of Lot 346 (condominium west of Wolcott Road), the project applicant or its designee, shall construct an 8-foot berm/solid wall along the eastern boundary of Lot 346 to mitigate delivery truck traffic noise from Lot 347 (mixed use commercial).

LV-4.8-12 To mitigate delivery truck and other noises from the commercial center west of Long Canyon Road on Lot 354 (apartments west of Long Canyon Road), the project applicant or its designee shall, prior to occupancy, construct an 8-foot berm/solid wall along the eastern perimeter of Lot 354.

LV-4.8-13 To mitigate noise impacts on Lot 354 (apartments west of Long Canyon Road) from SR-126, the project applicant or its designee shall, prior to occupancy, construct a 9-foot berm/solid wall along the northern boundary of Lot 354, and along the northern 200 feet of the western lot line. To preserve views of the Santa Clara River, 5/8-inch Plexiglas or transparent material with equivalent or better acoustic value may be incorporated into the wall design. In lieu of constructing the 9-foot berm/solid wall, the parcel shall be developed so that frequent use areas, including balconies, are placed towards the interior of the lot and fully shielded from noise from SR-126 by the apartment structure.

LV-4.8-14 To mitigate noise impacts on Lot 376 (apartments east of Long Canyon Road) from delivery truck and other noise from the commercial center proposed east of Long Canyon Road, the project applicant or its designee shall, prior to occupancy, construct an 8-foot berm/solid wall along the western boundary of Lot 376.

Table 4.8-7, On-Site Noise Levels with Recommended Sound Wall Mitigation at Santa Clarita Valley Buildout, presents the noise levels on selected on-site lots with implementation of **Mitigation Measures LV-4.8-5** through **LV-4.8-14**. In order to ensure the measures mitigate worst-case noise conditions, the noise levels in **Table 4.8-7** are calculated for traffic noise associated with Santa Clarita Valley build-out conditions for SR-126 and for project build-out conditions for "A" Street.

Table 4.8-7
On-Site Noise Levels with Recommended Sound Wall Mitigation
at Santa Clarita Valley Buildout

Lot No.	Recom. Barrier	Proposed Land Use	TOS (CNEL)	Predominant Vehicular Noise Source	CNEL SCV Buildout	Exceeds TOS By (dB) [3]
11	6'	Single Family	60	"A" Street	59	-1
22	6'	Single Family	60	"A" Street	57	-3
92	None	Single Family	60	SR-126	52	-8
98	None	Single Family	60	SR-126	54	-6
103	None	Single Family	60	SR-126	55	-5
105	None	Single Family	60	SR-126	56	-4
107	None	Single Family	60	SR-126	56	-4
110	None	Single Family	60	SR-126	58	-2
112	None	Single Family	60	SR-126	60	0
114	None	Single Family	60	SR-126	56	-4
115	6'	Single Family	60	"A" Street	56	-4
119	6'	Single Family	60	"A" Street	57	-3
122	6'	Single Family	60	"A" Street	57	-3
126	6'	Single Family	60	"A" Street	58	-2
128	6'	Single Family	60	"A" Street	58	-2
146	6'	Single Family	60	"A" Street	57	-3
152	6'	Single Family	60	"A" Street	59	-1
188	6'	Single Family	60	"A" Street	57	-3
315	6'	Single Family	60	"A" Street	58	-2
325	7'	Condominium	65	SR-126	65	0
326	7'	Condominium	65	SR-126	64	-2
329	None	Condominium	65	"A" Street	63	-2
330	None	Recreation	70	"A" Street	66	-4
331	None	Condominium	65	"A" Street	65	0
332/ 333	None	Mixed Use	45	Comb.	63	--
337	None	Park	70	"A" Street	63	-7

Lot No.	Recom. Barrier	Proposed Land Use	TOS (CNEL)	Predominant Vehicular Noise Source	CNEL SCV Buildout	Exceeds TOS By (dB) [3]
338	None	Condominium	65	"A" Street	64	-1
339	None	Condominium	65	"A" Street	63	-2
340	None	Recreation	70	"A" Street	64	-6
341	None	Condominium	65	"A" Street	64	-1
342	None	Condominium	65	"A" Street	63	-2
343	8'	Condominium	65	SR-126	65	0
343	None	Condominium	65	"A" Street	62	-2
344	None	Park	70	SR-126	66	-4
344	None	Park	70	"A" Street	62	-8
345	None	School	70	SR-126	67	-3
345	None	School	70	"A" Street	62	-8
346	10′	Condominium	65	SR-126	65	0
346	None	Condominium	65	"A" Street	63	-2
347	None	Mixed Use/ Commercial	45	Combin.[2]	64	--
349	None	Apartment	65	"A" Street	65	0
349	7'	Apartment	65	SR-126	64	-1
350	None	Condominium	65	"A" Street	65	0
350	7'	Condominium	65	SR-126	62	-3
351	None	Mixed Use/ Commercial	45	Long Canyon Rd	66	--
352	None	Mixed Use/ Commercial	45	Long Canyon Rd	68	--
354	None	Apartment	65	SR-126 (facing river)	61	-4
354	9'	Apartment	65	SR-126	65	0
357	None	Mixed Use/ Commercial	45	SR-126	68	--
361	None	Mixed Use/ Commercial	45	SR-126	67	--
367	None	Mixed Use/ Commercial	45	Long Canyon Rd	67	--
370	None	Mixed Use/ Commercial	45	Long Canyon Rd	66	--
371	None	Mixed Use/ Commercial	45	SR-126	65	--
375	None	Mixed Use/ Commercial	45	"A" Street	61	--
376	8'	Apartment	65	SR-126	64	-1
376	None	Apartment	65	"A" Street	63	-2
377	8'	Condominium	65	SR-126	65	0
377	None	Condominium	65	"A" Street	64	-1

Lot No.	Recom. Barrier	Proposed Land Use	TOS (CNEL)	Predominant Vehicular Noise Source	CNEL SCV Buildout	Exceeds TOS By (dB) [3]
384	None	Mixed Use/ Commercial	45	SR-126	71	--
385	None	Mixed Use/ Commercial	45	SR-126	72	--
388	None	Mixed Use/ Commercial	45	SR-126	71	--
389	None	Mixed Use/ Commercial	45	SR-126	71	--
403	None	Park	70	Long Canyon Rd	62	-8
416	None	Condominium	65	"A" Street	62	-3

Source: Impact Sciences, Inc. Noise calculations are presented in ***Appendix 4.8*** *of this EIR.*
TOS = threshold of significance
[1] *The threshold of significance for residences in mixed use commercial is 45 dB(A) CNEL.*
[2] *Vehicular noise source is a combination of SR-126, Wolcott Road, and "A" Street.*
[3] *No numeric value is given for Mixed Use Commercial uses because interior noise levels are based upon building construction and location of residences within the commercial centers. For lots designated mixed use commercial, only the residential units that may occur within these lots would be significantly impacted if interior noise levels exceed 45 dB(A) between 7:00 AM and 10:00 PM with the windows in their normal seasonal confirmation.*

The locations of proposed sound attenuation barriers are illustrated on **Figure 4.8-5, Recommended Noise Wall Locations**. **Table 4.8-7** shows that noise levels on some lots would decrease compared to the without mitigation noise levels shown in **Table 4.8-5** even though no sound walls are proposed. The noise reductions are due to intervening noise walls recommended for lots to the north that would also attenuate noise in other locations within Landmark Village. Noise levels at these locations also have the potential to be further reduced after buildings, which would act as structural noise barriers, between SR-126 and these locations are constructed.

As shown in the Table 4.8-7, noise impacts on all single- and multi-family residential lots would be reduced to less than significant levels with implementation of the recommended mitigation measures. With respect to the lots designated Mixed Use/Commercial, because there is the potential for residential uses to occur on these lots, the following additional mitigation measures are recommended to ensure that interior noise levels will be reduced to levels below 45 dB(A) between the hours of 7:00 AM and 10:00 PM.

LV-4.8-15 Residences within mixed-use commercial areas shall be discouraged within 500 feet of the centerline of SR-126. Residences that do occur within mixed use commercial lots shall be set back as far as possible from SR-126, Wolcott Road, Long Canyon Road, and "A" Street in order to minimize the need for acoustic insulation of the units. When the plot plan for the

commercial centers are complete, acoustic analyses shall be conducted by a qualified acoustic consultant to ensure that interior noise levels of any residences within the commercial centers can be feasibly reduced to 45 dB(A).

LV-4.8-16 Balconies with direct lines of sight to SR-126, Wolcott Road, Long Canyon Road, and/or "A" Street shall be discouraged from exposure to exterior noise levels greater than the 60 dB(A) CNEL standard for single family residences or the 65 dB(A) CNEL standard for multi-family residences through architectural or site design. Alternatively, balconies shall be enclosed by solid noise barriers, such as 3/8-inch glass or 5/8-inch Plexiglas to a height specified by a qualified noise consultant.

LV-4.8-17 All single family and multi-family structures, including multi-family units incorporated into commercial centers, within 500 feet of SR-126 and all residential units with direct lines of sight to SR-126 and/or "A" Street shall incorporate the following into the exterior wall that faces onto those roadways:

(a) All windows, both fixed and operable, shall consist of either double-strength glass or double-paned glass. All windows facing sound waves generated from the mobile source noise shall be manufactured and installed to specifications that prevent any sound from window vibration caused by the noise source.

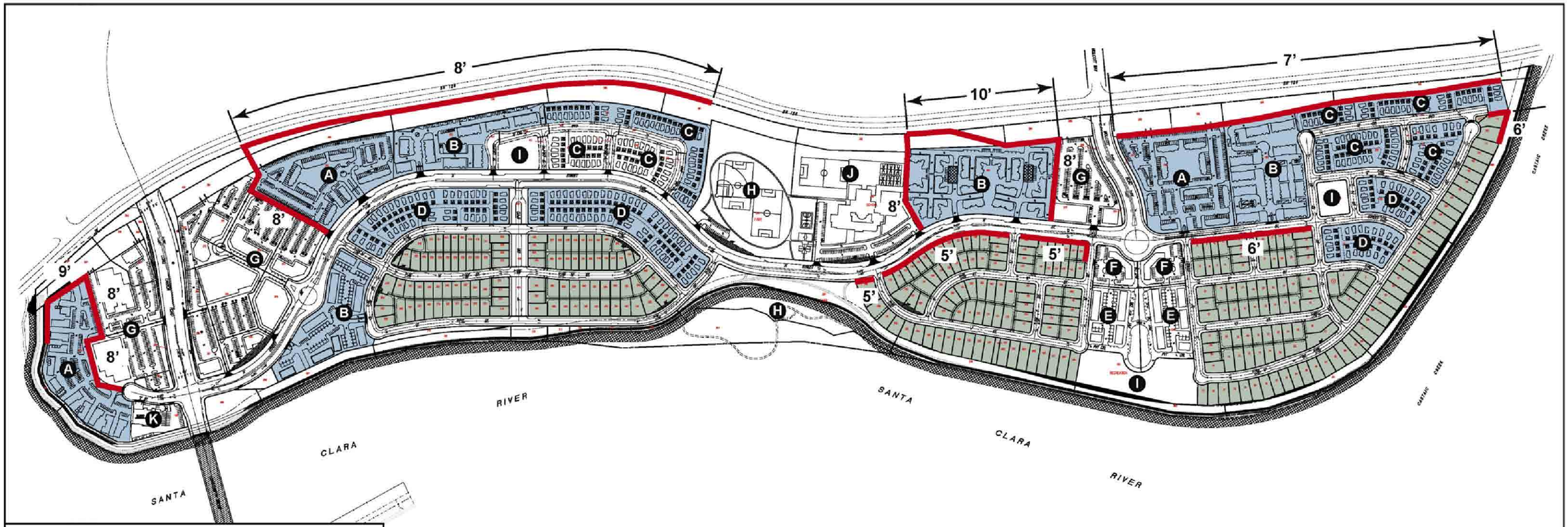
(b) Doors shall be solid core and shall be acoustically designed with gasketed stops and integral drop seals.

(c) If necessitated by the architectural design of a structure, special insulation or design features shall be installed to meet the required interior ambient noise level.

LV-4.8-18 Air conditioning units shall be installed to serve all living areas of all residences incorporated into commercial centers, and those with direct lines of sight to SR-126 and/or "A" Street so that windows may remain closed without compromising the comfort of the occupants.

9. CUMULATIVE IMPACTS

Cumulative noise impacts would primarily occur as a result of increased traffic on SR-126 and on local roadways due to the proposed project and other developments in the Santa Clarita Valley. As previously noted, the only noise sensitive uses in the project study area is the Travel Village RV Park. As previously



Legend:

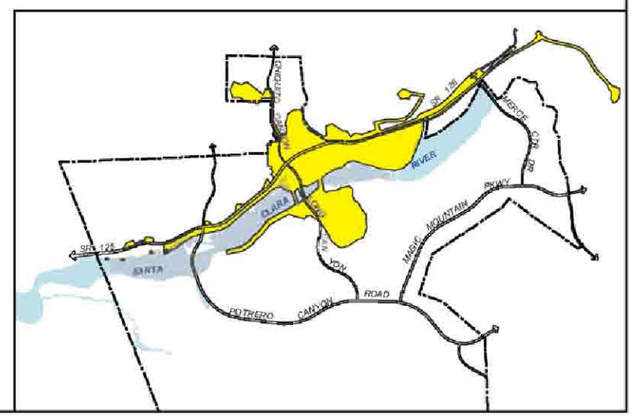
- Noise Walls
- Single-Family Detached
- Multi-Family Attached and Detached

Land Use:

- A Apartment – 3 Story
- B Condominium – 3 Story
- C Detached Condominium – 2 Story (32' MDE-Condo 1)
- D Detached Condominium – 2 Story (38' MDE-Condo 2)
- E Mixed Use/Condominium – 2 Story
- F Mixed Use/Commercial – 2 Story
- G Commercial
- H Park
- I Recreation
- J School
- K Fire Station

600 300 0 600

APPROXIMATE SCALE IN FEET



SOURCE: PSOMAS – August 2004, Impact Sciences, Inc. – September 2006

FIGURE **4.8-5**

Recommended Noise Wall Locations

32-92•09/06

discussed, the noise impact at Travel Village in 2010 without the project would be 71.0 dB(A) CNEL. With buildout of the Landmark Village project, the noise impact would be 73.1 dB(A) CNEL. Because existing noise levels at Travel Village RV Park would already exceed the *Guidelines* for transient lodging (i.e., 70 dB(A)), this impact would be significant and would be mitigated through Mitigation Measure 4.9-14 of the Newhall Ranch Specific Plan Program EIR. Cumulative 2010 traffic noise impacts at the residences northwest of Chiquito Canyon Road/SR-126 would be less than significant.

Although the Landmark Village project would not cause significant cumulative noise impacts in Ventura County, Landmark Village is required to mitigate noise impacts on specific sensitive receptors in Ventura County under Specific Plan Mitigation Measures 4.9-15 and 4.9-16 through payment of its fair share towards specified noise attenuation measures and program. Assuming that all future development projects that generate traffic along roadways adjacent to these receptors are required by Ventura County to implement similar mitigation measures, cumulative traffic noise impacts at these receptors would be reduced to less than significant.

10. CUMULATIVE MITIGATION MEASURES

Mitigation for cumulative noise impacts on Travel Village is provided for in the Newhall Ranch Specific Plan Program EIR under Mitigation Measure 4.9-14. A noise impact analysis for the RV Park was performed using SOUND32/2000 and it was determined that a 5-foot solid wall along the northern property line of the Park would reduce noise impacts from traffic along SR-126 at sensitive receptors in the Park to less than significant at Santa Clarita Valley buildout. No other cumulative mitigation measures are required.

11. SIGNIFICANT UNAVOIDABLE IMPACTS

a. Project-Specific Impacts

Mitigation measures recommended to reduce construction-related noise impacts would reduce the magnitude of those impacts; however, should pile driving be required to construct the Long Canyon Road Bridge instead of pile drilling, and should the project applicant not find it feasible to complete the pile driving prior to occupancy of on-site noise-sensitive uses within 5,000 feet of the pile driving, a short-term significant unavoidable construction noise impact would occur. Noise impacts from the pile driving would be unavoidably significant within 5,000 feet of the pile driving for the duration of the pile driving. Short-term noise impacts from pile drilling would also be significant at noise sensitive uses within 1,600 feet of the pile drilling. Furthermore, construction within the utility corridor immediately north of Travel Village RV Park could expose occupants of the RV Park to up to 93 dB(A) during its construction. Mitigation is recommended to reduce this noise impact to less than significant; however, even with the

mitigation measures in place if individuals are exposed to noise impacts greater than permitted under the County's Noise Ordinance, the project would result in a significant unavoidable temporary noise impact during construction activities in the utility corridor north of Travel Village RV Park.

b. Cumulative Impacts

Construction of the recommended 5-foot solid wall to reduce traffic noise levels from SR-126 at the Travel Village RV Park to 70 dB(A) CNEL or less, as required under the Newhall Ranch Specific Plan Program EIR, would mitigate the significant cumulative noise level increase at this location to a level below significant. With its construction, no significant unavoidable noise impacts would result from cumulative development.

4.9 AIR QUALITY

1. SUMMARY

Implementation of the Landmark Village project would generate both construction and operational air pollutant emissions. Construction-related emissions would be generated by on-site stationary sources, on- and off-road heavy-duty construction vehicles, and construction worker vehicles. Operation-related emissions would be generated by on-site and off-site stationary sources and by mobile sources. During project construction, emissions of carbon monoxide (CO), volatile organic compounds (VOC), and oxides of nitrogen (NO_x) would exceed the thresholds of significance recommended by the South Coast Air Quality Management District (SCAQMD) for all but one construction subphase. The analysis of local significance threshold (LST) impacts suggests that fine particulate matter (PM_{10}) emissions could exceed the limitations in SCAQMD Rule 403. While the nitrogen dioxide (NO_2) concentrations exceed the LST thresholds, the California Ambient Air Quality Standards (*CAAQS) would be exceeded only if (1) the actual background concentrations were as high as those on which the LSTs are based during the worst-case construction day; (2) the amount of construction activity (e.g., number and types of equipment, hours of operation) assumed in this analysis actually occurred; and (3) the meteorological conditions in the data set used in the dispersion modeling analysis occurred in the vicinity of the project site on the worst-case construction day.*

At project buildout, operational emissions of CO, VOC, NO_x, and PM_{10} would exceed SCAQMD thresholds, primarily due to mobile source emissions in the summertime and to mobile source and wood-burning fireplace emissions in the wintertime.

No project land use would be exposed to CO hotspots and the project would not cause a CO hotspot at other locations of sensitive receptors in the project study area. In addition, population growth attributed to the project is consistent with the approved Newhall Ranch Specific Plan and is within growth forecasts contained in the 2001 Regional Transportation Plan (2001 RTP) prepared by the Southern California Association of Governments (SCAG).[1] The 2001 RTP forms the basis for the land use and transportation control portions of the 2003 Air Quality Management Plan (2003 AQMP). Because the project is within the growth forecasts for the region, it would, consequently, be consistent with the 2003 AQMP, indicating that it would not jeopardize attainment of state and federal ambient air quality standards in the Santa Clarita Valley or throughout the South Coast Air Basin (Basin).

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1 The 2001 RTP was updated by SCAG in April 2004. The 2004 RTP includes the approved Newhall Ranch Specific Plan within its growth forecasts. Since the 2004 RTP was prepared after the 2003 AQMP was adopted, this EIR section relies on the 2003 AQMP and, therefore, the 2001 RTP.

Mitigation measures would be implemented that would reduce construction-related and operational-related emissions to the maximum extent feasible. However, no feasible mitigation exists that would reduce the project's construction-related emissions of CO, VOC, NO_x, or PM_{10} to below the SCAQMD's recommended thresholds of significance.[2] *No feasible mitigation exists to reduce the project's operational emissions of CO, VOC, NO_x, or PM_{10} to less than significant. Therefore, the project's construction-related and operation-related emissions would be considered significant and unavoidable.*

The SCAQMD's criteria of annual emission reductions of one percent for CO, VOC, NO_x, PM_{10}, and Sulfur Oxide (SO_x), were used to assess cumulative air quality impacts. Through site planning, proposed design features, and with implementation of the mitigation measures recommended in this section, the project would reduce wintertime emissions for CO, VOC, NO_x, and PM_{10} by 37.8, 83.1, 14.0, and 45.4 percent, respectively. During the summer, these emissions would be reduced by 9.7, 15.5, 12.0, and 9.6 percent, respectively. Therefore, cumulative air quality impacts would not be significant given the cumulative project thresholds of significance found in the SCAQMD's California Environmental Quality Act (CEQA) Air Quality Handbook,[3] *and the fact that the project's population forecast is consistent with the SCAQMD's 2003 AQMP. However, because the project's operational-related CO, VOC, NO_x, and PM_{10} emissions would exceed the SCAQMD's project-specific thresholds of significance, even with all feasible mitigation, project implementation would result in cumulatively significant and unavoidable air quality impacts. This is considered a conservative and "worst-case" approach for estimating the project's cumulative air quality impacts.*

All citations to sources and source materials are incorporated by reference. Copies of these documents are available for public inspection and review at the County of Los Angeles (County) Department of Regional Planning, 320 South Temple Street, Los Angeles, California.

2. BACKGROUND

a. Relationship of Project to Newhall Ranch Specific Plan Program EIR

Section 4.10 of the Newhall Ranch Specific Plan Program EIR identified and analyzed the existing conditions, potential impacts, and mitigation measures associated with local and regional air quality for the entire Newhall Ranch Specific Plan. The Newhall Ranch Specific Plan mitigation program was adopted by the County in findings and in revised Mitigation Monitoring Plans for both the Specific Plan

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2 CO emissions would only exceed SCAQMD's threshold of significance for six weeks during the 54-month construction period, and PM_{10} emissions would only exceed the thresholds of significance during project on- and off-site grading operations.

3 The *CEQA Air Quality Handbook* is in the process of being revised and replaced by an *Air Quality Analysis Guidance Handbook* (*Air Quality Guidance Handbook*). As of May 2006, the SCAQMD has revised Chapters 1-9 (www.aqmd.gov/ceqa/hdbk.html), but it is not yet completed.

and Water Reclamation Plant (WRP). The Newhall Ranch Specific Plan Program EIR concluded that Specific Plan implementation would result in significant unavoidable construction and operational air quality impacts and, as a result, the County adopted a Statement of Overriding Considerations relative to these air quality impacts. The Newhall Ranch Specific Plan Program EIR has indicated that subsequent project-specific development plans and tentative subdivision maps must employ all feasible operational emission reduction measures contained in the SCAQMD *CEQA Air Quality Handbook*, and be consistent with both the Newhall Ranch Specific Plan, adopted May 2003, the County of Los Angeles General Plan, and Santa Clarita Valley Areawide Plan.

This project-level EIR is tiering from the previously certified Newhall Ranch Specific Plan Program EIR. **Section 4.9** describes the Landmark Village project's existing conditions, analyzes the project's impacts on local and regional air quality, and identifies the applicable mitigation measures from the Newhall Ranch Specific Plan Program EIR, as well as mitigation measures recommended by this EIR for the Landmark Village project.

3. SUMMARY NEWHALL RANCH SPECIFIC PLAN PROGRAM EIR FINDINGS

The Specific Plan's construction and operational emissions were considered significant and unavoidable. The recommended mitigation measures were found to reduce the magnitude of the Specific Plan's construction and operational emissions to some extent.[4] However, no feasible mitigation existed that would have reduced these emissions to below the SCAQMD's recommended thresholds of significance.

While the Specific Plan's air emissions would be significant, Newhall Ranch was designed to reduce vehicle miles traveled (VMT) when compared to more conventional, or non-village, designs. The Specific Plan is also consistent with SCAQMD's 2003 AQMP, and, based on SCAQMD methods of analysis, its emissions would not jeopardize attainment of state and federal ambient air quality standards in the Santa Clarita Valley and the region.

The adopted air quality mitigation measures for Newhall Ranch would help to reduce VMT (and related air emissions) associated with the on-site employment-generating uses; however, the Specific Plan's significant cumulative air quality impact remains significant and unavoidable.

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4 See Mitigation Measures 4.10-1 through 4.10-14 in both the certified Newhall Ranch Specific Plan Program EIR and the adopted Mitigation Monitoring Plan for the Specific Plan (May 2003).

4. AIR QUALITY BACKGROUND

The SCAQMD has jurisdiction over an area of approximately 10,743 square miles, consisting of the four-County Basin (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). The project site is located within the Basin, which is bound by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto mountains to the north and east (see **Figure 4.9-1, South Coast Air Basin**). The project site is not located within either the SSAB or the MDAB.

The Basin consistently generates the highest levels of smog in the United States and is considered to have the worst air quality in the nation. The factors that influence this determination are discussed below.

a. Smog and Its Causes

Smog is a general term based on the words smoke and fog that is used to describe dense, visible air pollution. Although some air pollutants are colorless, smog is commonly used to describe the general concentrations of pollutants in the air. Smog is formed when combustion emissions and gaseous emissions, such as VOC and NO_x, undergo photochemical reactions in sunlight to form ozone (O_3). O_3 is a gas that, in the upper atmosphere, helps to shield the earth from harmful radiation. However, in the lower atmosphere where people live, O_3 poses health risks and damages crops, rubber, and other materials. Particulates, such as soil and dust materials, and vehicle exhaust particulates often mix with O_3, CO, and other compounds and create a brownish haze in the air. "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.[5]

The topography and climate of the Basin combine to make it an area of high smog potential. During the summer months, a warm air mass frequently descends over the lower, cool, moist marine air layer. 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. Concentrating volumes of pollutants in this manner allows the summer sunlight to generate high levels of smog. In the winter, cool ground temperatures and very light winds cause extremely low inversions and air stagnation that trap CO and NO_x 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 will be no important smog effects. A summary of local climatic conditions is provided later in this section.[6]

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5 SCAQMD, *CEQA Air Quality Handbook*, (Diamond Bar, California: SCAQMD, April 1993), p. G1s-7.

6 SCAQMD, *Air Quality Guidance Handbook*, (Diamond Bar, California: SCAQMD, November 2001), pp. 3-17–3-18. This document may be reviewed on-line at http://www.aqmd.gov/ceqa/hdbk.html.

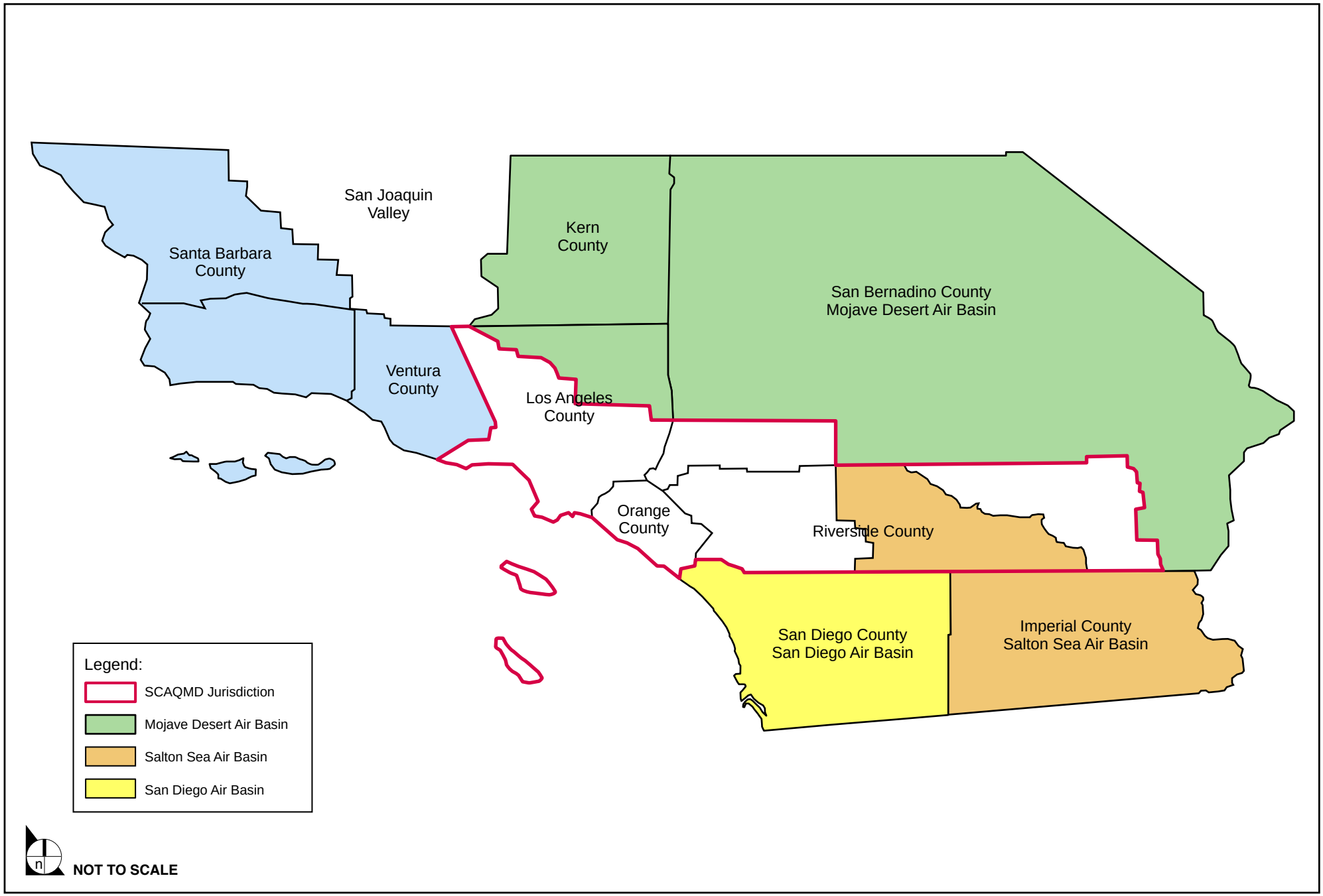

FIGURE **4.9-1**

South Coast Air Basin

The air pollutants within the Basin are generated by both stationary and mobile sources. One type of stationary source is known as a "point source," which has one or more emission sources at a single facility. The other type of stationary source is the "area source," which is widely distributed and produces many small emissions.

Point sources are usually associated with manufacturing and industrial uses, and includes 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. Examples of area sources include residential water heaters, painting operations, lawn mowers, agricultural fields, landfills, and consumer products, such as barbecue lighter fluid or hair spray. "Mobile sources" refer to operational and evaporative emissions from motor vehicles,[7] account for nearly 99 percent of the CO emissions, approximately 77 percent of the SO_x emissions, 88 percent of the NO_x emissions, and 65 percent of the VOC found within the Basin.[8]

b. Regulatory Agencies and Responsibilities

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, policy-making, 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.

(1) U.S. Environmental Protection Agency (U.S. EPA)

The U.S. EPA is responsible for enforcing the federal Clean Air Act (CAA) and the National Ambient Air Quality Standards (NAAQS). The NAAQS standards identify levels of air quality for seven "criteria" pollutants that are considered the maximum levels of ambient (background) air pollutants considered safe, with an adequate margin of safety, to protect the public health and welfare. The seven criteria pollutants include O_3, CO, NO_2 (a form of NO_x), SO_2 (a form of SO_x), PM_{10}, $PM_{2.5}$, and lead(Pb).[9]

In response to its enforcement responsibilities, the U.S. EPA requires each state to prepare and submit a State Implementation Plan (SIP) that describes how the state will achieve the federal standards by specified dates, depending on the severity of the air quality within the state or air basin. The Basin is

7 Ibid., p. 3-2.

8 Ibid., p. 3-17.

9 Ibid., p. 2-2.

classified by the U.S. EPA as a severe-17 nonattainment area for the 8-hour O_3 standard,[10,11] a serious nonattainment area for PM_{10},[12] and a serious nonattainment area for CO.[13]

Under the compliance timetables in the 1990 Amendments to the CAA that pertain to O_3, the Basin was originally to achieve attainment status for O_3 within 20 years (i.e., by November 15, 2010). To do so, the Basin was to show a 15 percent reduction from its 1990 Basin-wide emissions inventory within six years from the enactment date of the CAA, and a 3 percent annual reduction thereafter for the remainder of the 20 years. In July 1997, the U.S. EPA announced new health-based standards for O_3. The former 1-hour O_3 standard was revoked on June 15, 2005, and attainment is no longer required. The SCAQMD now has until June 15, 2021 at the latest to meet the 8-hour O_3 standard. For the other nonattainment pollutants, the Basin must achieve attainment status by the most expeditious date that can be achieved, but no later than five years from the date the area was designated nonattainment. If the Basin experiences difficulty doing so, the U.S. EPA may extend the period for attainment for an additional 10 years. According to the 2003 AQMP, the Basin has met the federal standards for both NO_2 and CO, although the Basin has not yet been redesignated as attainment for CO.[14]

In addition, in 1997, the U.S. EPA announced a new standard for particulate matter under the NAAQS: $PM_{2.5}$. A subset of PM_{10}, $PM_{2.5}$ refers to particulate matter that is 2.5 micrometers or smaller in size, or approximately 1/30 the diameter of a human hair. 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 SO_2, NO_2, and VOC (all of which are also products of fuel combustion), are transformed in the air by chemical reactions. Fine particles are of concern because they can be deeply inhaled and can put human health at risk, particularly the health of children. The standards that the U.S. EPA set for $PM_{2.5}$ in 1997 include an

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10 U.S. Environmental Protection Agency. "8-Hour Ozone Areas Listed by Category/Classification as of March 2, 2006." [Online] 22 May 2006. <http://www.epa.gov/air/oaqps/greenbk/gnc.html>. On April 30, 2004, the EPA published designations of nonattainment areas with respect to the 8-hour ozone standard. The Basin was designated as "severe-17" nonattainment for the purposes of this standard. Severe-17 nonattainment areas have an attainment date of June 15, 2021 (17 years after the effective date of the designation) to comply with the 8-hour ozone standard. This designation commences a new round of planning to demonstrate compliance with the 8-hour standard.

11 U.S. Environmental Protection Agency. "Green Book 8-Hour Ozone Nonattainment Areas." [Online] 22 May 2006. <http://www.epa.gov/air/oaqps/greenbk/ca8.html>.

12 U.S. Environmental Protection Agency. "Particulate Matter Nonattainment Area Map." [Online] 22 May 2006. <http://www.epa.gov/air/oaqps/greenbk/mappm10.html>.
U.S. Environmental Protection Agency. "Particulate Matter Nonattainment Areas as of March 2, 2006." [Online] 22 May 2006. http://www.epa.gov/air/oaqps/greenbk/pntc.html.

13 U.S. Environmental Protection Agency. "Carbon Monoxide Nonattainment Area Map." [Online] 22 May 2006. <http://www.epa.gov/air/oaqps/greenbk/losangc.html>.

14 South Coast Air Quality Management District. *2003 Air Quality Management Plan*. [Online] 22 December 2003. <http://www.aqmd.gov/aqmp/AQMD03AQMP.htm>, p. ES-9.

annual-average standard of 15 micrograms per cubic meter ($\mu g/m^3$) and a 24-hour standard of 65 $\mu g/m^3$. The SCAB is currently classified by the U.S. EPA as a nonattainment area with respect to the $PM_{2.5}$ standard.[15] The SCAQMD has until 2015 at the latest to meet the federal $PM_{2.5}$ standard.

No model to predict emissions of $PM_{2.5}$ from future development project exists and the SCAQMD has not established emission-based threshold of significance for $PM_{2.5}$ at the time of this writing. Because no model is currently available to assess potential $PM_{2.5}$ impacts from new land development projects, they cannot be assessed separately from the impacts of PM_{10} emissions as a whole.[16] However, because $PM_{2.5}$ is a subset of PM_{10}, as described above, the project's $PM_{2.5}$ emissions are inherently calculated along with PM_{10} emissions.

(2) California Air Resources Board

The California Air Resources Board (ARB), a department of the California Environmental Protection Agency (CalEPA), oversees air quality planning and control throughout California. It is primarily responsible for ensuring implementation of the 1989 amendments to the California Clean Air Act (CCAA), responding to the federal CAA requirements to establish state ambient air quality standards, and for regulating emissions from motor vehicles and consumer products within the state. The ARB has established emission standards for vehicles sold in California and for other emission sources, such as consumer products and certain off-road equipment. It also sets passenger vehicle fuel specifications to further reduce vehicular emissions.[17]

The CCAA established a legal mandate to achieve the CAAQS (state standards) by the earliest practicable date. These standards apply to the same seven criteria pollutants as the federal CAA and also include sulfate, visibility, hydrogen sulfide, and vinyl chloride. They are also more stringent than the federal standards and, in the case of PM_{10} and SO_2, the state standards are far more stringent.

In 1997, after receiving the new U.S. EPA standards, the ARB and Office of Environmental Health Hazard Assessment staff reviewed the scientific literature on the health effects of exposure to particulate matter, and recommended lowering the existing state standard for PM_{10} and adopting a lower standard for $PM_{2.5}$.[18] Staff specifically recommended that the annual-average standard for PM_{10} be lowered from 30

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15 U.S. Environmental Protection Agency. "Particulate Matter (PM-2.5) Nonattainment Areas as of March 2, 2006." [Online] 22 May 2006. <http://www.epa.gov/air/oaqps/greenbk/qnc.html>.

16 Telephone conversation with Patrick Gaffney, Air Pollution Specialist, California Air Resources Board, Planning and Technical Support, Inventory Branch, March 11, 2003.

17 SCAQMD, *Air Quality Guidance Handbook*, (Diamond Bar, California: SCAQMD, November 2001), p. 2-2. This document may be reviewed on-line at http://www.aqmd.gov/ceqa/hdbk.html.

18 California Air Resources Board. "Review of the Ambient Air Quality Standards for Particulate Matter and Sulfates; Standards Review Schedule." [Online] 16 June 2003. <http://www.arb.ca.gov/research/aaqs/std-rs/std-rs.htm>.

$\mu g/m^3$ to 20 $\mu g/m^3$ (the 24-hour-average standard of 50 $\mu g/m^3$ for PM_{10} would be retained), and that the new annual-average standard for $PM_{2.5}$ in California be established at 12 $\mu g/m^3$, which is less than the federal standard of 15 $\mu g/m^3$ (17 Cal.CodeRegs. Section 70200). These standards were adopted by the ARB in June 2002, approved by the Office of Administrative Law (OAL) on June 5, 2003, and became effective on July 5, 2003. The ARB also will consider establishing a 24-hour $PM_{2.5}$ state standard in the future; however, the timing of the adoption of this latter standard is currently unknown.

Health and Safety Code Section 39607(e) requires the ARB to establish and periodically review area designation criteria. These designation criteria provide the basis for the ARB to designate areas of the state as "attainment," "nonattainment," or "unclassified" for the state standards. In addition, Health and Safety Code Section 39608 requires the ARB to use the designation criteria to designate areas of California and to annually review those area designations. The ARB makes area designations for 10 criteria pollutants: O_3, CO, NO_2, SO_2, $PM_{2.5}$, PM_{10}, sulfates, Pb, hydrogen sulfide, and visibility-reducing particles.[19] Currently, the ARB has not established area designations for vinyl chloride;[20] however, the ARB has identified vinyl chloride as a Toxic Air Contaminant (TAC) with an undetermined threshold level of exposure for adverse health effects. Therefore, vinyl chloride is addressed on a project-by-project basis. As discussed below, this project is not expected to emit vinyl chloride or other criteria pollutants, such as sulfates, Pb, hydrogen sulfide, and visibility-reducing particles.

Currently, the ARB has designated the Basin as an extreme nonattainment area for O_3 with respect to the 1-hour standard,[21] a nonattainment area for PM_{10},[22] attainment for CO[23] and sulfates,[24] unclassified for hydrogen sulfide,[25] and attainment or unclassified for NO_2, SO_2, Pb, and visibility-reducing particles.[26] The ARB has not established area designations for vinyl chloride. For areas classified as nonattainment,

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19 California Air Resources Board. "Area Designations (Activities and Maps)." [Online] 22 December 2003. <http://www.arb.ca.gov/desig/desig.htm>. Written communication with Marcy Nystrom, California Air Resources Board, December 24, 2003, stating that state law requires the ARB to make area designations for pollutants with state standards listed in Title 17 of the California Code of Regulations, Section 70200. However, vinyl chloride is not included in this section of the California Code of Regulations; therefore, the ARB does not make area designations for vinyl chloride.

20 Ibid.

21 California Air Resources Board. "State Area Designation Map: Ozone." [Online] 22 May 2006. <http://www.arb.ca.gov/desig/adm/s_ozone.htm>.

22 California Air Resources Board. "State Area Designation Map: PM_{10}." [Online] 22 December 2003. <http://www.arb.ca.gov/desig/adm/s_pm10.htm>.

23 California Air Resources Board. "State Area Designation Map: CO." [Online] 22 May 2006. <http://www.arb.ca.gov/desig/adm/s_co.htm>.

24 California Air Resources Board. "State Area Designation Map: Sulfates." [Online] 22 May 2006. <http://www.arb.ca.gov/desig/adm/s_sulfates.htm>.

25 California Air Resources Board. "State Area Designation Map: Hydrogen Sulfide." [Online] 22 May 2006. < http://www.arb.ca.gov/desig/adm/s_h2s.htm>.

26 California Air Resources Board. "Area Designation Maps/State and Federal." [Online] 22 May 2006. <http://www.arb.ca.gov/desig/adm/adm.htm>.

the CCAA requires that the SCAQMD prepare an air quality management plan with specific emission reduction strategies, and to meet specified milestones in implementing emission controls to achieve more healthful air. New control strategies are to include an indirect and area source control program, best available retrofit control technology for existing sources, a program to mitigate all emissions from new and modified permitted stationary sources (no net increase), transportation control measures, and substantial use of low-emission vehicles (e.g., natural gas or methanol-powered vehicles). The CCAA also requires control measures to be ranked by priority and cost effectiveness. The air quality management plans must achieve a reduction in emissions of 5 percent or more per year, or 15 percent or more in a three-year period for pollutants causing severe nonattainment.

The ARB approved staff recommendations to amend the ozone standard on April 28, 2005, by adding a new 8-hour standard. On April 17, 2006, the state 8-hour ozone standard was approved by the OAL, and became effective May 17, 2006. The new 8-hour state standard of 0.070 parts per million (ppm) is more stringent than the 8-hour federal standard of 0.08 ppm.

In the early 1980s, the ARB established one of the nation's first comprehensive state air toxics programs. The Toxic Air Contaminant Identification and Control Act (Assembly Bill [AB] 1807–1983), Health and Safety Code Section 36950, et seq., created California's program to reduce the health risks from air toxics. This law expanded the ARB's authority to evaluate and control air toxics.

An additional state law, the Air Toxics "Hot Spots" Information and Assessment Act (AB 2588–1987), Health and Safety Code Section 44300, et seq., supplements the original legislation by requiring a statewide air toxics inventory and notification of local residents of significant risk from nearby sources of air toxics. A 1992 amendment to the law (Senate Bill [SB] 1731; Health and Safety Code Section 44390, et seq.) requires that the risk be reduced from these significant sources.

The goal of the ARB's Air Toxics Program is to protect the public health. It does this by reducing TACs that pose the highest risk to Californians. The ARB's program involves two separate steps. During the first step, risk assessment, the ARB identifies the highest risk substances (i.e., TACs). In the second or risk management step, the ARB and local air pollution control districts (APCD), such as the SCAQMD, investigate and adopt measures requiring air sources of TACs to minimize risk to public health.

The ARB maintains summaries and historical trends of TACs throughout the state, including the Basin.[27]

(3) Southern California Association of Governments (SCAG)

SCAG is a council of governments for the Counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura. As a regional planning agency, SCAG serves as a forum for regional issues

[27] California Air Resources Board. "Air Quality Data Statistics." [Online] 22 December 2003. http://www.arb.ca.gov/adam/welcome.html.

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 amendments to the CAA, for providing current population, employment, travel, and congestion projections for regional air quality planning efforts. 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 the 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. SCAG's method of accomplishing these requirements is through the preparation of demographic projections published in its 2001 RTP,[28] which was used by the SCAQMD in the preparation of its 2003 AQMP,[29] discussed below.

(4) South Coast Air Quality Management District (SCAQMD)

The management of air quality in the Basin is the responsibility of the SCAQMD. This responsibility was given to SCAQMD by the California Legislature's adoption of the 1977 Lewis-Presley Air Quality Management Act (Health and Safety Code Section 40400, et seq.), which merged four County air pollution control bodies into one regional district. Under the 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.

(a) SCAQMD 2003 AQMP

As discussed previously, the federal and state CAAs require the preparation of plans to bring air emissions within healthful levels. The SCAQMD has responded to this requirement by preparing a series

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28 The 2001 RTP, which was used as the basis for the 2003 AQMP, is available for public inspection and review at the County of Los Angeles Department of Regional Planning, as stated above, and incorporated by this reference. As noted above, the 2001 RTP was revised and replaced by SCAG in 2004.

29 SCAQMD. 2003 Air Quality Management Plan. [Online] 22 December 2003. <http://www.aqmd.gov/aqmp/AQMD03AQMP.htm>, p. 3-9. The 2003 AQMP specifically states, "Demographic growth forecasts for various socioeconomic categories (e.g., population, housing, employment by industries), developed by SCAG for their 2001 RTP, were used to estimate future emissions."

of air quality management plans,[30] the most recent of which was adopted by the governing board on August 1, 2003. The purpose of the 2003 AQMP for the Basin (and those portions of the SSAB under the SCAQMD's jurisdiction) is to set forth a comprehensive program that will lead these areas into compliance with all federal and state air quality planning requirements. Specifically, the 2003 AQMP is designed to satisfy the CCAA tri-annual update requirements and fulfill the SCAQMD's commitment to update transportation emission budgets based on the latest approved motor vehicle emissions model and planning assumptions.[31] The 2003 AQMP has been approved by the ARB, and it has been submitted to the U.S. EPA for review and approval as a SIP revision.

Success of the 2003 AQMP requires the cooperation of all levels of government: local, regional, state, and federal. Each level is represented in the 2003 AQMP by the appropriate agency or jurisdiction that has the authority over specific emissions sources, and for which each has specific planning and implementation responsibilities.[32]

The overall control strategy for the 2003 AQMP is designed to meet applicable state and federal requirements, including attainment with ambient air quality standards. The focus of the 2003 AQMP is to demonstrate attainment with the federal PM_{10} ambient air quality standard by 2006, and with the federal 1-hour ozone standard in 2010, while making expeditious progress toward attainment of state standards and upcoming new federal standards. Although the 2003 AQMP does not specifically address the new federal 8-hour ozone and $PM_{2.5}$ standards, it is designed to make continued progress toward meeting these standards. The 2003 AQMP relies upon the most recent planning assumptions and the best available information, such as the ARB's EMFAC2002 for on-road mobile source emissions inventory, ARB's off-road model for off-road mobile source emission inventory, latest point source and improved area source inventories, as well as the use of the 1997 O_3 episodes, expanded air quality modeling analysis, and SCAG's forecast assumptions based on its 2001 RTP.[33]

The 2003 AQMP was prepared to ensure compliance with the federal O_3 and PM_{10} standards, to accommodate growth, to reduce the high levels of criteria pollutants within the Basin, to meet state and federal air quality standards, and to minimize the fiscal impact that pollution control measures have on

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30 For example, the SCAQMD amended the 1997 AQMP in 1999 to address the U.S. EPA's proposed disapproval of the 1997 Ozone State Implementation Plan (SIP) revision and to ensure that the 1997 AQMP complied with or exceeded federal requirements. The 1999 AQMP amendments to the 1997 AQMP were subsequently approved by the U.S. EPA into the SIP in April 2000. The SCAQMD updated the PM_{10} portion of the 1997 AQMP for both the Basin and Coachella Valley in 2002, as part of the district's request to extend the PM_{10} attainment date from 2001 to 2006 for these areas as allowed under the federal CAA. The U.S. EPA approved the 2002 update on April 18, 2003. See, SCAQMD. 2003 AQMP. [Online] 22 December 2003. http://www.aqmd.gov/aqmp/AQMD03AQMP.htm, p. 1-1.

31 Ibid., p. 1-1.

32 Ibid.

33 SCAQMD. 2003 Air Quality Management Plan. [Online] 22 December 2003. http://www.aqmd.gov/aqmp/AQMD03AQMP.htm, p. 4-1. http://www.aqmd.gov/aqmp/AQMD03AQMP.htm.

the local economy. Principal control policies and measures for improving the Basin's air quality include extensive use of clean fuels, transportation control measures, market incentives, and facility permitting. Many of these policies and measures have been adopted as rules by the SCAQMD Governing Board or may be adopted as rules in the future.

The air quality levels projected in the 2003 AQMP are based on several assumptions. For example, the 2003 AQMP has assumed that development associated with general plans, specific plans, residential projects, and wastewater facilities will be constructed in accordance with population growth projections identified by SCAG in its 2001 RTP. The 2003 AQMP also has assumed that such development projects will implement strategies to reduce emissions generated during the construction and operational phases of development. The project's consistency with the 2003 AQMP is discussed later in this EIR section.

(b) 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 that limit the emissions that can be generated by various uses and/or activities, and that identify specific pollution reduction measures which 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.[34] The rules are subject to ongoing refinement by SCAQMD.

In particular, 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 the AQMP. The proposed project would be subject to SCAQMD rules and regulations to reduce specific emissions and to mitigate potential air quality impacts.

(c) SCAQMD's *CEQA Air Quality Handbook*

In April 1993, the SCAQMD prepared the *CEQA Air Quality Handbook* to assist local government agencies and consultants in preparing air quality impact analyses for projects subject to CEQA. It was later updated in November 1993 and is presently being updated by the district. The *CEQA Air Quality*

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[34] Assembly Bill 1807 (AB 1807) (Stats. 1983, Ch. 1047; Health and Safety Code Section 39650, et seq., Food and Agriculture Code Section 14021, et seq.), enacted in September 1983, sets forth a procedure for the identification and control of toxic air contaminants (TAC) in California. According to those statutes, the ARB is responsible for the identification and control of TACs, as discussed above. AB 1807 defines a TAC as an air pollutant which may cause or contribute to an increase in mortality or an increase in serious illness, or which may pose a present or potential hazard to human health (Health and Safety Code Section 39655a). California Air Resources Board. "Toxic Air Contaminant Staff Report/Executive Summaries." [Online] 2 February 2004. <http://www.arb.ca.gov/toxics/summary/summary.htm>.

Handbook is an advisory document and local jurisdictions are not required to utilize the methodology outlined therein, but it does describe the criteria that SCAQMD uses when reviewing and commenting on the adequacy of environmental documents, such as this EIR. It recommends thresholds for determining whether or not projects would have significant adverse environmental impacts, identifies methodologies for predicting project emissions and impacts, and identifies mitigation measures to avoid or reduce air quality impacts. Although the *CEQA Air Quality Handbook* has been adopted by the Governing Board of the SCAQMD, it does not, nor does it intend to, supersede a local jurisdiction's CEQA procedures.

The *CEQA Air Quality Handbook*, last published in November 1993, is currently undergoing revision. The updated and revised document is referred to by SCAQMD as the *Air Quality Guidance Handbook*. As of May 2006,[35] nine chapters of the *Air Quality Guidance Handbook* have been prepared. This EIR section was prepared following the recommendations of the SCAQMD found in the *CEQA Air Quality Handbook* and the revised chapters of *Air Quality Guidance Handbook*, as well as more current recommendations for air quality modeling.[36]

(d) Santa Clarita Subregional Analysis

In November 2004, SCAQMD prepared a subregional analysis for the Santa Clarita Valley. The purpose of the subregional analysis is to identify disproportionate air quality impacts in a specific geographic area, and if found, to address and mitigate these impacts. With regard to future development, the analysis concluded that:

- When simultaneous 25-year buildout of all recorded, pending and approved land parcels in the City and County portions of the valley is assumed, simulated annual PM_{10} impact is projected to increase up to 5 micrograms per cubic meter;
- The maximum regional annual average PM_{10} impact is projected to occur near Newhall Ranch; and
- Future development would not cause violations of the federal annual average PM_{10} standard, but could cause possible violations of the state standard.
- The overwhelming contribution of pollution transport to the Santa Clarita Valley comes from the San Fernando Valley and metropolitan Los Angeles. The major daytime wind vectors are from the south and upwind emission source areas. Additionally, field studies have confirmed the prevalent transport route through the Newhall Pass by tracing the northward movement of inert tracer gases released in the Metropolitan Los Angeles areas. As an example, Santa Clarita is a relatively small contributor to the total emissions of the key pollutants in both Los Angeles county and the Basin as a

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35 The revised chapters of the *Air Quality Guidance Handbook*, available at the time this section was written, and upon which this section relies, is available for public inspection and review at the County of Los Angeles Department of Regional Planning, as stated above, and incorporated by this reference.

36 SCAQMD recommends use of URBEMIS2002 as an alternative air quality model. Personal communication with Charles Blankson, Ph.D., SCAQMD, Diamond Bar, California, 8 November 2002.

whole. The report indicates that across the board, the emissions are typically less than three percent of the County total and 2 percent of the basin total.

(5) Local Governments

Local governments, such as the County of Los Angeles, have the authority and responsibility 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 2003 AQMP. The 2003 AQMP assigns local governments certain responsibilities to assist the Basin in meeting air quality goals and policies. In general, a first step toward implementing a local government's responsibility is accomplished by identifying air quality goals, policies, and implementation measures in its General Plan. Through capital improvement programs, local governments can fund infrastructure that contributes to improved air quality, by requiring such improvements as bus turnouts, energy-efficient streetlights, and synchronized traffic signals. In accordance with CEQA requirements and the CEQA review process, local governments assess the air quality impacts of projects they undertake or that occur within their jurisdictions, require mitigation of potential air quality impacts by conditioning discretionary permits, and monitor and enforce implementation of such mitigation.[37]

5. EXISTING CONDITIONS

a. Regional Climate[38]

The regional climate significantly influences the air quality in the Basin. Temperature, wind, humidity, precipitation, and even the amount of sunshine influence the quality of the air. In addition, the Basin is frequently subjected to an inversion layer that traps air pollutants. Temperature has an important influence on Basin wind flow, pollutant dispersion, vertical mixing, and photochemistry.

Annual average temperatures throughout the Basin 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.

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37 SCAQMD, *CEQA Air Quality Handbook*, (Diamond Bar, California: SCAQMD, April 1993), p. 2-2; *Air Quality Guidance Handbook* (July 1999) pp. 2-8–2-10. The *Air Quality Guidance Handbook* may be reviewed Online at http://www.aqmd.gov/ceqa/hdbk.html.

38 The information contained in this section, unless otherwise noted, primarily is derived from Appendix 8 to the *CEQA Air Quality Handbook*.

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. Humidity restricts visibility in the Basin, and the conversion of SO_2 to SO_4 is heightened in air with high relative humidity. The marine layer is an excellent environment for that conversion process, 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.

More than 90 percent of the Basin's rainfall occurs from November through April (see **Table 4.9-1**, **Average Monthly Temperatures and Precipitation for Los Angeles International Airport, CA, 1961–1990**). 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 4.9-1
Average Monthly Temperatures and Precipitation for
Los Angeles International Airport, CA, 1961–1990

	Mean Daily Temperatures (°F)		Mean Monthly
Month	**Maximum**	**Minimum**	**Precipitation**
January	65	47	2.40
February	66	49	2.51
March	65	50	1.98
April	68	53	0.72
May	69	56	0.14
June	72	60	0.03
July	75	63	0.01
August	76	64	0.15
September	76	63	0.31
October	74	59	0.34
November	71	52	1.76
December	66	48	1.66
	110 (high)	23 (low)	12.01 (total)

Source: 1999 Local Climatological Data, Annual Summary with Comparative Data, Los Angeles, California, International Airport.

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 Sanberg, a mountain location. The number of clear days also increases with distance from the coast: 145 days at LAX and 186 days at Burbank.[39] 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.

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. During the late autumn to early spring rainy season, the Basin is subjected 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

[39] 1999 Local Climatological Data, Annual Summary with Comparative Data, Los Angeles, California, International Airport. National Oceanic and Atmospheric Administration.

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.

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 NO_x and 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.

Conditions possibly affecting regional climate conditions include global warming. As is discussed in Chapter 3 of the AQMD Guidelines,

> *"Stratospheric ozone depletion" refers to the slow destruction of naturally occurring ozone, which lies in the upper atmosphere (called the stratosphere) and which protects Earth from the damaging effects of solar ultraviolet radiation. Figure 3-4 illustrates these reactions.*
>
> *Certain compounds, including chlorofluorocarbons (CFCs,) halons, carbon tetrachloride, methyl chloroform, and other halogenated compounds, accumulate in the lower atmosphere and then gradually migrate into the stratosphere. In the stratosphere, these compounds participate in complex chemical reactions to destroy the upper ozone layer. Destruction of the ozone layer increases the penetration of ultraviolet radiation to the Earth's surface, a known risk factor that can increase the incidence of skin cancers and cataracts, contribute to crop and fish damage, and further degrade air quality.*
>
> *Some gases in the atmosphere affect the Earth's heat balance by absorbing infrared radiation. This layer of gases in the atmosphere functions much the same as glass in a greenhouse (i.e., both prevent the escape of heat). This is why global warming is also known as the "greenhouse effect." Gases responsible for global warming and their relative contribution to the overall warming effect are carbon dioxide (55 percent), CFCs (24 percent), methane (15 percent), and nitrous oxide (6 percent). It is widely accepted that continued increases in greenhouse gases will contribute to global warming although there is uncertainty concerning the magnitude and timing of the warming trend.*
>
> *Global warming gases and ozone-depleting gases include, but are not limited to, the following:*
>
> - *Carbon dioxide. Carbon dioxide is caused by fossil fuel combustion in stationary and mobile sources. It contributes to the greenhouse effect, but not to stratospheric ozone depletion. In the Basin, approximately 48 percent of carbon dioxide emissions come from transportation, residential and utility sources contribute approximately 13 percent each, 20 percent come from industry, and the remainder come from a variety of other sources.*
> - *CFCs (chlorofluorocarbons). CFCs are emitted from blowing agents used in producing foam insulation. They are also used in air conditioners and refrigerators and as solvents to clean electronic microcircuits. CFCs are primary contributors to stratospheric ozone depletion and to global warming. Sixty-three percent of CFC emissions in the Basin come from the industrial sector (SCAQMD 1991).*
> - *Halons. Halons are used in fire extinguishers and behave as both ozone-depleting and greenhouse gases.*
> - *HCFCs (Hydro-chlorofluorocarbons). HCFCs are solvents, similar in use and chemical composition to CFCs. The hydrogen component makes HCFCs more chemically reactive than CFCs, allowing them to break down more quickly in the atmosphere.*
> - *Methane. Methane is emitted from biogenic sources, incomplete combustion in forest fires, landfills, and leaks in natural gas pipelines. It is a greenhouse gas and traps heat 40-70 times more effectively than carbon dioxide. In the Basin, more than 50 percent of human-induced methane emissions come from natural gas pipelines, while landfills contribute 24 percent.*

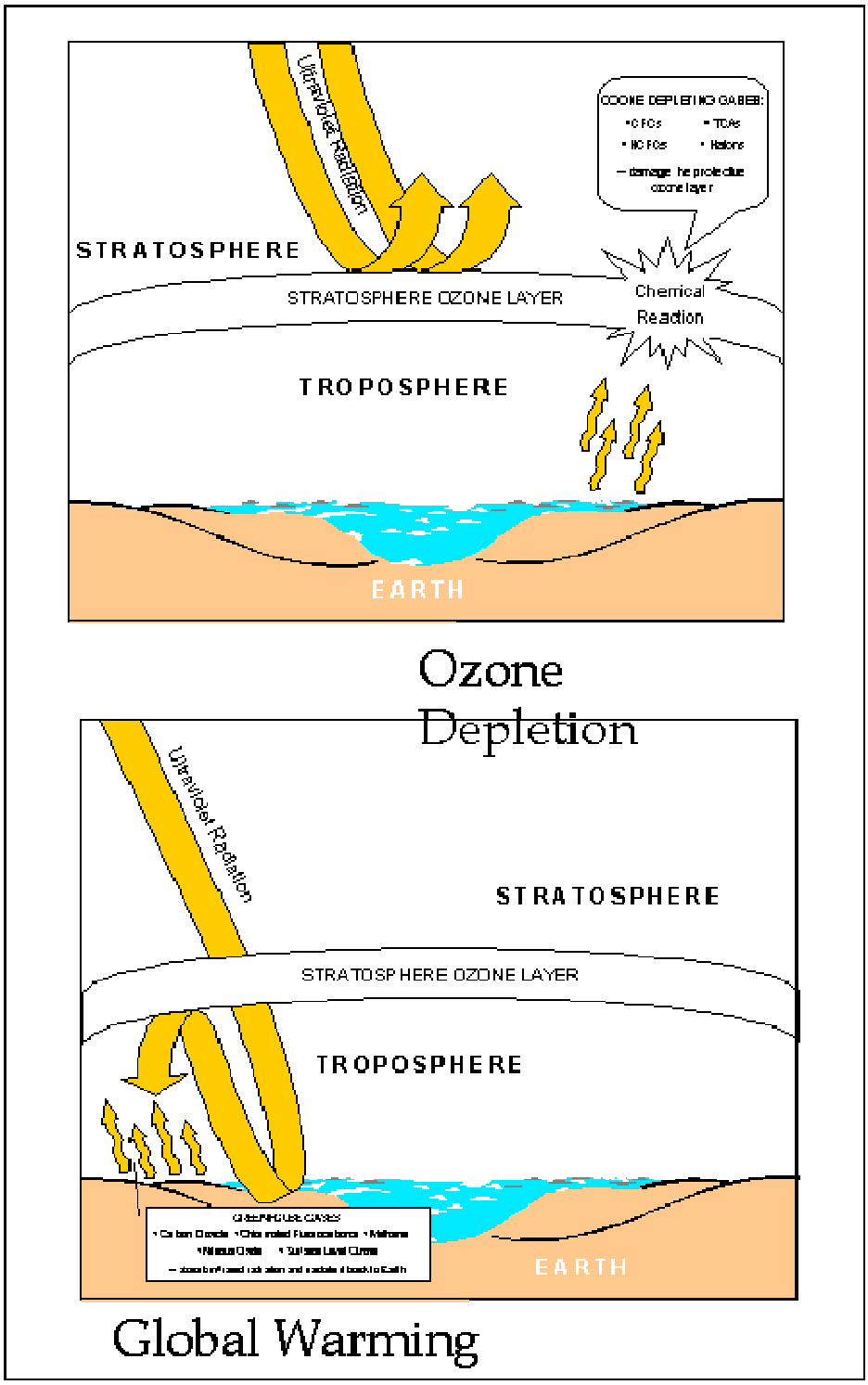

Figure 3-4
Stratospheric Ozone Depletion and Global Warming

- *1,1,1,-trichloroethane. 1,1,1,-trichloroethane or methyl chloroform is a solvent and cleaning agent commonly used by manufacturers. It is less destructive of the environment than CFCs or HCFCs, but its continued use will contribute to global warming and ozone depletion."*

b. Regional Air Quality

In this subsection, year 2001 regional air quality in the Basin monitored by the SCAQMD is compared to state and federal ambient air quality standards.[40] The following information, unless otherwise noted, is primarily derived from the SCAQMD's 2003 AQMP, Chapter 2 – Air Quality and Health Effects, and Appendix II – Current Air Quality.[41]

Air quality is determined primarily by the type and amount of contaminants emitted into the atmosphere, the size and topography of the air basin, and the meteorological conditions. The Basin has low mixing heights and light winds, which are conducive to the accumulation of air pollutants. Pollutants that impact air quality are generally divided into two categories, criteria pollutants (those for which health standards have been set), and TACs (those that cause cancer or have adverse human health effects other than cancer).

(1) Criteria Pollutants

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 Pb. These standards were established to protect exposed sensitive receptors from adverse health effect with a margin of safety. The California standards are more stringent than the federal standards, and in the case of PM_{10} and SO_2, the California standards are much more stringent. California has also established standards for sulfates, visibility reducing particles, hydrogen sulfide, and vinyl chloride. The state and national ambient air quality standards for each of the monitored pollutants and their effects on health are summarized in **Table 4.9-2, Ambient Air Quality Standards**.

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40 According to the SCAQMD's 2003 AQMP, complete data for the year 2002 was not available at the time the AQMP was prepared. SCAQMD. *2003 Air Quality Management Plan*. [Online] 22 December 2003. <http://www.aqmd.gov/aqmp/AQMD03AQMP.htm>, Chapter 2, p. 2-1, fn.1.

41 SCAQMD. *2003 Air Quality Management Plan*. [Online] 22 December 2003. <http://www.aqmd.gov/aqmp/AQMD03AQMP.htm>.

Table 4.9-2
Ambient Air Quality Standards[1]

Air Pollutant	Concentration/Averaging Time		Most Relevant Health Effects[2]
	State Standard	Federal Primary Standard	
Ozone	0.070 ppm, 8-hr avg. 0.09 ppm, 1-hr. avg.	0.08 ppm, 8-hr avg. 0.12 ppm, 1-hr avg. (revoked 6/15/05)	(a) Short-term exposures: (1) Pulmonary function decrements and localized lung edema in humans and animals, (2) Risk to public health implied by alterations in pulmonary morphology and host defense in animals; (b) Long-term exposures: Risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary-function decrements in chronically-exposed humans; (c) Vegetation damage; (d) Property damage.
Carbon Monoxide	9.0 ppm, 8-hr avg. 20 ppm, 1-hr avg.	9 ppm, 8-hr avg. 35 ppm, 1-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; (d) Possible increased risk to fetuses.
Nitrogen Dioxide	0.25 ppm, 1-hr avg.	0.0534 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 extra-pulmonary biochemical and cellular changes and pulmonary structural changes; (c) Contribution to atmospheric discoloration.
Sulfur Dioxide	0.04 ppm, 24-hr avg. 0.25 ppm, 1-hr. avg.	0.030 ppm, annual arithmetic mean 0.14 ppm, 24-hr avg.	(a) Bronchoconstriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma.
Suspended Particulate Matter (PM_{10})	20 $\mu g/m^3$, annual arithmetic mean 50 $\mu g/m^3$, 24-hr avg.	50 $\mu g/m^3$, annual arithmetic mean 150 $\mu g/m^3$, 24-hr avg.	(a) Excess deaths from short-term exposures and exacerbation of symptoms in sensitive patients with respiratory disease; (b) Excess seasonal declines in pulmonary function, especially in children.
Suspended Particulate Matter ($PM_{2.5}$)	12 $\mu g/m^3$, annual arithmetic mean	15 $\mu g/m^3$, annual arithmetic mean 65 $\mu g/m^3$, 24-hr avg.	(a) Increased hospital admissions and emergency room visits for heart and lung disease; (b) Increased respiratory symptoms and disease; and (c) Decrease lung functions and premature death.
Sulfates	25 $\mu g/m^3$, 24-hr avg.	None	(a) Decrease in ventilatory function; (b) Aggravation of asthmatic symptoms; (c) Aggravation of cardiopulmonary disease; (d) Vegetation damage; (e) Degradation of visibility; (f) Property damage.
Lead*	1.5 $\mu g/m^3$, 30-day avg.	1.5 $\mu g/m^3$, calendar quarterly average	(a) Increased body burden; (b) Impairment of blood formation and nerve conduction.
Visibility-Reducing Particles	In sufficient amount to reduce the visual range to less than 10 miles at relative humidity less than 70%, 8-hour average (10 AM–6 PM)	None	Visibility impairment on days when relative humidity is less than 70 percent.
Hydrogen Sulfide	0.03 ppm (42 $\mu g/m^3$), 1-hr avg.	None	Odor annoyance.

Air Pollutant	Concentration/Averaging Time		Most Relevant Health Effects[2]
	State Standard	Federal Primary Standard	
Vinyl Chloride*	0.01 ppm (26 μg/m^3), 24-hr avg.	None	Known carcinogen.

Sources:

[1] *California Air Resources Board. "Air Quality Standards." [Online] [May 15, 2003]. <http://www.arb.ca.govaqs aqs.htm>.*

[2] *South Coast Air Quality Management District. Final Program Environmental Impact Report to the 2003 Draft AQMP (Diamond Bar, California: SCAQMD, August 2003), Table 3.1-1, p. 3.1-2. This report may be reviewed on the SCAQMD website at http://ww.aqmd.gov/ceqa/documents/2003/aqmd/finalEA/aqmp/AQMP_FEIR.html*

μg/m^3 = microgram per meter cubed.

ppm = parts per million.

* *The ARB has identified lead and vinyl chloride as "toxic air contaminants" TACs 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.*

Air quality of a region is considered to be in attainment of the state standards if the measured ambient air pollutant levels for O_3, CO, SO_2 (1- and 24-hour), NO_2, PM_{10}, $PM_{2.5}$, and visibility reducing particles are not exceeded, and all other standards are not equaled or exceeded at any time in any consecutive 3-year period. The NAAQS (other than O_3, PM_{10}, $PM_{2.5}$, and those based on annual averages or arithmetic mean) are not to be exceeded more than once per year. NAAQS for O_3, PM_{10}, and $PM_{2.5}$ are based on statistical calculations over one- to three-year periods, depending on the pollutant.

In 2001, the Basin exceeded the federal standards for O_3, PM_{10} and $PM_{2.5}$ on a total of 58 days overall. Despite the substantial improvement over historical air quality in the past few decades, some areas in the Basin still exceeded the 1-hour federal standard for O_3 more frequently than any other area of the U.S. In 2001, 9 out of 10 locations in the nation that exceeded the standard most frequently were located in the Basin.[42]

The Basin is also among the few areas in the nation that are still classified as nonattainment for CO. Based on current data, the Basin met the CO standards in 2002, and the SCAQMD is expected to be reclassified as "attainment" in the next few years.

(a) Current Air Quality Summary

The following information is derived primarily from the SCAQMD's 2003 AQMP, Chapter 2 – Air Quality and Health Effects, and Appendix II – Current Air Quality, and presents a regional overview of the Basin's air quality status. The project is located in Source Receptor Area 13, Santa Clarita Valley, in northwest Los Angeles County. Ambient Air Monitoring Station No. 090 monitors pollutant concentrations for this Source Receptor Area.[43] As will be demonstrated later on in this EIR section, the

[42] Ibid., Chapter 2, p. 2-1, fn.1.

[43] Ibid., Appendix III, Table A-3, Figure A-1.

Santa Clarita Valley area, did not register any of the maximum pollutant concentrations measured for the Basin in 2001.

> *"In 2001, the maximum ozone, PM_{10}, and $PM_{2.5}$ concentrations exceeded federal standards by wide margins. Maximum 1-hour and 8-hour average ozone concentrations recorded (0.190 ppm in East San Gabriel Valley and 0.144 ppm in Central and East San Bernardino Valley areas) were 152 and 169 percent of the federal standard, respectively. Maximum 24-hour average and annual average PM_{10} concentrations (219 $\mu g/m^3$ recorded in Banning Airport area and 63.1 $\mu g/m^3$ recorded in the Metropolitan Riverside County area) were 146 and 125 percent of the federal 24-hour and annual average standards, respectively. Maximum 24-hour average and annual average $PM_{2.5}$ concentrations (98.0 $\mu g/m^3$ and 31.1 $\mu g/m^3$, both recorded in Metropolitan Riverside County area) were, respectively, 150 and 201 percent of the federal 24-hour and annual average standards. CO concentrations did not exceed the standards in 2001.*[44] *The highest 8-hour average CO concentration recorded (7.71 ppm in the South Central Los Angeles County area) was 81 percent of the federal 8-hour CO standard.*
>
> *Concentrations of other pollutants remained below the standards. The maximum annual average nitrogen dioxide NO_2 concentration (0.0419 ppm recorded in the East San Fernando Valley area) was 78 percent of the federal standard, and the maximum annual average sulfur dioxide (SO_2) concentration (0.0031 ppm recorded in Southwest Coastal Los Angeles County area) was 10 percent of the federal standard. The maximum sulfate concentration recorded (20.6 $\mu g/m^3$ in Southwest Coastal Los Angeles County area) was 82 percent of the state sulfate standard. The maximum quarterly average lead concentration recorded at any SCAQMD air monitoring station was 8 percent of the federal standard. However, higher concentrations of lead (32 percent of the standard) were recorded at special monitoring sites immediately adjacent to stationary sources (in Central Los Angeles area).*
>
> *The federal ozone standard was exceeded on a maximum of 26 days (seven percent of days in the Central San Bernardino Mountains area). Exceedances of the federal 24-hour PM_{10} standard were recorded on a maximum of one day (two percent of days sampled at each of the locations in Banning Airport and Southwest San Bernardino Valley area), and the federal 24-hour $PM_{2.5}$ standard was exceeded on a maximum of 19 days (6 percent of days sampled, in Metropolitan Riverside County area)."*[45]

The following sections present summary information on health effects and how frequently, and by how much of a margin, different areas of the Basin exceeded the federal and state ambient air quality standards in 2001.

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44 Preliminary data from 2002 indicates one violation of CO, which is allowed under the CAA for attainment classification purpose.

45 SCAQMD. 2003 AQMP. [Online] 22 December 2003. <http://www.aqmd.gov/aqmp/AQMD03AQMP.htm>, pp. 2-5–2-6.

(b) Ozone (O_3) Specific Information

O_3 is a highly reactive and unstable gas capable of damaging the respiratory tract. Please see the discussion of O_3, above in the **Subsection 4.a., Smog and Its Causes**, for more information and **Table 4.9-2, Ambient Air Quality Standards**, for a discussion of most relevant health effects.

Air Quality

Regularly monitored O_3 concentrations at 28 locations in the Basin in 2001 were below the stage 1 episode level (0.20 ppm), but the maximum concentrations in the Basin exceeded the health advisory level (0.15 ppm). **Table 4.9-3, 2001 Maximum 1-Hour Ozone Concentrations by County**, and **Table 4.9-4, 2001 Maximum 8-Hour Ozone Concentrations by County**, shows maximum 1-hour and 8-hour O_3 concentrations by County, respectively.

Table 4.9-3
2001 Maximum 1-Hour Ozone Concentrations by County

County	Maximum 1-Hr Avg. (ppm)	Percent of Federal Standard	Area
Los Angeles	0.190	152	East San Gabriel Valley
Orange	0.125	100	Saddleback Valley
Riverside	0.152	122	Perris Valley
San Bernardino	0.184	147	Central San Bernardino Valley

Source: SCAQMD, 2003 AQMP (Diamond Bar, California: SCAQMD) August 1, 2003, Chapter 2, p. 2-9. This document is also available for review at http://www.aqmp.gov/aqmp/AQMD03AQMP.htm.

Table 4.9-4
2001 Maximum 8-Hour Ozone Concentrations by County

County	Maximum 8-Hr Avg. (ppm)	Percent of Federal Standard	Area
Los Angeles	0.135	159	East San Gabriel Valley
Orange	0.098	115	Saddleback Valley
Riverside	0.136	160	Perris Valley
San Bernardino	0.144	169	Central San Bernardino Valley, East San Bernardino Valley

Source: SCAQMD, 2003 AQMP (Diamond Bar, California: SCAQMD) August 1, 2003, Chapter 2, p. 2-9. This document is also available for review at http://www.aqmd.gov/aqmp/AQMD03AQMP.htm.

"The number of days exceeding the federal standard varied widely by area. Areas along or nearby the coast did not exceed the federal standard, due in large part to the prevailing sea breeze which transports polluted air inland before high ozone concentrations can be reached. The standard was exceeded most frequently in the inland valleys extending from East San Gabriel Valley through the Riverside-San Bernardino area, and in the adjacent mountains. The Central San Bernardino Mountains area recorded the greatest number of exceedances of the state standard (88 days), federal standard (26 days) and health advisory level (12 days).

The number of exceedances of the 8-hour federal ozone standard was also lowest at the coastal areas, increasing to a peak in the Riverside-San Bernardino Valley and adjacent mountain areas."[46]

(c) Carbon Monoxide (CO) Specific Information

"CO is a colorless, odorless gas. It results from the incomplete combustion of carbon-containing fuels such as gasoline or wood, and is emitted by a wide variety of combustion sources."47 Please see **Table 4.9-2, Ambient Air Quality Standards**, for a discussion of most relevant health effects.

Air Quality

CO concentrations were measured at 23 locations in the Basin in 2001. **Table 4.9-5, 2001 Maximum Carbon Monoxide Concentrations by County**, shows the 2001 maximum 8-hour average concentrations of CO by County.

Table 4.9-5
2001 Maximum Carbon Monoxide Concentrations by County

County	Maximum 8-Hr Avg. (ppm)	Percent of Federal Standard	Area
Los Angeles	7.7	81	South Central L.A. County
Orange	4.7	49	Central Orange County, North Orange County
Riverside	4.5	47	Metropolitan Riverside County
San Bernardino	3.3	35	Central San Bernardino Valley

Source: SCAQMD, 2003 AQMP (Diamond Bar, California: SCAQMD) August 1, 2003, Chapter 2, p. 2-13. This document is also available for review at http://www/aqmd.gov/aqmp/AQMD03AQMP.htm.

Regarding the maximum 8-hour average CO concentrations in the Basin in 2001, higher concentrations were limited to the areas of the County where vehicular traffic is most dense, with the maximum

46 Ibid., pp. 2-9–2-10.

47 California Air Resources Board. "Carbon Monoxide." [Online] 8 January 2004. <http://www.arb.ca.gov/research/aaqs/caaqs/co/co.htm>.

concentration (7.71 ppm) recorded in the South Central Los Angeles County area. The Basin recorded the 6th highest maximum 8-hour average CO concentration in the nation in 2001 and is one of the few areas in the country still designated as nonattainment for CO.[48]

(d) Particulate Matter (PM_{10} and $PM_{2.5}$) Specific Information

> *"Suspended particulate matter (PM) is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size, and chemical composition, and can be made up of many different materials such as metals, soot, soil, and dust. 'Inhalable' PM consists of particles less than 10 microns in diameter, and is defined as 'suspended particulate matter' or 'PM_{10}.' Fine particles are less than 2.5 microns in diameter ($PM_{2.5}$) [and can significantly contribute to regional haze and reduction of visibility in California]."*[49]

Please see **Table 4.9-2, Ambient Air Quality Standards**, for a discussion of most relevant health effects.

Air Quality, PM10

The SCAQMD monitored PM_{10} concentrations at 18 locations in 2001. Maximum 24-hour and annual average concentrations are shown in **Table 4.9-6, 2001 Maximum 24-hour Average PM_{10} Concentrations by County**, and **Table 4.9-7, 2001 Maximum Annual Average PM_{10} Concentrations by County**, respectively.

Table 4.9-6
2001 Maximum 24-Hour Average PM_{10} Concentrations by County

County	Maximum 24-Hr Avg. ($\mu g/m^3$)	Percent of Federal Standard	Area
Los Angeles	106	70	East San Gabriel Valley
Orange	93	62	Central Orange County
Riverside	219	146	Banning Airport
San Bernardino	166	110	Southwest San Bernardino Valley

Source: SCAQMD, 2003 AQMP (Diamond Bar, California: SCAQMD) August 1, 2003, Chapter 2, p. 15. This document is also available for review at http://www.aqmd.gov/aqmp/AQMD03AQMP.htm.
**Adjusted for high-wind days in accordance with U.S. EPA's Natural Event Policy.*

48 Ibid., p. 2-12.

49 California Air Resources Board. "Particulate Matter." [Online] 8 January 2004. <http://www.arb.ca.gov/research/aaqs/caaqs/pm/pm.htm>.

Table 4.9-7
2001 Maximum Annual Average PM_{10} Concentrations by County

County	Annual Average (μg/m³)	Percent of Federal Standard	Area
Los Angeles	45.3	90	East San Gabriel Valley
Orange	36.0	79	Central Orange County
Riverside	63.1	125	Metropolitan Riverside County
San Bernardino	52.4	104	Southwest San Bernardino Valley

Source: SCAQMD, 2003 AQMP (Diamond Bar, California: SCAQMD) August 1, 2003, Chapter 2, p. 15. This document is also available for review at http://www.aqmd.gov/aqmp/AQMD03AQMP.htm.
**Adjusted for the high-wind days in accordance with U.S. EPA's Natural Event Policy.*

As would be expected, higher concentrations of PM_{10} associated with high winds in the inland valley areas were recorded in San Bernardino and Riverside Counties. Data for samples collected on these high-wind days were excluded from overall monitoring data in accordance with U.S. EPA's Natural Event Policy.

> *"The federal annual PM_{10} standard was exceeded at only a few locations in the [SCAQMD] in the areas of Riverside and San Bernardino Counties in and around the Metropolitan Riverside County area and further inland in San Bernardino Valley areas. The federal 24-hour standard was also exceeded at two locations in Riverside and San Bernardino counties. The much more stringent state standards were exceeded in all areas of the Basin monitored in 2001."*[50]

Air Quality $PM_{2.5}$

The SCAQMD began regular monitoring of $PM_{2.5}$ in 1999 following the EPA's adoption of the national $PM_{2.5}$ standards in 1997. In 2001, $PM_{2.5}$ concentrations were monitored at 18 locations throughout the SCAQMD. Maximum 24-hour and annual average concentrations are shown in **Table 4.9-8, 2001 Maximum 24-hour Average $PM_{2.5}$ Concentrations by County**, and **Table 4.9-9, 2001 Maximum Annual Average $PM_{2.5}$ Concentrations by County**, respectively. Both 24-hour and annual $PM_{2.5}$ standards were exceeded at most locations in the Basin.[51]

50 Ibid.

51 Ibid.

Table 4.9-8
2001 Maximum 24-Hour Average $PM_{2.5}$ Concentrations by County

County	Maximum 24-Hr Avg. ($\mu g/m^3$)	Percent of Federal Standard	Area
Los Angeles	94.7	145	East San Fernando Valley
Orange	70.8	108	Central Orange County
Riverside	98.0	150	Metropolitan Riverside County
San Bernardino	78.5	120	Central San Bernardino Valley

Source: SCAQMD, 2003 AQMP (Diamond Bar, California: SCAQMD) August 1, 2003, Chapter 2, p. 2-16. This document is also available for review at http://www.aqmd.gov/aqmp/AQMD03AQMP.htm.

Table 4.9-9
2001 Maximum Annual Average $PM_{2.5}$ Concentrations by County

County	Annual Average ($\mu g/m^3$)	Percent of Federal Standard	Area
Los Angeles	26.1	168	South San Gabriel Valley
Orange	22.4	145	Central Orange County
Riverside	31.1	201	Metropolitan Riverside County
San Bernardino	26.2	169	Southwest San Bernardino Valley, Central San Bernardino Valley

Source: SCAQMD, 2003 AQMP (Diamond Bar, California: SCAQMD) August 1, 2003, Chapter 2, p. 2-16. This document is also available for review at http://www.aqmd.gov/aqmp/AQMD03AQMP.htm.

$PM_{2.5}$ concentrations were higher in the inland valley areas of San Bernardino and Metropolitan Riverside counties, but were also high in Los Angeles County and central Orange County. The high $PM_{2.5}$ concentrations in Los Angeles and Orange Counties are due to the secondary formation of smaller particulates generated by mobile and stationary source activities. PM_{10} concentrations are normally higher due to windblown and fugitive dust emissions.[52]

(e) Nitrogen Dioxide (NO_2) Specific Information

"Nitrogen dioxide (NO_2) is a reactive oxidizing gas capable of damaging cells lining the respiratory tract. This pollutant is also an essential ingredient in the formation of ground-level O_3 pollution. NO_2 is one of the nitrogen oxides emitted from high-temperature combustion processes,

52 Ibid., p. 2-16.

such as those occurring in trucks, cars, and power plants. Home heaters and gas stoves also produce substantial amounts of NO_2 in indoor settings."[53]

Please see **Table 4.9-2, Ambient Air Quality Standards**, for a discussion of most relevant health effects.

Air Quality

In 2001, NO_2 concentrations were monitored at 23 locations in the SCAQMD. No area of the Basin exceeded the federal or state standards for NO_2. Maximum annual average concentrations for 2001 are shown in **Table 4.9-10**, **2001 Maximum Nitrogen Dioxide Concentrations by County**. The Basin has not exceeded the federal standard for NO_2 since 1991, when the Los Angeles County portion of the Basin recorded the last exceedance of the standard in any U.S. County.

The state standard was not exceeded at any SCAQMD monitoring location in 2001. The highest 1-hour average concentration recorded (0.25 ppm in East San Fernando Valley) was 96 percent of the state standard.[54]

Table 4.9-10
2001 Maximum Nitrogen Dioxide Concentrations by County

County	Maximum Annual Avg. (ppm)	Percent of Federal Standard	Area
Los Angeles	0.0419	78	East San Fernando Valley
Orange	0.0293	55	Central Orange County
Riverside	0.0247	46	Metropolitan Riverside County
San Bernardino	0.0384	72	Northwest San Bernardino Valley

Source: SCAQMD, 2003 AQMP (Diamond Bar, California: SCAQMD) August 1, 2003, Chapter 2, p. 2-19. This document is also available for review at http://www.aqmd.gov/aqmp/AQMD03AQMP.htm.

(f) Sulfur Dioxide (SO_2) Specific Information

A gaseous compound of sulfur and oxygen, SO_2 is formed when sulfur-containing fuel is burned by mobile sources, such as locomotives, ships, and off-road diesel equipment. SO_2 is also emitted during

53 California Air Resources Board. "Nitrogen Dioxide." [Online] 8 January 2004. <http://www.arb.ca.gov/research/aaqs/caaqs/no2-1/no2-1.htm>.

54 Ibid.

some industrial processes, such as petroleum refining and metal processing.[55] Please see **Table 4.9-2, Ambient Air Quality Standards**, for a discussion of most relevant health effects.

Air Quality

Monitored SO_2 concentrations in the SCAQMD remained within federal and state standards in 2001. Although SO_2 concentrations remained well below the standards, SO_2 is a precursor to sulfate, which is a component of PM_{10} and $PM_{2.5}$. Standards for both PM_{10} and $PM_{2.5}$ were both exceeded in 2001.[56] Maximum concentrations of SO_2 for 2001 are shown in **Table 4.9-11, 2001 Maximum Sulfur Dioxide Concentrations by County**.

Table 4.9-11
2001 Maximum Sulfur Dioxide Concentrations by County

County	Maximum 24-hr Avg. (ppm)	Percent of Federal Standard	Area
Los Angeles	0.012	8	Southwest Coastal Los Angeles County, South Coastal Los Angeles County
Orange	0.007	5	North Coastal Orange County
Riverside	0.011	8	Metropolitan Riverside County
San Bernardino	0.010	7	Central San Bernardino Valley

Source: SCAQMD, 2003 AQMP (Diamond Bar, California: SCAQMD) August 1, 2003, Chapter 2, p. 2-20. This document is also available for review at http://www.aqmd.gov/aqmp/AQMD03AQMP.htm. http://www.aqmd.gov/aqmp/AQMD03AQMP.htm.

(g) Sulfates (SO_4) Specific Information

> *"Sulfates (SO_4) are the fully oxidized ionic form of sulfur. Sulfates occur in combination with metal and/or hydrogen ions. In California, emissions of sulfur compounds occur primarily from the combustion of petroleum-derived fuels (e.g., gasoline and diesel fuel) that contain sulfur. This sulfur is oxidized to sulfur dioxide (SO_2) during the combustion process and subsequently converted to sulfate compounds in the atmosphere. The conversion of SO_2 to sulfates takes place comparatively rapidly and completely in urban areas of California due to regional meteorological features."*[57]

Please see **Table 4.9-2, Ambient Air Quality Standards,** for a discussion of most relevant health effects.

55 California Air Resources Board. "Sulfur Dioxide." [Online] 8 January 2004. <http://www.arb.ca.gov/research/aaqs/caaqs/so2-1/so2-1.htm>.

56 Ibid., pp. 2-19–2-20.

57 California Air Resources Board. "Sulfates." [Online] 8 January 2004. <http://www.arb.ca.gov/research/aaqs/caaqs/sulf-1/sulf-1.htm>.

Air Quality

The state SO_4 standard was not exceeded anywhere in the Basin in 2001 (see **Table 4.9-12**, **2001 Maximum Sulfate Concentrations by County**). Concentrations of SO_4 in the Basin have been historically well below the standard to the extent that some monitoring stations (i.e., Orange) have discontinued monitoring of the pollutant.

Table 4.9-12
2001 Maximum Sulfate Concentrations by County

County	Maximum 24-hr Avg. ($\mu g/m^3$)	Percent of Federal Standard	Area
Los Angeles	20.6	82	Southwest Coastal Los Angeles County
Orange	N.D.	--	--
Riverside	10.7	43	Metropolitan Riverside Co.
San Bernardino	11.5	46	Central San Bernardino Valley

Source: SCAQMD, 2003 AQMP (Diamond Bar, California: SCAQMD) August 1, 2003, Chapter 2, p. 2-21. This document is also available for review at http://www.aqmd.gov/aqmp/AQMD03AQMP.htm. N.D. = No Data. Historical measurements indicate concentrations are well below standards and monitoring has been discontinued.

(h) Lead (Pb) Specific Information

Pb is a relatively soft and chemically resistant metal. Pb forms compounds with both organic and inorganic substances. As an air pollutant, Pb is present in small particles. Sources of Pb emissions in California include a variety of industrial activities. Because it was emitted in large amounts from vehicles when leaded gasoline was used, Pb is present in many soils (especially urban soils) and can get re-suspended into the air.[58] Please see **Table 4.9-2, Ambient Air Quality Standards**, for a discussion of most relevant health effects.

Air Quality

> *"The federal and state standards for lead were not exceeded in any area of the [SCAQMD] in 2001. There have been no violations of the standards at the [SCAQMD's] regular air monitoring stations since 1982, as a result of removal of lead from gasoline. However, special monitoring stations immediately adjacent to stationary sources of lead [(such as lead smelters and plating operations)] have recorded exceedances of the standards in very localized areas of the Basin as recently as 1991 for the federal standard and 1994 for the state standard. [**Table 4.9-13**, **2001***

[58] California Air Resources Board. "Lead." [Online] 8 January 2004. <http://www.arb.ca.gov/research/aaqs/caaqs/pb-1/pb-1.htm>.

***Maximum Lead Concentrations by County**] shows the maximum concentrations recorded in 2001. The highest quarterly average lead concentration (0.49 µg/m³ in Central Los Angeles), measured at special monitoring sites immediately adjacent to stationary sources of lead, was 32 percent of the federal standard.*

The maximum monthly average lead concentration at the regular monitoring stations (0.23 µg/m³ in the South Central Los Angeles County area) was 15 percent of the state standard. The maximum at the special monitoring sites immediately adjacent to sources (0.57 µg/m³ in Central Los Angeles) was 38 percent of the standard."[59]

Table 4.9-13
2001 Maximum Lead Concentrations by County

County	Maximum Quarterly Average (µg/m³)	Percent of Federal Standard	Area
Los Angeles	0.12	8	South Central Los Angeles County
Orange	N.D.	--	--
Riverside	0.03	2	Metropolitan Riverside County
San Bernardino	0.04	3	Northwest San Bernardino Valley, Central San Bernardino Valley

Source: SCAQMD, 2003 Air Quality Management Plan (Diamond Bar, California: SCAQMD) August 1, 2003, Chapter 2, p. 2-22. This document is also available for review at http://www.aqmd.gov/aqmp/AQMD03AQMP.htm.
N.D. = No Data. Historical measurements indicate concentrations are well below standards.

(i) Hydrogen Sulfide (H_2S) Specific Information

Formed during bacterial decomposition of sulfur-containing organic substances, H_2S is a colorless gas with the odor of rotten eggs. It also can be present in sewer gas and some natural gas, and can be emitted as the result of geothermal energy exploitation.[60] Please see **Table 4.9-2, Ambient Air Quality Standards**, for a discussion of most relevant health effects.

Air Quality

The SCAQMD's monitoring stations throughout the Basin do not currently monitor this pollutant.[61]

59 Ibid., p. 2-22.

60 California Air Resources Board. "Hydrogen Sulfide." [Online] 22 December 2003. <http://www.arb.ca.gov/research/aaqs/caaqs/h2s/h2s.htm>.

61 SCAQMD. 2003 AQMP. [Online] 22 December 2003. <http://www.aqmd.gov/aqmp/AQMD03AQMP.htm>, Appendix II, Tables A-4–A-22.

(j) Vinyl Chloride Specific Information

"Vinyl chloride (chloroethene), a chlorinated hydrocarbon, is a colorless gas with a mild, sweet odor. Most vinyl chloride is used to make polyvinyl chloride (PVC) plastic and vinyl products. Vinyl chloride has been detected near landfills, sewage plants, and hazardous waste sites, due to microbial breakdown of chlorinated solvents."[62]

Please see **Table 4.9-2, Ambient Air Quality Standards**, for a discussion of most relevant health effects.

Air Quality

The SCAQMD's monitoring stations throughout the Basin do not currently monitor this pollutant.[63]

(k) Visibility-Reducing Particles Specific Information

"Visibility-reducing particles consist of suspended particulate matter, which is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size and chemical composition, and can be made up of many different materials such as metals, soot, soil, dust, and salt."[64]

Please see **Table 4.9-2, Ambient Air Quality Standards**, for a discussion of most relevant health effects.

Air Quality

Although the SCAQMD's monitoring stations throughout the Basin do not directly monitor visibility-reducing particles, this pollutant is indirectly measured as PM_{10} and $PM_{2.5}$.[65]

Since deterioration of visibility is one of the most obvious manifestations of air pollution and plays a major role in the public's perception of air quality, the state of California has adopted a standard for visibility or visual range. Until 1989, the standard was based on visibility estimates made by human observers, but the standard was changed that year to require measurement of visual range using

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62 California Air Resources Board. "Vinyl Chloride." [Online] 22 December 2003. <http://www.arb.ca.gov/research/aaqs/caaqs/vc/vc.htm>.

63 SCAQMD. 2003 AQMP. [Online] 22 December 2003. <http://www.aqmd.gov/aqmp/AQMD03AQMP.htm>, Appendix II, Tables A-4–A-22.

64 California Air Resources Board. "Visibility Reducing Particles." [Online] 22 December 2003. <http://www.arb.ca.gov/research/aaqs/caaqs/vrp-1/vrp-1.htm>.

65 SCAQMD. 2003 AQMP. [Online] 22 December 2003. <http://www.aqmd.gov/aqmp/AQMD03AQMP.htm>, Appendix II, Tables A-4–A-22.

instruments that measure light scattering and absorption by suspended particles. However, as noted above, the SCAQMD does not directly monitor visibility-reducing particles.[66]

(l) Criteria Pollutant Emissions Inventory

SCAQMD's emissions inventory for the Basin from the 2003 AQMP is summarized in **Table 4.9-14**, **Annual Average Emissions by Major Source Type for Baseline Year 1997**. The emissions inventory for the anthropogenic (of human genesis) inventory is made up of stationary sources and mobile sources.

Table 4.9-14
Annual Average Emissions by Major Source Type for Baseline Year 1997
(ton/day)

Source Category	TOG	VOC	CO	NO_x	SO_x	TSP	PM_{10}	$PM_{2.5}$
Total Stationary and Area Sources	958.19	416.50	150.81	131.63	24.62	468.78	239.34	73.38
Total On-Road Vehicles	559.58	518.80	5,092.20	760.79	4.45	19.36	19.11	13.56
Total Other Mobile	256.75	236.55	1,409.97	311.97	28.87	21.00	20.51	18.27
Total	**1,774.53**	**1,171.85**	**6,652.99**	**1,204.13**	**57.94**	**509.14**	**278.96**	**105.21**

Source: SCAQMD, 2003 AQMP (Diamond Bar, California: SCAQMD) August 1, 2003, Appendix III, Attachment A. This document is also available for review at http://www.aqmd.gov/aqmp/AQMD03AQMP.htm.

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. Mobile sources are divided into two source categories: on-road and off-road mobile sources. On-road mobile sources include light-duty passenger vehicles; light-, medium-, and heavy-duty trucks; motorcycles; urban buses; school buses; and motor homes. Off-road mobile sources include off-road recreational vehicles, trains, ships, commercial boats, aircraft, and mobile equipment.[67]

66 California Air Resources Board. "Visibility Reducing Particles." [Online] 22 December 2003. <http://www.arb.ca.gov/research/aaqs/caaqs/vrp-1/vrp-1.htm>.

67 SCAQMD. 2003 AQMP. [Online] 22 December 2003. <http://www.aqmd.gov/aqmp/AQMD03AQMP.htm>, Appendix III, p. III-2-1.

The SCAQMD emissions inventory includes emissions in the Basin of total organic gases (TOG), VOC, CO, NO_x, SO_x, total suspended solids (TSP), PM_{10}, and $PM_{2.5}$.[68] Since O_3 is formed by photochemical reactions involving the precursors VOC and NO_x, it is not inventoried. **Table 4.9-14** lists the 1997 (most recent) inventory for the criteria pollutants (including $PM_{2.5}$) in the Basin.

As shown in **Table 4.9-14**, mobile sources are the major contributors to CO (98 percent), NO_x (89 percent), SO_x (58 percent), and VOC (64 percent) emissions in the Basin. Stationary and area sources are the major contributors to PM_{10} and $PM_{2.5}$ emissions (86 and 70 percent, respectively).

Pb and vinyl chloride inventories for the Basin are shown in **Table 4.9-15**, **1998 Annual Average Day Toxic Emissions for the South Coast Air Basin**. H_2S, as discussed above, is primarily related to odors and would be inventoried as a nuisance. Visibility reducing particles are indirectly discussed above in the context of PM_{10} and $PM_{2.5}$. S_4 are indirectly discussed above in the context of SO_x.

(2) Toxic Air Contaminants (TACs)

The following information has been obtained primarily from the SCAQMD's Multiple Air Toxics Exposure Study II (MATES II), described below. TACs typically emitted in the Basin include the contaminants listed in **Table 4.9-15**.

(a) 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 a 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.[69]

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68 The 2003 AQMP presents emission levels in the Basin for the criteria air contaminants and their precursors. Specifically, data are included for emissions of VOC, NO_x, SO_x, CO, PM_{10}, and $PM_{2.5}$. The $PM_{2.5}$ emissions are presented in this document because the U.S. EPA was in the process of adopting $PM_{2.5}$ air quality standards. O_3 is formed from photochemical reactions involving other air contaminants so it is not inventoried. NO_x and SO_x emissions are in the emissions inventory because multiple species of NO_x and SO_x contribute to the formation of NO_2, SO_2, particulate matter, and NO_x and VOC react in the presence of sunlight to produce ozone. VOC includes organic gases that contribute to ozone formation and exclude acetone, ethane, methane, methylene chloride, methylchloroform, perchloroethylene, methyl acetate, parachlorobenzotrifluoride, and a number of Freon-type gases. Important subsets of PM are PM_{10} and $PM_{2.5}$. In the 2003 AQMP, the amount of VOC as a fraction of total organic gases and the amount of PM_{10} and $PM_{2.5}$ in PM are calculated for each process primarily using species and size fraction profiles provided by the ARB. SCAQMD. AQMP 2003. Appendix III, p. III-1-2. [Online] 22 December 2003. <http://www.aqmd.gov/aqmp/docs/2003AQMP_AppIII.pdf>.

69 Doll and Peto. "The Causes of Cancer: Qualitative Estimates of Avoidance of Risks of Cancer in the United States Today," Journal of the National Cancer Institute (June 1981).

Table 4.9-15
1998 Annual Average Day Toxic Emissions for the South Coast Air Basin
(lbs/day)

Pollutant	On-Road	Off-Road	Point	AB2588	Area	Total
Acetaldehyde[a]	5,485.8	5,770.3	33.9	57.1	189.1	11,536.2
Acetone[b]	4,945.8	4,824.7	3,543.5	531.4	23,447.4	37,292.8
Benzene	21,945.5	6,533.4	217.7	266.8	2,495.4	31,458.8
Butadiene [1,3]	4,033.8	1,566.1	6.7	2.0	151.3	5,759.9
Carbon tetrachloride	0.0	0.0	8.8	1.8	0.0	10.6
Chloroform	0.0	0.0	0.0	35.5	0.0	35.5
Dichloroethane [1,1]	0.0	0.0	0.0	0.1	0.0	0.1
Dioxane [1,4]	0.0	0.0	0.0	105.0	0.0	105.0
Ethylene dibromide	0.0	0.0	0.0	0.2	0.0	0.2
Ethylene dichloride	0.0	0.0	4.9	17.6	0.0	22.5
Ethylene oxide	0.0	0.0	58.1	12.3	454.1	524.4
Formaldehyde[a]	16,664.9	16,499.3	521.6	674.7	1,107.5	35,468.0
Methyl Ethyl Ketone[a]	905.1	906.9	3,240.2	385.9	14,535.4	19,973.5
Methylene chloride	0.0	0.0	1,378.6	1,673.6	94,21.7	12,473.9
Methyl tertiary butyl ether (MTBE)	58,428.9	2,679.2	40.5	434.4	54,73.7	67,056.7
p-Dichlorobenzene	0.0	0.0	0.0	4.5	3,735.6	3,740.1
Perchloroethylene	0.0	0.0	4,622.0	2,249.1	22,813.1	29,684.2
Propylene oxide	0.0	0.0	0.0	22.3	0.0	22.3
Styrene	1,114.8	287.1	447.0	3,836.7	21.4	5,707.0
Toluene	63,187.6	11,085.9	5,689.6	3,682.4	52,246.7	135,892.2
Trichloroethylene	0.0	0.0	1.1	58.0	2,550.3	2,609.3
Vinyl chloride	0.0	0.0	0.0	4.3	0.0	4.3
Arsenic	0.1	0.3	2.7	0.7	21.4	25.2
Cadmium	1.6	1.5	0.5	0.7	27.5	31.8
Chromium	2.4	2.3	3.9	2.2	302.2	313.0
Diesel particulate	23,906.3	22,386.3	0.0	5.4	815.3	47113.4
Elemental carbon[c]	27,572.1	6,690.3	702.8	0.0	16,770.5	51,735.7
Hexavalent chromium	0.4	0.4	0.3	1.0	0.1	2.2
Lead	0.7	0.9	1.9	24.5	1,016.3	1,044.3
Nickel	2.5	2.2	2.9	21.6	85.6	114.9
Organic carbon	16,426.2	153,81.8	0.0	0.0	108,612.1	140,420.2
Selenium	0.1	0.1	3.0	5.7	2.6	11.6
Silicon[b,c]	68.6	67.6	167.2	0.0	248,614.0	248,917.4

Source: SCAQMD, Multiple Air Toxics Exposure Study II (Diamond Bar, California: SCAQMD) March 2000, Table 4.2.

[a] *Primarily emitted emissions. These materials are also formed in the atmosphere as a result of photochemical reactions.*

[b] *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.*

[c] *Includes elemental carbon from all sources (including diesel particulate).*

The MATES II, which is the most comprehensive study of urban toxic air pollution ever undertaken, shows that motor vehicles and other mobile sources of air pollution are the predominant source of

cancer-causing air pollutants in the Basin.[70] The SCAQMD's Governing Board directed staff to undertake the MATES II as part of the agency's environmental justice initiatives adopted in late 1997. A panel of scientists from universities, an environmental group, businesses, and other government agencies helped design and guide the study. One goal of the study was to determine the cancer risk from toxic air pollution throughout the area by monitoring toxics continually for one year at 10 monitoring sites. Another goal was to determine if there were any sites where TAC concentrations emitted by local industrial facilities were causing a disproportionate cancer burden on surrounding communities. To address this second goal, the SCAQMD monitored toxic pollutants at 14 sites for one month each with three mobile monitors. Monitoring platforms were placed in or near residential areas adjacent to clusters of facilities.[71] Although no TAC hotspots were identified, models show that elevated levels of toxic air pollutants can occur very close to facilities emitting TACs.[72]

In the MATES II study, SCAQMD monitored more than 30 TACs at 24 sites over a 1-year period in 1999. The SCAQMD collected more than 4,500 air samples and, together with the CARB, performed more than 45,000 separate laboratory analyses of these samples. In the study, SCAQMD calculated cancer risk assuming seventy years of continuous exposure to monitored levels of pollutants.[73]

The MATES II found that the average carcinogenic risk throughout the Basin is approximately 1,400 in one million ($1{,}400 \times 10^{-6}$). Diesel-fueled mobile sources represent the greatest contributors to TAC emissions in the Basin.[74]

(b) 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 CalEPA 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.[75]

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70 SCAQMD, Multiple Air Toxics Exposure Study II (MATES II) (Diamond Bar, California: SCAQMD, March 2000), p. ES-3. http://www.aqmd.gov/matesiidf/matestoc.htm.

71 Ibid., p. ES-1.

72 Ibid., p. ES-6.

73 Ibid., pp. ES-1–ES-2.

74 Ibid., p. ES-3, Fig. ES-2, p. ES-9.

75 *Air Toxic Hot Spots Program Risk Assessment Guidelines*, Part III, Technical Support Document for the Determination of Noncancer Chronic Reference Exposure Levels, OEHHA (February 2000), p. 9.

(c) Toxic Air Contaminants Inventory

The data available for TAC emissions inventories are not nearly as complete as the data for criteria pollutants. Starting in 1989, industrial facilities have been required to compile toxic emissions inventories under the Assembly Bill (AB) 2588 program. Companies subject to the program are required to report their TAC emissions to the SCAQMD.[76]

The SCAQMD's first emissions inventory was compiled for thirty TACs for the year 1982, for stationary sources only. This inventory was updated during the preparation of the 1999 MATES II study, which consisted of an evaluation and a characterization of ambient air toxics data in the Basin. The MATES II inventory is the most up-to-date inventory prepared by the SCAQMD. It also estimated the cancer risk of several TACs. For the study, 20 of the original 30 pollutants were updated for the year 1998. Additionally, mobile source emissions for 12 of the 20 toxic pollutants were compiled. The stationary source data included 1,244 point sources and the mobile source inventory included only on-road motor vehicles. A summary of the 1998 emissions inventory is presented in **Table 4.9-15**, which provides the estimated toxic emissions for selected compounds, by source category.

c. Local Climate

The coastal area of the Basin is dominated by a semi-permanent, subtropical, Pacific high-pressure system. Generally mild, the climate is tempered by cool sea breezes, but may be infrequently interrupted by periods of extremely hot weather, passing winter storms, or Santa Ana winds. The project site is located further inland where the temperature is generally higher and the relative humidity lower than along the coast.

The project site is located in the transitional microclimatic zone of the Basin, which is located between two climatic types, termed valley marginal and high desert. Situated far enough from the ocean to usually escape coastal damp air and fog, the summers are hot and the winters are sunny and warm. Summer nights are pleasantly cool and the surrounding slopes drain off cold air near the ground on clear winter nights.

The Basin both transports and receives air pollutants from the coastal portions of Ventura and Santa Barbara counties that are located in the South Central Coast Air Basin, which also receives air pollutants from oil and gas development operations on the outer continental shelf.

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76 In September 1987, the California Legislature established the AB 2588 air toxics "Hot Spots" program. (Health and Safety Code Section 44300, et seq.). It requires facilities to report their air toxics emissions, ascertain health risks, and to notify nearby residents of significant risks. The emissions inventory and risk assessment information from this program has been incorporated into this report. In September 1992, the "Hot Spots" Act was amended by Senate Bill 1731, to require facilities that pose a significant health risk to the community to reduce their risk through a risk management plan.

Climate in the Santa Clarita Valley is relatively mild and annual average daytime temperatures range from 89.7 °F in summer to 63.6 °F in winter. Low temperatures average 58.9 °F in summer and 41.3 °F in winter. In wintertime during calm, clear nights, the localized mountain/valley wind patterns are enhanced and cool air blows down from the mountains towards the valley floor. Annual precipitation in the Santa Clarita Valley is 13.10 inches, which occurs almost exclusively from late October to early April. As elsewhere in the Basin, precipitation is higher in the mountains than in the valley. Portions of the Santa Susana and San Gabriel Mountains, which form the outer limits of the valley, receive between 22 and 24 inches of rainfall per year.

Predominant wind patterns for the greater Santa Clarita Valley area are typical for areas in which valleys and mountains are located in proximity to one another. During the day, onshore winds reach the valley and are enhanced by local topographical features. During the night, surface radiation cools the air in the mountains and hills, which flows down the valley, producing a gentle wind pattern (**Figure 4.9-2, Dominant Wind Patterns in the Basin**). The predominant daytime wind flows from the south/southeast as the effects of the regional onshore flow are modified by the up-valley flow from the San Fernando Valley through the Newhall Pass. This pattern is most dominant during summer, the peak smog season. At night, local winds flow down the Santa Clara River Valley as winds flowing from the east.

d. Local Ambient Air Quality

(1) Source Receptor Area 13

To monitor the concentrations of the criteria pollutants, the SCAQMD has divided the Basin into source receptor areas (SRAs) in which its 33 air quality monitoring stations are operated. The project site is located within SRA 13, which encompasses the Santa Clarita Valley west to the Ventura County line. The station that monitors this SRA (No. 090) is located approximately 6.5 miles southeast of the project site at 12th Street and Placerita Canyon Road.[77] This station presently only monitors pollutant concentrations of O_3, CO, NO_2, and PM_{10}.[78] No other station monitors air pollutant concentrations in the Santa Clarita Valley. $PM_{2.5}$ and SO_2 are not monitored in SRA 13; ambient air quality data for these pollutants were obtained from the Reseda (SRA 6) and Burbank (SRA 7) monitoring stations, respectively.

Table 4.9-16, **Ambient Pollutant Concentrations Registered in SRA 13,** lists the ambient pollutant concentrations registered and the violations of state and federal standards that have occurred at the Santa Clarita monitoring station from 2000 through 2004 (the most recent complete data available at the time of this writing).

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77 SCAQMD. 2003 AQMP. [Online] December 22, 2003. <http://www.aqmd.gov/aqmp/AQMD03AQMP.htm>, Appendix III, Attachment A, Table A-3 and Figure A-1.

78 As late as 1991, this station also monitored SO2, pollutant concentrations for the Santa Clarita Valley. SCAQMD. 2003 AQMP. [Online] 22 December 2003. <http://www.aqmd.gov/aqmp/AQMD03AQMP.htm>, Appendix III, Tables A-4 – A-22.

Table 4.9-16
Ambient Pollutant Concentrations Registered in SRA 13

Pollutant	Standards[1, 2]	Year				
		2000	2001	2002	2003	2004
SANTA CLARITA MONITORING STATION						
OZONE (O_3)						
Maximum 1-hour concentration monitored (ppm)[3]		0.13	0.184	0.169	0.194	0.158
Maximum 8-hour concentration monitored (ppm)		0.111	0.129	0.145	0.152	0.133
Number of days exceeding federal standard	>0.12 ppm	1	9	32	35	13
Number of days exceeding state standard	>0.09 ppm	31	49	81	89	69
Number of days exceeding federal 8-hour standard	>0.08 ppm	16	27	56	69	52
Number of days exceeding Health Advisory	≥0.15 ppm	0	2	8	15	1
CARBON MONOXIDE (CO)						
Maximum 1-hour concentration monitored (ppm)		6	6	3	3	5
Maximum 8-hour concentration monitored (ppm)		4.9	3.14	1.9	1.7	3.7
Number of days exceeding federal 8-hour standard	≥9.5 ppm	0	0	0	0	0
Number of days exceeding state 8-hour standard	≥9.0 ppm	0	0	0	0	0
NITROGEN DIOXIDE (NO_2)						
Maximum 1-hour concentration monitored (ppm)		0.10	0.10	0.10	0.12	0.09
Annual arithmetic mean concentration (ppm)	>0.053 ppm	0.0246	0.0239	0.0200	0.0221	0.0204
Number of days exceeding state 1-hour standard	>0.25 ppm	0	0	0	0	0
PARTICULATE MATTER (PM_{10})						
Maximum 24-hour concentration ($\mu g/m^3$)		64	62	61	72	54
Number of samples		61	61	60	61	60
Number of samples exceeding federal standard	>150 $\mu g/m^3$	0	0	0	0	0
Number of samples exceeding state standard	>50 $\mu g/m^3$	4	4	7	10	2
Percent of samples exceeding federal standard	>150 $\mu g/m^3$	0	0	0	0	0
Percent of samples exceeding state standard	>50 $\mu g/m^3$	7	7	11.7	16.4	3.3
PARTICULATE MATTER ($PM_{2.5}$)[4]						
Maximum 24-hr concentration ($\mu g/m^3$)		67.5	71.1	48.8	47.5	56.2
Annual arithmetic mean concentration ($\mu g/m^3$)		18.1	18.5	18.9	16.4	15.6
Number of samples exceeding federal 24-hr std.	>65 $\mu g/m^3$	2	1	0	0	0
SULFUR DIOXIDE (SO_2)[5]						
Maximum 1-hr concentration (ppm)		0.010	0.013	0.013	0.013	0.024
Maximum 24-hr concentration (ppm)		0.004	0.005	0.007	0.005	0.10
Annual arithmetic mean concentration (ppm)		0.001	0.001	0.002	0.002	0.003
Number of days exceeding state 1-hour standard	>0.25 ppm	0	0	0	0	0
Number of days exceeding state 24-hour standard	>0.04 ppm	0	0	0	0	0
Number of days exceeding federal 24-hour standard	>0.14 ppm	0	0	0	0	0

Sources:

(i) SCAQMD, Air Quality Data (for 2000, 2001, 2002, 2003, and 2004), (Diamond Bar, California: SCAQMD, 2000, 2001, 2002, 2003, and 2004). www.aqmd.gov/smog/historicaldata.htm.

(ii) U.S. Environmental Protection Agency Air Quality Database (for 2000, 2001, 2002, 2003, 2004), www.epa.gov/air /data/reports.html

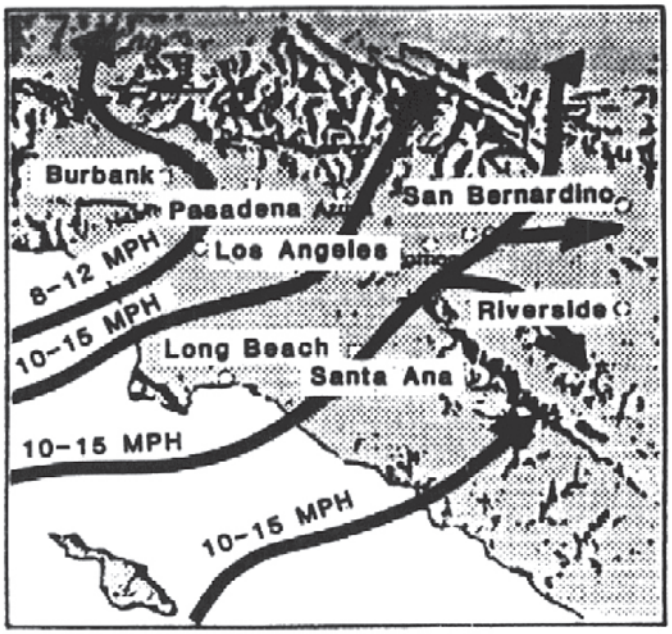
[1] *Parts by volume per million of air (ppm), micrograms per cubic meter of air ($\mu g/m^3$), or annual arithmetic mean (aam).*

[2] *Federal and state standards are for the same time period as the maximum concentration measurement unless otherwise indicated.*

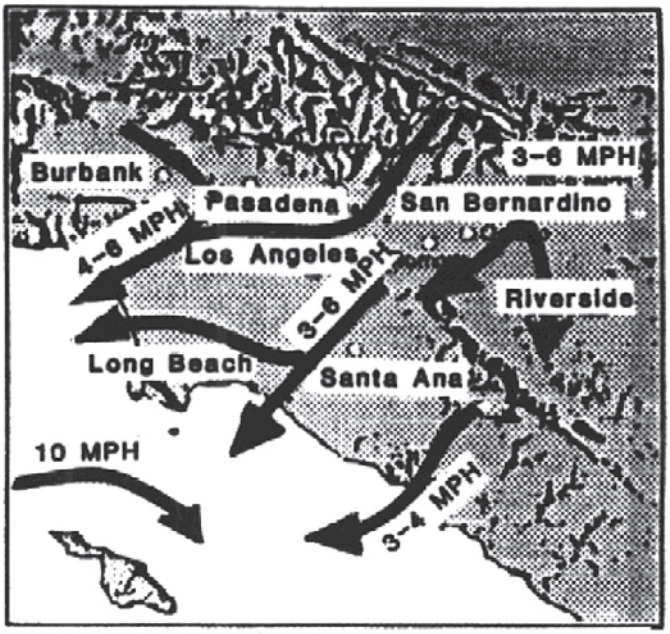
[3] *The federal 1-hour standard was revoked on June 15, 2005. The data are shown for informational purposes.*

[4] *Pollutant is monitored at 18330 Gault Street in Reseda (SRA 6), which is the nearest monitoring station that monitors the particular pollutant.*

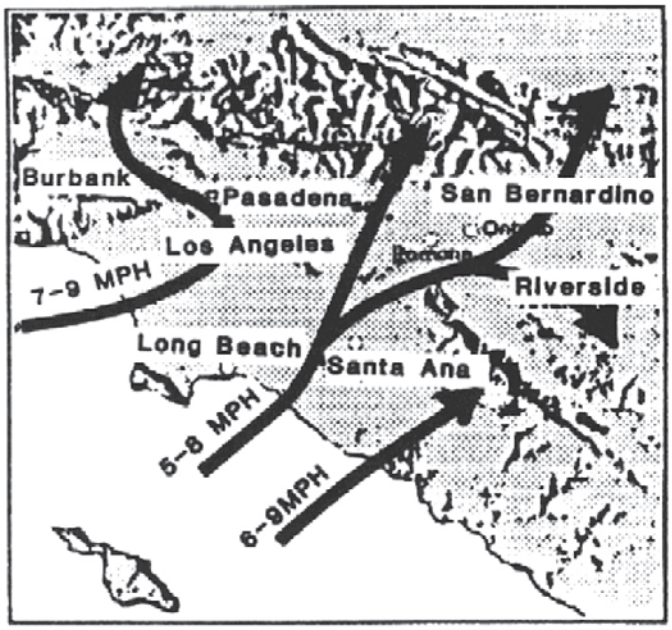
[5] *Pollutant is monitored at 228 West Palm Avenue in Burbank (SRA 7), which is the nearest monitoring station that monitors the particular pollutant*



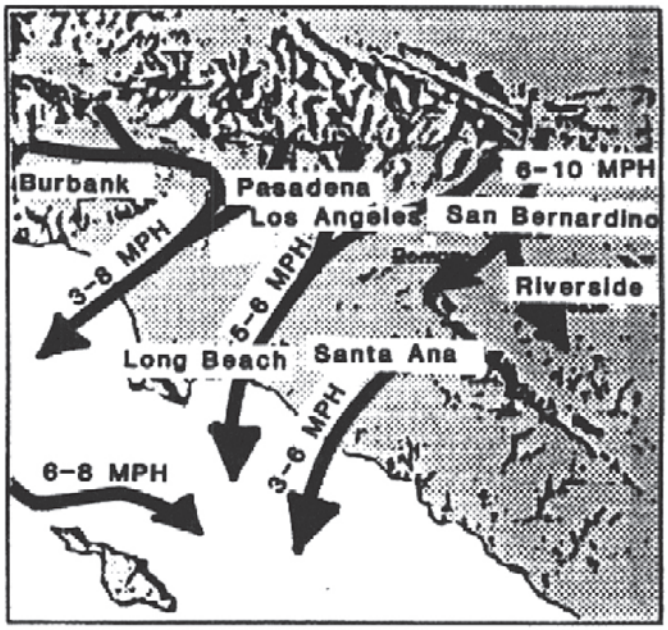
Typical Summer Daytime Ocean Winds
(noon to 7:00 pm)



Typical Summer Night Drainage Winds
(midnight to 5:00 am)



Typical Winter Daytime Ocean Winds
(noon to 7:00 pm)



Typical Winter Night Drainage Winds
(midnight to 5:00 am)

NOT TO SCALE

SOURCE: South Coast Air Quality Management District, CEQA Air Quality Handbook

FIGURE **4.9-2**

Dominant Wind Patterns

As shown in **Table 4.9-16**, the Santa Clarita monitoring station has registered values above state and federal standards for O_3 and the state standard for PM_{10}. Concentrations of CO and NO_2 have not been exceeded within the Santa Clarita Valley in the period reported in **Table 4.9-16**, and concentrations of the other two criteria pollutants, SO_2 and Pb, have not been exceeded anywhere within the Basin since 1990, and since 1982, respectively.[79]

(2) Local Vicinity Emissions

The vicinity of the project site is characterized by undeveloped land to the north, west, and south, and Travel Village Recreational Vehicle (RV) Park to the east. State Route 126 (SR-126) forms the northern site boundary while, further to the north, is the Chiquita Canyon Sanitary Landfill. Elsewhere in the vicinity and within Newhall Ranch are oil and natural gas production operations. Emissions sources include stationary activities, such as space heating, cooking, and water heating; and mobile activities—primarily automobile and truck traffic along SR-126.

In addition, the Chiquita Canyon Landfill generates fugitive dust emissions during landfill covering operations and travel on dirt roads and surfaces, in the form of motor vehicle emissions, and methane gas. No liquid, radioactive, or hazardous wastes are accepted at the landfill, and the landfill does not accept untreated medical wastes, car batteries, or tires. Dust control at the landfill includes periodic watering of access roads, limiting the size of the active disposal area, applying and compacting daily cover. A gas management system to reduce odors and prevent gas migration was installed at the landfill in the early 1990s and is used to control methane gas, which is a naturally occurring product of waste decomposition. The gas is collected and burned at a single, enclosed flare stack located at the landfill.[80] Minor amounts of toxic air contaminants such as benzene, carbon tetrachloride, chloroform, dichlorobenzene, ethylene dichloride, perchloroethylene, and vinyl chloride are emitted by the landfill flaring operations.[81] The EIR for the landfill expansion indicates that the location of maximum health risk associated with flaring operations with the expansion would be along the foothills south of the Santa

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79 SCAQMD. 2003 AQMP. [Online] 22 December 2003. <http://www.aqmd.gov/aqmp/AQMD03AQMP.htm>, Appendix III, Attachment A, Tables A-21 and A-22.

80 Consolidated Disposal Service. "Chiquita Canyon Landfill - Landfill Info. Fact Sheet." [Online] 27 October 2004. <http://www.consolidateddisposalservice.com/landinfo.htm>.

81 Ogden Environmental and Energy Services, Draft Environmental Impact Report Chiquita Canyon Landfill Expansion and Resource Recovery Facilities (San Diego, California Los Angeles County Department of Regional Planning, May 1995), p. IV.G-23. According to Los Angeles County Department of Regional Planning Impact Analysis, this project (CUP 89-081) was approved and the EIR was certified by the Regional Planning Commission on September 11, 1996. The approval was appealed to the Board of Supervisors who sustained the approval in May 1997. CUP 89-081 was approved until November 2019. Koutnik, Daryl <dkoutnik@planning.co.la.ca.us>. "RE: Chiquita Canyon Landfill Expansion EIR." 25 October 2004. Rosemarie Mamaghani <rosem@impactsciences.com>.

Clara River,[82] but that the incremental excess cancer risk at this location would be 0.33 in one million, which is less than the SCAQMD's acceptable risk level of one in one million. No other sources of toxic air contaminants are located within 0.25 mile of the Landmark Village site.[83]

The landfill is permitted by the California Environmental Protection Agency, the Regional Water Quality Control Board, Los Angeles Region, the Los Angeles County Department of Health Services, and the SCAQMD.[84]

Motor vehicles are the primary sources of pollutants within the project vicinity. Traffic-congested roadways and intersections that operate at Levels of Service (LOS) D, E, or F have the potential to generate localized high levels of CO within approximately 1,000 feet of a roadway. Localized areas where ambient concentrations exceed state and/or federal standards are termed CO "hotspots." Section 9.4 of the *CEQA Air Quality Handbook* identifies CO as a localized problem requiring additional analysis when a project is likely to subject sensitive receptors to CO hotspots.[85] Sensitive receptors are populations that are more susceptible to the effects of air pollution than the population at large. The SCAQMD identifies the following as sensitive receptors: long-term health care facilities, rehabilitation centers, convalescent centers, retirement homes, residences, schools, playgrounds, child care centers, and athletic facilities.[86] As indicated in **Table 4.9-16** above, CO concentrations are not an issue in SRA 13 and are not expected to be an issue in the project study area,[87] because the existing background concentrations for SRA 13 are well below the CO standards. In addition, no sensitive receptors exist within 50 feet of an intersection in the project study areas. Furthermore, no intersection in the project study area operates at LOS D or worse (see Table 4.1 in the Landmark Village Traffic Impact Analysis in **Appendix 4.7** of this EIR). This is consistent with the findings of the Newhall Ranch Specific Plan Program EIR and, therefore, a CO hotspot analysis was not conducted for project study area intersections.

In 2002, peak hour vehicle mix along SR-126 at the Ventura/Los Angeles County line was composed of 78.1 percent passenger vehicles, 3.3 percent medium trucks, and 18.6 percent heavy trucks. Traffic along SR-126 west of Interstate 5 (I-5) was composed of 87.5 percent passenger vehicles, 3.7 percent medium

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82 Ibid., p. IV.G-34.

83 According to the *CEQA Air Quality Handbook*, 0.25 mile is the distance which the SCAQMD uses in evaluating impacts on sensitive receptors, which include long-term health care facilities, rehabilitation centers, convalescent centers, retirement homes, residences, schools, playgrounds, child care centers, and athletic facilities. SCAQMD, *CEQA Air Quality Handbook*, (Diamond Bar, California: SCAQMD, April 1993), p. 5-1, Fig. 5-1; p. 5-7.

84 Consolidated Disposal Service. Chiquita Canyon Landfill – Landfill Info. Fact Sheet." [Online] 13 February 2004. <http://www.consolidateddisposalservice.com/landinfo.htm>.

85 SCAQMD, *CEQA Air Quality Handbook*, (Diamond Bar, California: SCAQMD, April 1993), p. 9-9.

86 Ibid., p. 5-1, Figure 5-1; p. 5-7.

87 The project study area includes all intersections and roadways that could potentially be significantly impacted by project traffic.

trucks, and 8.7 percent heavy trucks.[88] According to the operator of the Chiquita Canyon Sanitary Landfill, approximately 466 vehicles (including heavy trucks and passenger vehicles) visit the landfill on a daily basis.

(3) Site-Specific Emissions

Aside from the agricultural operations and agricultural sheds on the project site, it is undeveloped. The agricultural operations generate fugitive dust from the cultivated soil and dirt roads, and emissions from the farm equipment when it is utilized on the site. The agricultural sheds generate stationary source emissions from space and water heating, and from the low volumes of vehicular traffic to and from the site.

6. PROPOSED PROJECT IMPROVEMENTS

The project applicant proposes residential, commercial, and recreational uses on the site, all of which would include sidewalks, bike lanes, trails, and trees that would shade buildings. The sidewalks, bike lanes, and trails would encourage alternative modes of travel in lieu of automobiles, while the shade trees would reduce the amount of energy required for air conditioning and the corresponding energy generation emissions. The Landmark Village project is required to implement, as applicable and feasible, those mitigation measures for air quality impacts that were required in the certified Newhall Ranch Specific Plan Program EIR (May 2003). Implementation of these measures would directly and indirectly reduce the project's air emissions.

Landmark Village would facilitate the use of public transit by providing bus pull-ins along SR-126 and within the project site, and by reserving right-of-way for a future Metrolink line, space for a park-and-ride and/or Metrolink station. The project study area is served by the Santa Clarita Transit (SCT) system, which is operated by the City of Santa Clarita, and which largely serves the Santa Clarita Valley. SCT commuter buses provide regional service to downtown Los Angeles, the San Fernando Valley, and the Antelope Valley. SCT currently operates one fixed-route transit line (Route 2) near the project site. The route passes the project site via SR-126 and provides service to the greater Val Verde and Commerce

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88 State of California Department of Transportation, *2002 Annual Average Daily Truck Traffic on the California State Highway System*, (Sacramento, California: California Department of Transportation, February 2004), p. 189. Heavy trucks are all vehicles with three or more axles designed for the transportation of cargo; generally, the gross weight if greater than 12,000 kilograms (kg) (26,500 lbs.). Medium trucks are all vehicles with two axles and six wheels designed for transportation of cargo. Generally, the gross vehicle weight is greater than 4,500 kg (10,000 lbs.) and less than 12,000 kg (26,500 lbs.). Finally, passenger vehicles are all vehicles with two axles and four wheels designed primarily for transportation of nine or fewer passengers (automobiles). Lightweight trucks with a gross vehicular weight of less than 4,500 kg (10,000 lbs.) also fall into this passenger vehicle category.

Center areas. Additional routes, accessible from Route 2, provide service to the greater Santa Clarita Valley area.[89]

Metrolink, operated by the Southern California Regional Rail Authority (SCRRA), provides commuter rail service between the Antelope Valley and Downtown Los Angeles, and also links Ventura, Los Angeles, San Bernardino, Riverside, Orange, and San Diego Counties with convenient transfer service between the bus and rail systems. The closest Metrolink station to the project site is located along Soledad Canyon Road east of Bouquet Canyon Road. An eventual Metrolink extension along the SR-126 corridor to Ventura County is part of the long-range transit plans prepared by Ventura County, the City of Santa Clarita, and SCAG. Land within Newhall Ranch is set aside for the rail right-of-way, and a park-and-ride and/or train station.

Using data from April 2004 (most recent data available), average weekday ridership on the Antelope Valley Line of the Metrolink, which serves the Santa Clarita Valley, was 6,144 people,[90] with approximately 17.5 percent boarding at the Santa Clarita station on Soledad Canyon Road.[91] According to Metrolink management, the overall regional system has removed 24,971 cars per weekday from regional roadways, which represents 2.9 percent of the freeway traffic on freeways that run parallel to the Metrolink lines.[92] The use of these mass transit facilities has helped to reduce roadway congestion, fuel consumption, and air emissions within the region.

The project site is also within 5 miles of existing job centers (e.g., Valencia Commerce Center, Valencia Industrial Center, Corporate Center, Valencia Gateway, Centre Point Business Park, Rye Canyon Business Park, Valencia Market Place, and Town Center) that provide employment opportunities to many Santa Clarita Valley residents. Furthermore, the project itself is expected to generate a portion of the 19,320 employment opportunities projected at buildout of the Newhall Ranch Specific Plan. Because of the proximity of project residences to existing and future job centers, future project residents would not have to commute to more distant employment centers in the San Fernando Valley, Ventura County, or beyond. Because the Landmark Village has been designed to provide future residents of the site with a range of on-site employment opportunities and services, including parks, schools, and retail shopping areas, and is promoting efficient means of access to these uses, VMT and air pollutant emissions can be reduced

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89 Santa Clarita Transit. "Routes and Schedules." [Online] 25 October 2004. http://www.santa-clarita.com/cityhall/field/transit/routes & schedules.asp.

90 Metrolink. "Facts and Timeline: Our Story." [Online] 20 August 2003. <http://www.metrolingtrains.com/about/facts and timeline.asp>. The Antelope Valley Line has nine stations that run from Lancaster to Glendale.

91 City of Santa Clarita. "City of Santa Clarita Press Releases: Metrolink Ridership Soars in Santa Clarita." [Online] 21 November 2002. <http://www.santa-clarita.com/cityhall/press/o73101h.htm>.

92 Metrolink. "Facts and Timeline: Our Story." [Online] 20 August 2003. <http://www.metrolingtrains.com/about/facts and timeline.asp>.

when compared with a community designed without such a balance of land uses, thereby helping to reduce longer commutes to more distant employment centers in Ventura County, the San Fernando Valley and beyond. As a result of reduced commutes, VMT and, consequently, air pollutant emissions, can be further reduced.

Project residences would also be linked to various employment, shopping, and recreation areas within the site through the community trails and paseos, and within the remainder of Newhall Ranch as it builds out.

During grading, approximately 4.2 million cubic yards of earthen materials would be graded on the Landmark Village site, up to 5.8 million cubic yards of which would be exported to the site from one borrow sites within Newhall Ranch. For the purposes of this impact analysis, it is assumed that the soil would be transported to Landmark Village via double-loaded, heavy-duty trucks, each with a capacity for 20 cubic yards. This does not preclude alternative modes of soil transport, such as conveyor systems, which are commonly used in the quarry and mining industries.

7. PROJECT IMPACTS

The analysis of potential local and regional air quality impacts associated with construction and operation of the proposed project, including the significance criteria applicable to assessing such impacts, is presented below.

a. Significant Thresholds Criteria

Based on the thresholds of significance identified in Appendix G of the 2005 *CEQA Guidelines*, the proposed project would result in a significant impact to air quality if it would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for O_3 precursors);
- Expose sensitive receptors to substantial pollutant concentrations; and/or
- Create objectionable odors affecting a substantial number of people?

The County of Los Angeles typically refers 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 generated by the proposed project, as well as the threshold for cumulative impacts.

(1) Construction Emission Thresholds

The SCAQMD recommends that projects with construction-related emissions that exceed any of the following emissions thresholds should be considered significant:[93]

- 24.75 tons per quarter or 550 pounds per day of CO;
- 2.5 tons per quarter or 75 pounds per day of VOC;
- 2.5 tons per quarter or 100 pounds per day of NO_x;
- 6.75 tons per quarter or 150 pounds per day of SO_x; and
- 6.75 tons per quarter or 150 pounds per day of PM_{10}.

(2) Operational Emissions

The SCAQMD has recommended two types of air pollution thresholds to assist lead agencies in determining whether or not the operational phase of a project's development would be significant. These are identified in the following discussion under Emission Significance Thresholds and Additional Indicators of Potential Air Quality Impacts. The SCAQMD recommends that a project's impacts be considered significant if any of these operational thresholds are exceeded.

(a) Emission Significance Thresholds

The SCAQMD has established these thresholds, in part, based on Section 182(e) of the federal CAA, which identifies 10 tons per year of VOC as the significance level for stationary sources of emissions in extreme nonattainment areas for O_3.[94] As discussed earlier, VOC and NO_x undergo photochemical reactions in sunlight to form O_3 and the Basin is the only extreme nonattainment area for O_3 in the United States. This emission threshold has been converted to a pound per day threshold for the operational phase of a project. Thresholds for other emissions have been identified based on their levels in the Basin in comparison with O_3 levels. Because they are converted from a CAA threshold, the SCAQMD believes that these thresholds are based on scientific and factual data.[95] Therefore, the district recommends that

93 SCAQMD, *CEQA Air Quality Handbook*, (Diamond Bar, California: SCAQMD, November 1993), p. 6-4.

94 Ibid., p. 6-1.

95 Ibid.

the following thresholds be used by lead agencies in making a determination of operation-related project significance:[96]

- 550 pounds per day of CO;
- 55 pounds per day of VOC;
- 55 pounds per day of NO_x;
- 150 pounds per day of SO_x; and
- 150 pounds per day of PM_{10}.

(b) 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:[97]

- 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 build-out 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 .25 mile of an existing facility that emits air toxics identified in SCAQMD Rule 1401; or
- Project could emit carcinogenic or TACs that individually or cumulatively exceed the maximum individual cancer risk of 10 in 1 million.

The following discussion reviews the project's potential impacts relative to each of the recommended significance criteria identified above.

(3) Cumulative Significance Thresholds

The SCAQMD's *CEQA Air Quality Handbook* identifies three possible methods to determine the cumulative significance of land use projects. If the analysis shows that an individual project is consistent

96 Ibid., p. 6-2.

97 Ibid., pp. 6-2 – 6-3.

with the AQMP performance standards, the project's cumulative impact could be considered less than significant. If the analysis shows that the project does not comply with the standards, then cumulative impacts are considered to be significant unless there is other pertinent information to the contrary.

The performance standards are:

- Reduce the Rate of Growth in VMT and Trips;
- 1 Percent Per Year Reduction in Project Emissions of CO, VOC, NO_x, SO_x, and PM_{10}; and
- 1.5 Average Vehicle Ridership (AVR), or Average Vehicle Occupancy, if a Transportation Project. The requirement to achieve a specific AVR has been ruled unlawful by the federal government and is no longer recommended.

b. Construction-Related Impacts

(1) Construction Emissions

As mentioned above, construction-related emissions can be designated as either on-site or off-site. On-site emissions generated during construction principally consist of exhaust emissions (NO_X, SO_X, CO, VOC, and PM_{10}) from heavy-duty diesel powered construction equipment operation, fugitive dust (PM_{10}) from disturbed soil, and evaporative VOC emissions from asphaltic paving, and architectural coatings (i.e., painting). Off-site emissions during the construction phase normally consist of exhaust emissions and entrained paved road dust (PM_{10}) during grading and soil removal at the two soil export sites, transporting the cut material to the Landmark Village site, from worker commute trips. Emissions during the construction phase are also a result of truck trips made for equipment and materials delivery, and to remove wastes and unused materials from the construction site.

Development of the proposed project would require site preparation (i.e., removal of the existing irrigation equipment and agricultural sheds, clearing, and grading); pavement and asphalt installation (including infrastructure improvements); and construction of the proposed residential, commercial, institutional, and recreational uses. The few agricultural sheds that exist at the site would be dismantled largely by hand. Their dismantlement would occur concurrently with on-site grading and emissions from their demolition are factored into the site grading activities. During project buildout, emissions would be generated by on-site stationary sources, heavy-duty construction vehicles, on-road trucks, and construction worker vehicles. In addition, fugitive dust would be generated during grading and pavement installation.

Because of the construction time frame and the normal day-to-day variability in construction activities, it is difficult, if not impossible, to precisely quantify the daily emissions associated with each construction subphase. **Table 4.9-17**, **Estimated Unmitigated Construction Emissions**, nonetheless, conservatively

identifies daily emissions associated with construction based on information provided by the project applicant and on other information provided in the *Software Users' Guide [for] URBEMIS2002 for Windows with Enhanced Construction Module* (May 2002).[98] (These assumptions have been entered into the spreadsheets that are available for review in **Appendix 4.9** of the EIR.) These results are also based on the assumption that all of the construction equipment in each subphase would operate continuously over an 8-hour period. In reality, this would not occur, as most equipment would operate for only a fraction of each workday. Another assumption is that all construction equipment would be properly maintained, grading activities would conform to Rule 403 to control fugitive dust emissions, and that low VOC emission asphalt and architectural coating would be used. As shown in **Table 4.9-17**, the project's construction-related emissions would exceed one or more of the SCAQMD's construction thresholds of significance during all but one of the construction subphases.

It is expected that the project's construction-related activities will either emit the other criteria pollutants (i.e., sulfates, hydrogen sulfide, Pb, vinyl chloride, and visibility reducing particles) in nominal quantities (i.e., sulfates), not at all (i.e., hydrogen sulfide, Pb, and vinyl chloride), or will be accounted for by the pollutants actually estimated in this analysis (i.e., visibility reducing particles). Note that NO_x and VOC are O_3 precursors and NO_2, SO_2, and $PM_{2.5}$ are subset of NO_x, SO_x, and PM_{10}, respectively.

Table 4.9-17
Estimated Unmitigated Construction Emissions

Subphase/Emissions Source	Emissions (lbs/day)				
	CO	VOC	NO_x	SO_x	PM_{10}
Weeks 1 thru 19					
Mitigated Emissions Total	1,904.84	295.29	1,531.46	0.65	6,863.21
SCAQMD Thresholds	550.00	75.00	100.00	150.00	150.00
Exceeds Thresholds?	YES	YES	YES	NO	YES
Notes: No Demolition, Pavement and Asphalt, or Building Construction during this subphase.					
Weeks 20 thru 39					
Mitigated Emissions Total	3,285.77	467.09	2,676.20	0.81	6,903.47
SCAQMD Thresholds	550.00	75.00	100.00	150.00	150.00
Exceeds Thresholds?	YES	YES	YES	NO	YES
Notes: No Demolition or Building Construction during this subphase.					
Weeks 40 thru 46					
Mitigated Emissions Total	5,007.45	844.93	4,329.78	0.79	6,983.38
SCAQMD Thresholds	550.00	75.00	100.00	150.00	150.00
Exceeds Thresholds?	YES	YES	YES	NO	YES
Notes: No Demolition during this subphase.					

98 California Air Resources Board. "URBEMIS2002 Program." [Online] 22 December 2003. <http://www.arb.ca.gov/planning/urbemis/urbemis2002/urbemis2002.htm>.

Subphase/Emissions Source	Emissions (lbs/day)				
	CO	VOC	NO_x	SO_x	PM_{10}
Weeks 47 thru 91					
Mitigated Emissions Total	3,102.61	549.63	2,798.32	0.15	131.16
SCAQMD Thresholds	550.00	75.00	100.00	150.00	150.00
Exceeds Thresholds?	YES	YES	YES	NO	NO
Notes: No Demolition or Grading during this subphase.					
Week 92					
Mitigated Emissions Total	3,603.81	603.46	3,035.29	0.06	122.52
SCAQMD Thresholds	550.00	75.00	100.00	150.00	150.00
Exceeds Thresholds?	YES	YES	YES	NO	NO
Notes: No Demolition or Grading during this subphase.					
Weeks 93 thru 144					
Mitigated Emissions Total	3,306.30	555.86	2,790.95	0.05	112.86
SCAQMD Thresholds	550.00	75.00	100.00	150.00	150.00
Exceeds Thresholds?	YES	YES	YES	NO	NO
Notes: No Demolition or Grading during this subphase.					
Weeks 145 thru 158					
Mitigated Emissions Total	3,126.78	528.79	2,527.25	0.05	97.52
SCAQMD Thresholds	550.00	75.00	100.00	150.00	150.00
Exceeds Thresholds?	YES	YES	YES	NO	NO
Notes: No Demolition or Grading during this subphase.					
Weeks 159 thru 178					
Mitigated Emissions Total	1,764.79	358.43	1,402.96	0.03	53.80
SCAQMD Thresholds	550.00	75.00	100.00	150.00	150.00
Exceeds Thresholds?	YES	YES	YES	NO	NO
Notes: No Demolition, Grading, or Pavement and Asphalt during this subphase.					
Weeks 179 thru 196					
Mitigated Emissions Total	1,549.32	332.26	1,245.55	0.03	48.53
SCAQMD Thresholds	550.00	75.00	100.00	150.00	150.00
Exceeds Thresholds?	YES	YES	YES	NO	NO
Notes: No Demolition, Grading, or Pavement and Asphalt during this subphase.					
Weeks 197 thru 210					
Mitigated Emissions Total	1,064.36	218.82	854.79	0.02	33.26
SCAQMD Thresholds	550.00	75.00	100.00	150.00	150.00
Exceeds Thresholds?	YES	YES	YES	NO	NO
Notes: No Demolition, Grading, or Pavement and Asphalt during this subphase.					
Weeks 211 thru 220					
Mitigated Emissions Total	794.57	134.83	596.44	0.01	22.03
SCAQMD Thresholds	550.00	75.00	100.00	150.00	150.00
Exceeds Thresholds?	YES	YES	YES	NO	NO
Notes: No Demolition, Grading, or Pavement and Asphalt during this subphase.					
Weeks 221 thru 235					
Mitigated Emissions Total	500.54	71.95	374.61	0.01	13.72
SCAQMD Thresholds	550.00	75.00	100.00	150.00	150.00
Exceeds Thresholds?	NO	NO	NO	NO	NO
Beg. 2015 (196 Weeks) [1]					
Mitigated Emissions Total	905.93	147.09	669.17	0.03	24.03

Subphase/Emissions Source	Emissions (lbs/day)				
	CO	VOC	NO_x	SO_x	PM_{10}
SCAQMD Thresholds	550.00	75.00	100.00	150.00	150.00
Exceeds Thresholds?	YES	YES	YES	NO	NO
Notes: No Demolition, Grading, or Pavement and Asphalt during this subphase.					

Source: Impact Sciences, Inc., Calculations can be found in ***Appendix 4.9****.*

[1] *As a worst-case scenario, assumes all associated grading and pavement/asphalt is completed during the first three subphases.*

(a) Localized Significance Thresholds (LST)

The SCAQMP has recommended that this EIR analyze ambient PM_{10}, NO_2, and CO concentrations (fugitive dust and motor vehicle and equipment exhaust) due to construction of the proposed project on ambient air quality concentrations in the vicinity of the construction site. The ambient air quality impacts are compared to thresholds established by the SCAQMD. The significance threshold for PM_{10} represents compliance with Rule 403 (Fugitive Dust). The thresholds for NO_2 and CO represent the allowable increase in concentrations above background levels in the vicinity of the project that would not cause or contribute to an exceedance of the relevant ambient air quality standards.

Emission Estimation Methodology

Unmitigated construction emissions were estimated based on the information provided in the Software Users' Guide: URBEMIS2002 for Windows with Enhanced Construction Module, Version 8.7.0 (April 2005) [The assumptions are available for review in **Appendix 4.9** of the EIR]. URBEMIS2002 is a land use and transportation based air quality model developed in cooperation with the ARB and designed to estimate air emissions from new development projects, including construction emissions. The emissions are estimated based on the information provided by the project applicant. The key emission estimation assumptions are as follow:

- Anticipated starting year: 2007;
- Anticipated development duration: 251 weeks;
- Anticipated grading and asphalt paving schedule: week 1 to week 75;
- Anticipated construction schedule: week 76 to week 251;
- Total number of acres of land to be graded: 291 acres;
- Maximum acres graded per day: 28 acres; and
- Dust control measures: As required by SCAQMD Rule 403.

The Utility Corridor

- Anticipated starting year: 2007;
- Anticipated development duration: 52 weeks;
- Anticipated grading schedule: week 1 to week 30;
- Anticipated grading and water tanks construction schedule: week 31 to week 48;
- Anticipated grading and water tanks welding and coating schedule: week 49 to week 52;
- Total number of acres of land to be graded: 32 acres;
- Maximum acres graded per day: 0.12 acre; and
- Dust control measures: As required by SCAQMD Rule 403.

In order to comparatively assess comparative impacts, **Table 4.9-18, Peak Background Concentrations for SRA 13 for the Period of 2003 to 2005**, shows the peak background concentrations of NO_2 and CO in Source Receptor Area (SRA) 13 (Santa Clarita Valley) in which the proposed project is located. These are the values on which LST criteria for NO_x and CO are based.

Table 4.9-18
Peak Background Concentrations for SRA 13 for the Period of 2003 to 2005

Pollutant	Averaging Period	Unit	2003	2004	2005	Peak Concentration
Nitrogen Dioxide (NO_2)	1 hour	ppm	0.12	0.09	0.08	0.12
Carbon Monoxide (CO)	1 hour	ppm	3	5	2	5
	8 hours	ppm	1.7	3.7	1.3	3.7

Source: SCAQMD "Historical Data by Year." [Online] [March 30, 2005. http://www.aqmd.gov/smog/historicaldata.htm. U.S. Environmental Protection Agency, Air Data: Access to Air Pollution Data [Online] [March 2, 2006], http://www.epa.gov/air/data/index.html.

Table 4.9-19, Localized Significance Criteria, shows the threshold criteria recommended by the SCAQMD for determining whether the emissions resulting from construction of a development project have the potential to generate significant adverse local impacts on ambient air quality. The SCAQMD's concentration-based PM_{10} threshold from its *Localized Significance Threshold Methodology* (*LST Methodology*)[99] is a 24-hour average concentration of 10.4 μg/m^3 based on compliance with Rule 403. The

99 SCAQMD, *Final Localized Significance Threshold Methodology*, June 2003.

thresholds for NO_2 and CO were based on the maximum concentrations that occurred during the last three years (2003 to 2005) as shown in **Table 4.9-18**. These thresholds represent the allowable increase in NO_2 and CO ambient concentrations above current levels that could occur in SRA 13 without causing or contributing to exceedances of the CAAQS. For reference, the applicable CAAQS are also shown in **Table 4.9-19, Localized Significance Criteria**.

Table 4.9-19
Localized Significance Criteria

Pollutant	Averaging Period	CAAQS		Peak Conc. in ppm	LST Criteria[1]	
		µg/m³	ppm			
Respirable Particulate Matter (PM_{10})	24 hours	50	NA	NA	10.4	NA
Nitrogen Dioxide (NO_2)	1 hour	470	0.25	0.12	244	0.13
Carbon Monoxide (CO)	1 hour	23,000	20	5	17,165	15
	8 hours	10,000	9.0	3.7	6,065	5.3

Source: SCAQMD, Final Localized Significance Threshold Methodology, June 2003.
[1] LST Criteria is the difference between CAAQS and the Peak Concentration.

The maximum daily emissions that could occur on the project site from any construction phase were selected for the LST analysis. The maximum daily emissions for each pollutant may occur during a different subphase (e.g., grading, building construction). **Table 4.9-20, Estimated Construction Emissions Associated with the Proposed Project**, shows the estimated construction emissions associated with each proposed project that would occur on the project site.

Table 4.9-20
Estimated Construction Emissions Associated with the Proposed Project

Pollutant	Maximum Daily Emissions (pounds per day)	
	Fugitive Dust	Mobile Sources
PM_{10}[1]	1,253.84	41.20
NO_x[2]	—	2,524.30
CO[2]	—	3,184.13

Source: Construction emissions were estimated based on the information provided in the User's Guide [for] URBEMIS2002 for Windows with Enhanced Construction Module (May 2002). Emissions reflect the worst-case scenario (i.e., highest daily emissions associated with the project). The worst-case daily emissions may occur in different project subphases.
[1] Maximum daily PM_{10} emissions are expected to occur during week 45 to week 48.
[2] Maximumdaily CO and NO_x emissions are expected to occur during week 128.

Project-Specific Impacts

Table 4.9-21, Modeling Results – Maximum Impacts at Residential Receptors, **Table 4.9-22, Modeling Results – Maximum Impacts at Workplace Receptors**, **Table 4.9-23, Modeling Results – Maximum Impacts at Sensitive Receptors**, show the maximum PM_{10}, NO_2, and CO concentrations associated with the proposed project at residential, workplace, and sensitive receptors, respectively. The nearest residential community to the project site is the community of Val Verde, located approximately 1.9 kilometers to the north, across SR-126. Other residences are scattered throughout the area, primarily to the north of the site across SR-126. A recreational vehicle park (Travel Village) is located to the east of the project site; however, occupants are limited to a 30-day stay. The nearest potential off-site workplace receptors are located to the northeast in the Valencia Commerce Center, approximately 700 meters to the northeast. The nearest sensitive receptors are located approximately 1.7 kilometers to the northeast in the Live Oak Elementary School.

Table 4.9-21
Modeling Results – Maximum Impacts at Residential Receptors

Pollutant	Averaging Period	Modeling Results		LST Criteria[1]		Exceeds Threshold?
		µg/m³	ppm	µg/m³	ppm	
Respirable Particulate Matter (PM_{10})	24 hours	56.08	NA	10.4	NA	**YES**
Nitrogen Dioxide (NO_2)	1 hour	404.83	0.22	244	0.13	**YES**
Carbon Monoxide (CO)	1 hour	680.87	0.59	17,165	15	NO
	8 hours	97.31	0.09	6,065	5.3	NO

Source: Impact Sciences, Inc.

[1] *SCAQMD,* Final Localized Significance Threshold Methodology, *June 2003.*

The maximum impacts were observed at the community of Val Verde located approximately 1.9 kilometers to the north, across SR-126.

Table 4.9-22
Modeling Results – Maximum Impacts at Workplace Receptors

Pollutant	Averaging Period	Modeling Results		LST Criteria[1]		Exceeds Threshold?
		µg/m³	ppm	µg/m³	ppm	
Respirable Particulate Matter (PM_{10})	24 hours	60.90	NA	10.4	NA	**YES**
Nitrogen Dioxide (NO_2)	1 hour	483.28	0.26	244	0.13	**YES**
Carbon Monoxide (CO)	1 hour	1787.23	1.56	17,165	15	NO
	8 hours	243.5	0.21	6,065	5.3	NO

Source: Impact Sciences, Inc.

[1] *SCAQMD, Final Localized Significance Threshold Methodology, June 2003.*

The maximum impacts were observed at the Valencia Commerce Center located approximately 700 meters to the northeast.

Table 4.9-23
Modeling Results – Maximum Impacts at Sensitive Receptors

Pollutant	Averaging Period	Modeling Results		LST Criteria[1]		Exceeds Threshold?
		µg/m³	ppm	µg/m³	ppm	
Respirable Particulate Matter (PM_{10})	24 hours	14.82	NA	10.4	NA	**YES**
Nitrogen Dioxide (NO_2)	1 hour	223.90	0.12	244	0.13	NO
Carbon Monoxide (CO)	1 hour	424.65	0.37	17,165	15	NO
	8 hours	53.08	0.05	6,065	5.3	NO

Source: Impact Sciences, Inc.

[1] *SCAQMD, Final Localized Significance Threshold Methodology, June 2003.*

The maximum impacts were observed at the Live Oak Elementary School located approximately 1.7 kilometers to the northeast.

The LST analysis shows that maximum 24-hour PM_{10} would exceed the threshold of significance established by SCAQMD at the nearest residential, workplace, and sensitive receptors to the project site. Also, 1-hour NO_2 concentrations would exceed the threshold of significance established by SCAQMD at the nearest residential and workplace receptors to the project site.

The impacts suggest that PM_{10} emissions could exceed the limitations in SCAQMD Rule 403. While the NO_2 concentrations exceed the LST thresholds, the CAAQS would be exceeded only if: (1) the actual background concentrations were as high as those on which the LST thresholds are based during the worst-case construction day; (2) the amount of construction activity (e.g., number and types of equipment, hours of operation) assumed in this analysis actually occurred; and (3) the meteorological conditions in the data set used in the dispersion modeling analysis occurred in the vicinity of the project site on the worst-case construction day.

(2) Construction Emissions Conclusions

Because project construction emissions would exceed one or more of the SCAQMD's CO, VOC, NO_x, and PM_{10} thresholds of significance during all but one subphase of the project's construction, the emission levels are considered potentially significant and feasible mitigation is required. The effectiveness of the proposed mitigation in reducing these potentially significant adverse air quality impacts is discussed below.

c. Operational Impacts

(1) Daily Emissions

Operational emissions would be generated by point, area, and mobile sources as a result of normal day-to-day activities on the project site after occupation.

(a) Point Source Emissions

Point source emissions could be generated, depending upon the types of uses that locate in the Mixed-Use/Commercial areas of the project site. For this analysis, it is conservatively assumed that the types of point sources that could potentially locate in this area could include fast-food restaurants with under-fired charbroilers, dry cleaners, and fuel dispensers at gasoline stations.

If a dry cleaning establishment were to be located on the commercial site, all dry cleaning operations are presumed to occur at existing permitted off-site locations. Therefore, no point source emission permit under the authority of the SCAQMD would be required.

PM_{10} and VOC emissions from fast-food restaurants with charbroilers are regulated under SCAQMD Rule 1138,[100] which requires installation of a catalytic oxidizer that can reduce PM_{10} emissions by approximately 89 percent and VOC emissions by 86 percent.

VOC emissions from gasoline station operations are generated from gasoline dispensing, storage tank "breathing," and gasoline spillage. VOC emissions from gasoline dispensing are regulated by SCAQMD Rule 461, which requires vapor recovery systems that can reduce vapor loss during dispensing by as much as 95 percent.[101]

Although the specific uses that would locate at the Mixed-Use/Commercial sites are yet unknown, it is assumed for the purposes of this impact analysis, based on common uses in similarly sized commercial centers, that at least one fast-food restaurant with an under-fired charbroiler and at least one gas station could operate at the site. Both of these uses, should they occur, would require SCAQMD permits to operate and would be required to employ best available control technologies (BACT) to control their stationary source emissions before they could receive their permits. Based on information obtained from the SCAQMD,[102] it is assumed that such a restaurant would charbroil 233 pounds of 25 percent fat content hamburger meat[103] daily and would operate in conformance with Rule 1138. Based on those assumptions, the restaurant would generate 0.84 pounds of PM_{10}[104] and 0.13 pounds of VOC per day.[105]

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100 SCAQMD, Rule 1138: Control of Emissions From Restaurant Operations, (Diamond Bar, California: SCAQMD, Adopted 14 November 1997). See also "Rule 1138." [Online] 22 December 2003. <http://www.aqmd.gov/rules/html/r1138.html>.

101 SCAQMD, Rule 461: Gasoline Transfer and Dispensing (Amended January 9, 2004). [Online] 27 October 2004. <http://www.aqmd.gov/rules/reg/reg04/r461.pdf>.

102 SCAQMD, Staff Report for Proposed Rule 1138 – Control of Emissions From Restaurant Operations, (Diamond Bar, California: SCAQMD, October 1997).

103 High fat content hamburger meat generates the greatest amount of PM_{10} and VOC emissions of most charbroiled meats. Staff Report for Proposed Rule 1138 – Control of Emissions From Restaurant Operations, pp. 11–12.

104 This emission assumes an uncontrolled emission rate of 32.65 pounds of PM_{10} per 1,000 pounds of 25 percent fat hamburger meat and an 89 percent reduction rate. Staff Report for Proposed Rule 1138 – Control of Emissions From Restaurant Operations, p. 11.

105 This emission assumes an uncontrolled emission rate of 3.94 pounds of VOC per 1,000 pounds of 25 percent fat hamburger meat and an 86 percent reduction rate. Staff Report for Proposed Rule 1138 – Control of Emissions From Restaurant Operations, p. 11.

Based on information obtained from the SCAQMD,[106] it is assumed that the gas station would have a throughput of 10,000 gallons per day and would operate in conformance with Rule 461. Based on those assumptions, the gas station would generate 3.01 pounds of VOC per day.[107]

The above analysis is expected to be consistent with the analysis that would be performed during the SCAQMD permit process; permits would not be issued for these uses by the SCAQMD unless they comply with SCAQMD rules and regulations, including the use of emission control equipment at the site. Accordingly, based on the above stationary source emissions from these uses and the SCAQMD requirement that the operators employ BACT and other emission controls prior to issuance of a permit to operate from the SCAQMD,[108] point source emissions from the fast-food restaurant and gasoline station, as shown in **Table 4.9-24, Estimated Operational Emissions Without Mitigation**, would be minimal and less than significant.

(b) Area and Mobile Source Emissions

Area sources emissions would be generated during the consumption of natural gas for space and water heating devices, by wood-burning fireplaces, and during the operation of gasoline-powered landscape maintenance equipment and use of consumer products (e.g., hair spray, deodorants, lighter fluid, air fresheners, automotive products, and household cleaners). Mobile source emissions would be generated by the motor vehicles traveling to and from the project site.

Inputting project land use characteristics, trip generation information from the Landmark Village Traffic Analysis prepared by Austin-Foust Associates, Inc. (October 2003), and the above project assumptions, URBEMIS2002 was used to calculate area and mobile source emissions from the proposed project for both summertime and wintertime emissions. The primary difference between the summertime and the wintertime emissions is that wood-burning fireplaces would only generate emissions during wintertime. The project's area and mobile source emissions, as estimated using URBEMIS2002, are shown in **Table**

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106 SCAQMD, Staff Report for Proposed Rule 461 – Gasoline Transfer And Dispensing, (Diamond Bar, California: SCAQMD, August 1995). Telephone voice mail Randy Matsuyama, Air Quality Engineer II, SCAQMD, to Darren W. Stroud, Nossaman, Guthner, Knox & Elliott, LLP, 20 October 2003.

107 This calculation assumes an emission rate of 0.417 pounds of VOC/1,000 gallons during gasoline dispensing, 0.027 pounds of VOC/1,000 gallons from storage tank breathing, and 0.232 pounds of VOC/1,000 gallons from gasoline spillage. The emission rate of 0.417 was provided by SCAQMD staff (telephone voice mail Randy Matsuyama, Air Quality Engineer II, SCAQMD, to Darren W. Stroud, Nossaman, Guthner, Knox & Elliott, LLP, October 20, 2003). The emission rate of 0.027 lb/1,000 gallons is based on the emission factor of 0.1 lb/1,000 gallons from p. A-2 of the Staff Report for Proposed Rule 461 – Gasoline Transfer and Dispensing for the Pressure/Vacuum Vent (P/V) Valve on Vent Pipe (Breathing Loss) calculation and the control efficiency of 73 percent. The emission rate of 0.232 lb/1,000 gallons is based on the emission factor of 0.29 lb/1,000 gallons from p. A-3 of the Staff Report for Proposed Rule 461 – Gasoline Transfer and Dispensing for the Required Check Valve in the Nozzle calculation, and a control efficiency of 20 percent.

108 SCAQMD, Rule 1303 – Requirements, (Diamond Bar, California: SCAQMD, Amended 6 December 2002); http:www.aqmd.gov/rules/reg/reg13/r1303.pdf; Rule 1138. Control Of Emissions From Restaurant Operations, (Diamond Bar, California: SCAQMD, Adopted 14 November 1997). http://www.aqmd.gov/rules/reg/reg11/r1135.pdf; Rule 461. Gasoline Transfer And Dispensing, (Diamond Bar, California: SCAQMD, Amended 15 June 2001). http://www.aqmd.gov/rules/reg/reg04/r461.pdf.

4.9-24. The table does not reflect mitigation required of the Landmark Village project under the Newhall Ranch Specific Plan approval. The mitigating effects of these measures on Landmark Village air emissions are calculated later on in this impact analysis under **Subsection 8., Mitigation Measures**.

Table 4.9-24
Estimated Operational Emissions Without Mitigation

Emissions Source	Emissions in Pounds per Day				
	CO	**VOC**	**NO_x**	**SO_x**	**PM_{10}**
Summertime Emissions					
Point Sources	--	3.14	--	--	0.84
Mobile Sources	4,086.19	337.40	385.45	2.43	371.12
Area Sources					
Natural Gas	12.18	2.21	29.13	--	0.05
Wood Stoves	0.00	0.00	0.00	0.00	0.00
Fire Places	0.00	0.00	0.00	0.00	0.00
Landscape Maintenance	5.78	0.71	0.08	0.09	0.01
Consumer Products	--	75.46	--	--	--
Area Source Subtotal	17.96	78.38	29.21	0.09	0.06
Summertime Emission Totals:	4,104.14	418.92	414.66	2.52	372.02
Recommended Threshold:	550.0	55.0	55.0	150.0	150.0
Exceeds Threshold?	**YES**	**YES**	**YES**	**NO**	**NO**
Wintertime Emissions					
Point Sources	--	3.14	--	--	0.84
Mobile Sources	3,939.50	324.54	557.65	1.97	371.12
Area Sources					
Natural Gas	12.18	2.21	29.13	--	0.05
Wood Stoves	0.00	0.00	0.00	0.00	0.00
Fire Places	1,784.09	1,617.41	18.36	2.83	244.38
Landscape Maintenance	5.78	0.71	0.08	0.09	0.01
Consumer Products	--	75.46	--	--	--
Area Source Subtotal	1,802.05	1,695.79	47.57	2.92	244.44
Wintertime Emission Totals:	5,741.55	2,023.47	605.22	4.89	616.4
Recommended Threshold:	550.0	55.0	55.0	150.0	150.0
Exceeds Threshold?	**YES**	**YES**	**YES**	**NO**	**YES**

*Source: Impact Sciences, Inc. Emissions calculations are provided in **Appendix 4.9**.*
Totals in table may not appear to add exactly due to rounding in the computer model calculations.

As shown in **Table 4.9-18**, the project at buildout and in full operation would generate total summertime emissions of CO, VOC, and NO_x that would exceed SCAQMD recommended thresholds, while the total wintertime emissions would exceed the thresholds for CO, VOC, NO_X, and PM_{10}. As the amount of emissions under each scenario would exceed the recommended significance thresholds for operational emissions, project air quality impacts would be significant for both scenarios.

(2) Additional Indicators of Potential Air Quality Impacts

As previously discussed, the SCAQMD lists additional criteria indicating when a project may create potential air quality impacts.[109] These criteria are listed below along with an analysis of whether or not the project meets any of them. If a project meets any one of the criteria, project air quality impacts would be significant relative to that criterion.

- 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.

SCAQMD's *CEQA Air Quality Handbook* suggests that an air quality modeling analysis (i.e., dispersion modeling) may be performed that identifies the project's potential impact on ambient air quality. A project would not create potential significant adverse air quality impacts if the dispersion modeling demonstrates that the project's incremental emissions would not increase the frequency or the severity of existing air quality violations, or contribute to a new violation.[110] It has already been demonstrated that the project's CO emissions would not exceed the criteria and this finding is consistent with that of the Newhall Ranch Specific Plan Program EIR. With respect to the other pollutants (i.e., NO_x, SO_x, VOC, and PM_{10}), SCAQMD staff have stated that air quality dispersion models do not currently exist for general development projects that can determine if the project's NO_x, SO_x, VOC, and PM_{10} emissions would increase the frequency or the severity of existing air quality violations, or contribute to a new violation.[111] Therefore, no such air quality dispersion analysis can be undertaken for this project.

Instead, SCAQMD staff state that a project's consistency with the population number and location assumptions identified by SCAG and used in the preparation of the 2003 AQMP should be assessed as required by the next criterion:

- Project could result in population increases within an area that 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 build-out year.

The 2003 AQMP is designed to accommodate planned growth, to reduce the high levels of pollutants within the areas under the jurisdiction of SCAQMD, to return clean air to the region by 2010, and to minimize the impact on the economy. Projects that are considered to be consistent with the AQMP do not interfere with attainment and do not contribute to the exceedance of an existing air quality violation because this growth is included in the projections utilized in the formulation of the AQMP. Therefore, projects, uses, and activities that are consistent with the applicable assumptions used in the development

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109 SCAQMD, *CEQA Air Quality Handbook*, (Diamond Bar, California: SCAQMD, November 1993), pp. 6-2–6-3.

110 Ibid., p. 12-3.

111 Interview with Steve Smith, SCAQMD, Diamond Bar, California, February 23, 1996.

of the AQMP would not jeopardize the long-term attainment of the air quality levels identified in the AQMP, even if they exceed the SCAQMD's recommended thresholds.

Future air emissions within the Basin are based on demographic projections developed by SCAG for its 2001 RTP.[112] Projects that are consistent with the projections of population forecasts identified in the 2001 RTP are considered consistent with the AQMP growth projections. Because the population, housing, and employment that would be generated by Newhall Ranch have been incorporated into the 2001 RTP, the Landmark Village project is consistent with the 2003 AQMP and, therefore, it would not jeopardize attainment of state and federal ambient air quality standards in the Santa Clarita Valley area or the Basin.

Another means of assessing 2003 AQMP consistency for this criterion is to determine how a project accommodates the expected increase in population and employment. Generally, if a project is planned in a way that results in the minimization of VMT both within the project and in the community in which it is located, and consequently the minimization of air pollutant emissions, that project is deemed to be consistent with the 2003 AQMP.[113]

As discussed earlier, the Landmark Village project and Newhall Ranch include a mobility system with alternatives to automobile use, including a system of pedestrian and bicycle trails, and infrastructure to accommodate a bus transit system, a railway right-of-way, and a park and ride lot. As such, the project would minimize VMT both within the project and within the community of Newhall Ranch as it builds out. Therefore, air emissions would be minimized.

- 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.

According to the October 2003 Landmark Village Traffic Impact Analysis (see **Appendix 4.7, Table 4.5**), the intersections of Wolcott Way/SR-126, Commerce Center Drive/SR-126, and Chiquita Canyon-Long Canyon Roads/SR-126 would operate at LOS F (PM peak hour) at project buildout. With implementation of the mitigation recommended in **Section 4.7**, **Traffic/Access**, these intersections would operate at LOS B, D, and C, respectively (see **Table 6-3** in **Appendix 4.7**). As previously mentioned, traffic-congested roadways and intersections that operate at LOS D, E, or F have the potential to generate localized high levels of CO within approximately 1,000 feet of a roadway. Only the intersection of Commerce Center Drive/SR-126 would operate at LOS D at project buildout with mitigation. No sensitive receptors exist at this location; therefore, no CO hotspots at locations occupied by sensitive receptors would occur within

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112 SCAQMD. 2003 AQMP. [Online] 22 December 2003. <http://www.aqmd.gov/aqmp/AQMD03AQMP.htm>, p. 3-9.

113 SCAQMD, *CEQA Air Quality Handbook*, (Diamond Bar, California: South Coast Air Quality Management District, November 1993), p. 12-5.

the project study area. This is consistent with the findings of the Newhall Ranch Specific Plan Program EIR and there would be significant impacts under this criterion.

- Project will have the potential to create, or be subjected to, an objectionable odor that could impact sensitive receptors.

The proposed residential and institutional uses on the site would not generate objectionable odors. Within the Commercial Uses, airborne odors associated would result primarily from cooking activities within any food services and eating establishments that may occur in these areas. Food-related odors would be typical of food service businesses and are not considered objectionable by most individuals. Food wastes can, however, putrefy if left on site in dumpsters for long periods of time without frequent disposal and can generate objectionable odors. In each case, such odors would be controlled in accordance with County Department of Health Services, SCAQMD permit requirements for proper air filtration and food storage and disposal, and SCAQMD Rule 402, which prohibits persons from discharging quantities of air contaminants which cause nuisance to any considerable number of persons.[114] Consequently, no significant impacts from such odors are anticipated.

The Newhall Ranch Specific Plan proposes a WRP within Newhall Ranch and to the west of the Landmark Village site. The plant, which was subject to its own separate environmental review, is a potential source of odors that could affect sensitive receptors within Landmark Village. The presence of strong easterly winds could also possibly cause objectionable odors to reach sensitive residential receptors to the east. The primary source of odor at WRPs is hydrogen sulfide produced by the activity of anaerobic organisms in anaerobic treatment processes at the plant site. Another common odor is that of non-ionized ammonia, which is prevalent and readily volatilized whenever the wastewater pH is elevated (becomes less acidic and more alkaline).[115] In addition, other organic compounds can contribute to odor production. These odors can be adequately controlled through physical design of the facility and proper operations management. The SCAQMD also controls the potential for odors through Regulation IX, Subpart O – Standards of Performance for Sewage Treatment Plants, which requires BACT for new WRP sources.[116] This regulation also requires that the primary treatment processes be covered and sealed, and that the exhaust gases from the primary treatment processes are vented to carbon absorbers (scrubbers). According to the County Sanitation Districts of Los Angeles County (CSDLAC),

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114 SCAQMD, Rule 402 – Nuisance (Adopted May 7, 1976). [Online] 27 October 2005. <http://www.aqmd.gov/rules/reg/reg04/r402.pdf>.

115 Jones & Stokes, Associates Inc., Draft Program Environmental Impact Report for the Joint Outfall System 2010 Master Facilities Plan (Whittier, California: County Sanitation Districts of Los Angeles County: November 1994), p. 8-10.

116 SCAQMD, Regulation IX - Standards of Performance for New Stationary Sources (Amended May 7, 2004). [Online] 27 October 2005. <http://www.aqmd.gov/rules/reg/reg09/reg09.pdf>.

each of these physical and managerial strategies has proven to be effective in controlling odors when properly applied.[117]

One additional potential source of odors is the Chiquita Canyon Landfill located to the north and along the Newhall Ranch boundary. There are two potential sources of odors associated with landfill operations: (1) aerobic decomposition of organic refuse materials prior to being covered with soil, and (2) gases produced by anaerobic bacterial digestion of buried refuse. Each of these sources is controlled by landfill operations and equipment. For example, odors emanating from aerobic decomposition of refuse are controlled by compaction and covering of waste on a daily basis, while odoriferous gases produced by anaerobic decomposition of material within covered landfill cells are collected and disposed of in a landfill gas collection and flaring system.[118] Given the operational techniques employed as part of a sanitary landfill operation and the use of the gas collection and flaring system, no significant impacts from such odors are expected.

No other adjacent land uses are such that they would generate objectionable odors that would be detected on the project site. Consequently, no significant impacts from such odors are anticipated under this criterion.

- 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 toxic air contaminant 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; or
- Project could emit carcinogenic or toxic air contaminants that individually or cumulatively exceed the maximum individual cancer risk of 10 in 1 million.

TAC emissions are not expected to occur in conjunction with operation of the proposed development and, as a result, no significant impacts would occur under these criteria. Charbroilers are not typically considered sources of TACs, and, therefore, any charbroiler operated in association with the proposed Commercial Uses would not be expected to emit TACs that would exceed the SCAQMD's recommended toxics' thresholds of significance. Gasoline stations can emit TACs, generally in the form of benzene from dispensing operations, tank "breathing" losses, and gasoline spillage. However, as previously

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117 Jones & Stokes, Associates Inc., Draft Program Environmental Impact Report for the Joint Outfall System 2010 Master Facilities Plan (Whittier, California: County Sanitation Districts of Los Angeles County: November 1994), p. 8–10.

118 Ogden Environmental and Energy Services, Draft Environmental Impact Report Chiquita Canyon Landfill Expansion and Resource Recovery Facilities (San Diego, California Los Angeles County Department of Regional Planning, May 1995), p. IV.H-2.

demonstrated, assuming these emissions are benzene, the amount of VOCs from a gasoline station associated with the project is nominal. Therefore, any gasoline station operated on the site is not expected to emit TACs that would exceed the SCAQMD's thresholds of 10 cancer risks in 1 million.

Further, all regulated point sources of emissions associated with the project's Commercial Uses, should they occur, must be permitted and must use toxic best available control technologies before they can receive a permit.[119] Compliance with the permit would reduce TACs to less than significant. The receipt and maintenance of SCAQMD permits represent verification that any such sources would not result in a significant impact under the first two and last criteria.

As to off-site sources of TACs, the project is not located within 0.25 mile of an existing facility that emits TACs as identified in SCAQMD Rule 1401, Table I. Chiquita Canyon Sanitary Landfill uses flaring operations to control methane gas emissions and the project site could be exposed to toxic emissions generated by these operations, which emit minor amounts of TACs, such as benzene, carbon tetrachloride, chloroform, dichlorobenzene, ethylene dichloride, perchloroethylene, and vinyl chloride.[120] The recent EIR for the landfill expansion indicates that the location of maximum health risk associated with flaring operations for the expansion would be along the foothills south of the Santa Clara River within Newhall Ranch.[121] However, the incremental excess cancer risk at this location would be 0.33 in one million, which is less than the SCAQMD's maximum individual cancer risk level of 10 in 1 million.[122]

Future air emissions from the WRP, which would be constructed to the west of the site and which is not part of Landmark Village, were discussed in the Newhall Ranch Specific Plan Program EIR. The WRP has the potential to generate hazardous emissions from the storage of chlorine solution, diesel fuel, oil and lubricants, and polymer and laboratory chemicals on the site; however, these emissions would be less than significant for the following reasons: (1) Pursuant to SCAQMD Regulation XIV, the WRP would be required to obtain permits to construct and operate all new sources of air toxic emissions; (2) The WRP would be required to obtain permits to construct and operate all new sources of criteria air pollutants, at each stage of development, and whenever any new sources are added or replaced, pursuant to SCAQMD Regulation XIII; (3) The receipt and maintenance of SCAQMD permits represent verification that any such sources would not result in a significant impact under the first two and last criteria.

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119 SCAQMD, Rule 1401 – New Source Review of Toxic Air Contaminants, (Diamond Bar, California: SCAQMD, Amended 2 May 2003). Rule 1401 may be viewed on-line at http://www.aqmd.gov/rules/reg/reg14/41401.pdf.

120 Ogden Environmental and Energy Services, Draft Environmental Impact Report Chiquita Canyon Landfill Expansion and Resource Recovery Facilities (San Diego, California Los Angeles County Department of Regional Planning, May 1995), p. IV.G-23.

121 Ibid., p. IV.G-34.

122 Ibid., p. IV.G-34.

Furthermore, the applicant for the WRP would be required to prepare and implement an "Integrated Emergency Response Plan" (IERP). The IERP would provide procedures for personnel medical emergencies, evacuation procedures, and mitigation and abatement procedures for hazardous chemicals. The plan must conform to multiple regulatory requirements, including 8 Cal.CodeRegs. Section 3220, Emergency Action Plan; 8 Cal.CodeRegs. Section 3221, Fire Prevention Plan; 8 Cal.CodeRegs Section 5192, Hazardous Waste Operations and Emergency Response; and 22 Cal.CodeRegs. Sections 66265.50–66265.56, Contingency Plan and Emergency Procedures. As a result, potential for project residents, employees, and visitors to be exposed to toxic air contaminants is minimal and less than significant under these criteria.

(3) Operational Impacts Conclusion

Operational-related CO, VOC, NO_x, and PM_{10} emissions generated by the project would exceed SCAQMD recommended emission thresholds of significance for these pollutants and, for that reason, they are considered significant. As a result, feasible mitigation for these significant impacts is required both under the conditions imposed on the Newhall Ranch Specific Plan and under the requirements of the CEQA. The effectiveness of the required mitigation measures in reducing these potentially significant adverse air quality impacts is discussed below.

The project would be consistent with the 2003 AQMP; therefore, it would not jeopardize the long-term attainment of the air quality standards predicted in that document. The project also does not meet the additional indicators of potential air quality impacts.

d. Health Risk Assessment

A health risk assessment evaluates the health impacts due to diesel exhaust particulate matter (DPM) emitted by diesel trucks and equipment associated with construction of a proposed project. A health risk assessment has been prepared for the proposed Landmark Village project and is found in **Appendix 4.9** of this EIR, and a summary of the assessment is provided herein. The proposed project site is bounded by SR-126 on the northern boundary and by the Santa Clara River on the southern boundary. The proposed project will consist of 308 single-family residential units; 685 condominiums; 451 apartments; 337,600 square feet (sq. ft.) of retail area; 695,400 sq. ft. of office space; 70,000 sq. ft. of school buildings; and 16.1 acres of park area. Total development is anticipated to occur over a 251-week period. Also, a utility corridor extending approximately 39,800 feet in length and 35 feet wide was considered as a part of the proposed project. The utility corridor includes the infrastructure components for potable water, sewer, reclaimed water, and natural gas. The sources of DPM include on-road trucks and diesel-powered construction equipment like front-end loaders, bulldozers, and scrapers.

The SCAQMD recommends the following significance criteria for health risk assessments:

- Criterion 1: a greater than 10 in one million (10×10^{-6}) lifetime probability of contracting cancer; and
- Criterion 2: a health hazard index of 1.0 for evaluating the non-carcinogenic effects of toxic air contaminants.

Using SCAQMD's thresholds of significance, the health risk assessment has concluded that the maximum anticipated cancer risks associated with construction of the proposed Landmark Village project are 1.2, 1.7, and 0.3 in one million at workplace, residential, and sensitive receptors, respectively. The assessment also has found that the chronic hazard indices for non-cancer health impacts are well below 1.0 at the maximally exposed receptors under this construction scenario. The health impacts associated with the construction of the proposed project are below the significance criteria and, therefore, are less than significant.

8. MITIGATION MEASURES

Although the proposed Landmark Village project may result in potentially significant local and regional air quality impacts, the County already has imposed mitigation measures required to be implemented as part of the Newhall Ranch Specific Plan. These mitigation measures, as they relate to air quality, are found in the previously certified Newhall Ranch Specific Plan Program EIR and the adopted Mitigation Monitoring Plan for the Specific Plan (May 2003). In addition, this EIR identifies recommended mitigation measures specific to the Landmark Village project. The project applicant has committed to implementing both the applicable mitigation measures from the Newhall Ranch Specific Plan and the mitigation measures recommended for the proposed Landmark Village project. These measures are preceded by "SP," which stands for Specific Plan.

a. Mitigation Measures Already Incorporated into Specific Plan

SP 4.10-1 The Specific Plan will provide Commercial and Service Uses in close proximity to residential subdivisions. *(The Landmark Village project provides Commercial and Service Uses in close proximity to residential subdivisions.)*

SP 4.10-2 The Specific Plan will locate residential uses in close proximity to Commercial Uses, Mixed-Uses, and Business Parks. *(The Landmark Village project locates residential uses in close proximity to Commercial Uses and Mixed Uses.)*

SP 4.10-3 Bus pull-ins will be constructed throughout the Specific Plan site. *(The Landmark Village project provides for bus pull-ins at designated locations/)*

SP 4.10-4 Pedestrian facilities, such as sidewalks, and community regional, and local trails, will be provided throughout the Specific Plan site. *(Pedestrian facilities, such as sidewalks, bike paths, and trails, will be constructed throughout the Landmark Village project, with future connections to other on-site and off-site future developments and designated trails.)*

SP 4.10-5 Roads with adjacent trails for pedestrian and bicycle use will be provided throughout the Specific Plan site connecting the individual Villages and community. *(Roads with adjacent trails for pedestrian and bicycle use will be provided throughout the Landmark Village project site with future connections to future developments within Newhall Ranch.)*

b. Applicable Mitigation Measures Required by the Adopted Newhall Ranch Specific Plan as they Relate to the Landmark Village Project

The following nine mitigation measures were adopted by the County in connection with its approval of the Newhall Ranch Specific Plan (May 2003). Of the nine mitigation measures, eight measures are applicable to the Landmark Village project. The applicable mitigation measures will be implemented in conjunction with the proposed Landmark Village project to mitigate potentially significant air quality impacts. Because the Specific Plan would be built out over an estimated 25-year period, it was unknown at the time the Newhall Ranch Specific Plan Program EIR was prepared what technological developments or regulatory requirements may take place over the course of Specific Plan build out that may affect the identification and implementation of mitigation measures. To address this issue, the Newhall Ranch Specific Plan Program EIR called for each future subdivision to implement those feasible measures in effect at the time a subdivision or other development project is filed within the Specific Plan area. Consistent with the approach taking in the Newhall Ranch Specific Plan Program EIR, the eight mitigation measures applicable to the Landmark Village project have been updated for consistency with current SCAQMD regulations, and to reflect existing technologies. Deleted text is marked with a ~~strikethrough~~ while additions are marked through <u>underlined</u> text. It is assumed that all Specific Plan mitigation measures will be implemented unless otherwise indicated.

(1) Construction Mitigation Measures

SP 4.10-6 The applicant of future subdivisions shall implement all rules and regulations adopted by the Governing Board of the SCAQMD which are applicable to the development of the subdivision (such as Rule 402 – Nuisance, Rule 403 – Fugitive Dust, Rule 1113 – Architectural Coatings) and which are in effect at the time of development. The purpose of Rule 403 is to reduce the amount of particulate matter entrained in the ambient air as a result of man-made fugitive dust sources by requiring actions to prevent, reduce, or mitigate fugitive dust emissions. Rule 403 applies to any activity or man-made condition capable of

generating fugitive dust such as the mass and remedial grading associated with the project as well as weed abatement and stockpiling of construction materials (i.e., rock, earth, gravel). Rule 403 requires that grading operations either (1) take actions specified in Tables 1 and 2 of the Rule for each applicable source of fugitive dust and take certain notification and record keeping actions, or (2) obtain an approved Fugitive Dust Control Plan. A complete copy of the SCAQMD's Rule 403 Implementation Handbook, which has been included in **Appendix 4.10**, provides guideline tables to demonstrate the typical mitigation program and record keeping required for grading operations (Tables 1 and 2 and sample record-keeping chart). The record keeping is accomplished by on-site construction personnel, typically the construction superintendent.

Each future subdivision proposed in association with the Newhall Ranch Specific Plan shall implement the following if found applicable and feasible for that subdivision:

Grading

a. Apply non-toxic soil stabilizers according to manufacturers' specification to all inactive construction areas (previously graded areas inactive for 10 days or more).

b. Replace groundcover in disturbed areas as quickly as possible.

c. Enclose, cover, water twice daily, or apply non-toxic soil binders according to manufacturers' specifications, to exposed piles (i.e., gravel, sand, dirt) with 5 percent or greater silt content.

d. Water active sites at least twice daily.

e. Suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 miles per hour.

f. Monitor for particulate emissions according to district-specified procedures.

g. All trucks hauling dirt, sand, soil, or other loose materials are to be covered or should maintain at least 2 feet of freeboard (i.e., minimum vertical distance between top of the load and the top of the trailer) in accordance with the requirements of CVC Section 23114.

Paved Roads

h. Sweep paved streets at the end of the day if visible soil material is carried onto adjacent public paved roads (recommend water sweepers with reclaimed water).

i. Install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash off trucks and any equipment leaving the site each trip.

Unpaved Roads

j. Apply water three times daily, or non-toxic soil stabilizers according to manufacturers' specifications, to all unpaved parking or staging areas or unpaved road surfaces.

k. Reduce traffic speeds on all unpaved roads to 15 miles per hour or less.

l. Pave construction roads that have a traffic volume of more than 50 daily trips by construction equipment, 150 total daily trips for all vehicles.

m. Pave all construction access roads at least 100 feet on to the site from the main road.

n. Pave construction roads that have a daily traffic volume of less than 50 vehicular trips.

These measures control PM_{10} emissions and would also control $PM_{2.5}$ emissions. The effectiveness of these measures at reducing PM_{10} emissions ranges from 7 to 92.5 percent.[123] For the purposes of this impact analysis, and to be consistent with URBEMIS2002 methodology, it is assumed that implementation of these measures would reduce $PM_{2.5}$ and PM_{10} emissions by a maximum of 50 percent.

SP 4.10-7 Prior to the approval of each future subdivision proposed in association with the Newhall Ranch Specific Plan, each of the construction emission reduction measures indicated below (and in Tables 11-2 and 11-3 of the SCAQMD's *CEQA Air Quality Handbook*, as amended) shall be implemented if found applicable and feasible for that subdivision:

On-Road Mobile Source Construction Emissions

a. Configure construction parking to minimize traffic interference.

b. Provide temporary traffic controls when construction activities have the potential to disrupt traffic to maintain traffic flow (e.g., signage, flag person, detours).

c. 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).

d. Develop a trip reduction plan to achieve a 1.5 average vehicle ridership (AVR) for construction employees.

e. Implement a shuttle service to and from retail services and food establishments during lunch hours.

f. Develop a construction traffic management plan that includes the following measures to address construction traffic that has the potential to affect traffic on public streets:

- Rerouting construction traffic off congested streets;

123 SCAQMD, *CEQA Air Quality Handbook* (Diamond Bar, California: SCAQMD, November 1993), p. 11-15, and p. A11-77.

- Consolidating truck deliveries; and
- Providing temporary dedicated turn lanes for movement of construction trucks and equipment on and off of the site.

g. Prohibit truck idling in excess of two minutes.

Off-Road Mobile Source Construction Emissions

h. Use methanol-fueled pile drivers.

i. Suspend use of all construction equipment operations during second stage smog alerts.

j. Prevent trucks from idling longer than two minutes.

k. Use electricity from power poles rather than temporary diesel-powered generators.

l. Use electricity from power poles rather than temporary gasoline-powered generators.

m. Use methanol- or natural gas-powered mobile equipment instead of diesel.

n. Use propane- or butane-powered on-site mobile equipment instead of gasoline.

(2) Operational Mitigation Measures

(a) Point Source Operational Emissions

SP 4.10-8 The applicant of future subdivisions shall implement all rules and regulations adopted by the Governing Board of the SCAQMD which are applicable to the development of the subdivision (such as Rule 402 – Nuisance, Rule 461 – Gasoline Transfer And Dispensing, Rule 1102 – Petroleum Solvent Dry Cleaners, Rule 1111 – NO_x Emissions from Natural Gas-Fired, Fan-Type Central Furnaces, Rule 1138 – Control Of Emissions From Restaurant Operations, Rule 1146 – Emissions of Oxides of Nitrogen from Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters) and which are in effect at the time of occupancy permit issuance.

(b) Mobile Source Operational Emissions

SP 4.10-9 Prior to the approval of each future subdivision proposed in association with the Newhall Ranch Specific Plan, each of the operational emission reduction measures indicated below (and in Tables 11-6 and 11-7 of the SCAQMD's *CEQA Air Quality Handbook*, as amended) shall be implemented if found applicable and feasible for that subdivision.

On Road Mobile Source Operational Emissions

Residential Uses

a. ~~Include satellite telecommunications centers in residential subdivisions~~ *(Removed as growth of internet allows residents to telecommute from home using personal computers.)*

b. Establish shuttle service from residential subdivision to commercial core areas.

c. Construct on-site or off-site bus stops (e.g., bus turnouts, passenger benches, and shelters).

d. Construct off-site pedestrian facility improvements, such as overpasses and wider sidewalks.

e. Include retail services within or adjacent to residential subdivisions.

f. Provide shuttles to major rail transit centers or multi-modal stations.

g. Contribute to regional transit systems (e.g., right-of-way, capital improvements, etc.).

h. Synchronize traffic lights on streets impacted by development.

i. Construct, contribute, or dedicate land for the provision of off-site bicycle trails linking the facility to designated bicycle commuting routes.

Commercial Uses

j. Provide preferential parking spaces for carpools and vanpools and provide 7 foot 2 inch minimum vertical clearance in parking facilities for vanpool access.

k. Implement on-site circulation plans in parking lots to reduce vehicle queuing.

l. Improve traffic flow at drive-throughs by designing separate windows for different functions and by providing temporary parking for orders not immediately available for pickup.

m. Provide videoconference facilities.

n. Set up resident worker training programs to improve job/housing balance.

o. ~~Implement home dispatching system where employees receive routing schedule by phone instead of driving to work.~~ *(Removed as growth of internet allows employers to establish websites where such information can be posted and accessed by employees at home on personal computers.)*

p. Develop a program to minimize the use of fleet vehicles during smog alerts (for business not subject to Regulation XV (now Rule 2202) or XII). *(Not applicable to Landmark Village project as the commercial uses to be developed in this subdivision will be neighborhood supporting uses that do not utilize commercial vehicle fleets.)*

q. Use low-emissions fleet vehicles:

- TLEV
- ULEV
- LEV
- ZEV

(Not applicable to Landmark Village project as the commercial uses to be developed in this subdivision will be neighborhood supporting uses that do not utilize commercial vehicle fleets.)

r. Reduce employee parking spaces for those businesses subject to Regulation XV (now Rule 2202). *(Rule 2202 applies to employers with more than 250 employees on a single worksite. The Landmark Village project does not include Business Park or similar uses that would generate significant levels of employment at a single location.)*

s. Implement a lunch shuttle service from a worksite(s) to food establishments.

t. Implement compressed workweek schedules where weekly work hours are compressed into fewer than five days.

- 9/80
- 4/40
- 3/36

(The Landmark Village project does not include the types of uses that would generate significant levels of employment at a single location. Therefore, this measure is considered not applicable.)

u. Develop a trip reduction plan to achieve 1.5 AVR for businesses with less than 100 employees or multi-tenant worksites. *(This measure is considered not applicable, because the uses proposed by the Landmark Village project are not suited for imposition of a trip reduction plan. In addition, the requirement to achieve a specific AVR has been ruled unlawful and, therefore, is no longer recommended.)*

~~v. Utilize satellite offices rather than regular worksite to reduce VMT.~~ *(Removed as growth of internet allows employees to work from home on personal computers.)*

w. Establish a home-based telecommuting program.

x. Provide on-site child care and after-school facilities or contribute to off-site development within walking distance.

y. Require retail facilities or special event centers to offer travel incentives such as discounts on purchases for transit riders.

z. Provide on-site employee services such as cafeterias, banks, etc.

aa. Establish a shuttle service from residential core areas to the worksite.

ab. Construct on-site or off-site bus stops (e.g., bus turnouts, passenger benches, and shelters).

ac. Implement a pricing structure for single-occupancy employee parking and/or provide discounts to ridesharers.

ad. Include residential units within a commercial project.

ae. Utilize parking in excess of code requirements as on-site park-n-ride lots or contribute to construction of off-site lots.

af. Any two of the following:

- Construct off-site bicycle facility improvements, such as bicycle trails linking the facility to designated bicycle commuting routes, or on-site improvements, such as bicycle paths.
- Include bicycle parking facilities, such as bicycle lockers and racks.
- Include showers for bicycling employees' use.

ag. Any two of the following:

- Construct off-site pedestrian facility improvements, such as overpasses, wider sidewalks.
- Construct on-site pedestrian facility improvements, such as building access that is physically separated from street and parking lot traffic and walk paths.
- Include showers for pedestrian employees' use.

ah. Provide shuttles to major rail transit stations and multi-modal centers.

ai. Contribute to regional transit systems (e.g., right-of-way, capital improvements, etc.).

aj. Charge visitors to park.

ak. Synchronize traffic lights on streets impacted by development.

al. Reschedule truck deliveries and pickups to off-peak hours.

am. Set up paid parking systems where drivers pay at walkup kiosk and exit via a stamped ticket to reduce emissions from queuing vehicles.

an. Require on-site truck loading zones.

ao. Implement or contribute to public outreach programs.

ap. Require employers not subject to Regulation XV (now Rule 2202) to provide commuter information area.

Business Park Uses

aq. Provide preferential parking spaces for carpools and vanpools and provide 7′2″ minimum vertical clearance in parking facilities for vanpool access. (*This mitigation measure is not applicable to the Landmark Village project. The measure refers to preferential parking spaces for carpools and vanpools in Business Park uses. The Landmark Village project does not propose a Business Park.)*

ar. Implement on-site circulation plans in parking lots to reduce vehicle queuing. *(This mitigation measure is not applicable to the Landmark Village project. The measure refers to improved circulation within Business Park parking lots. The Landmark Village project does not propose a Business Park.)*

as. Set up resident worker training programs to improve job/housing balance. *(This mitigation measure is not applicable to the Landmark Village project. The measure refers to resident worker training programs for Business Park employees. The Landmark Village project does not propose a Business Park.)*

at. Implement home dispatching system where employees receive routing schedule by phone instead of driving to work. *(This mitigation measure is not applicable to the Landmark Village project. The measure refers to establishment of home dispatching system for Business Park employees. The Landmark Village project does not propose a Business Park.)*

au. Develop a program to minimize the use of fleet vehicles during smog alerts (for business not subject to Regulation XV (now Rule 2202) or XII). *(This mitigation measure is not applicable to the Landmark Village project. The measure refers to creation of a program designed to reduce use of vehicle fleets. The Landmark Village project does not propose a Business Park.)*

av. Use low-emissions fleet vehicles:

- TLEV
- ULEV
- LEV
- ZEV

(This mitigation measure is not applicable to the Landmark Village project. The measure promotes use of alternative fuels in vehicle fleets. The Landmark Village project does not propose a Business Park.)

aw. Require employers not subject to Regulation XV (now Rule 2202) to provide commuter information area. *(This mitigation measure is not applicable to the Landmark Village project. The measure requires employers in Business Parks to provide commuter information area. The Landmark Village project does not propose a Business Park.)*

ax. Reduce employee parking spaces for those businesses subject to Regulation XV (now Rule 2202). *(This mitigation measure is not applicable to the Landmark Village project. The measure requires employers in Business Parks to limit employee parking. The Landmark Village project does not propose a Business Park.)*

ay. Implement compressed workweek schedules where weekly work hours are compressed into fewer than five days.

- 9/80
- 4/40
- 3/36

(This mitigation measure is not applicable to the Landmark Village project. The measure promotes use of flexible work schedules in Business Park uses. The Landmark Village project does not propose a Business Park.)

az. Offer first right of refusal, low interest loans, or other incentives to employees who purchase or rent local residences. *(This mitigation measure has been omitted because it is not applicable to the Landmark Village project. The measure promotes use of incentives to Business Park employees who choose to reside in a local residence. The Landmark Village project does not propose a Business Park.)*

ba. Develop a trip reduction plan to achieve 1.5 AVR for businesses with less than 100 employees or multi-tenant worksites. *(This mitigation measure is not applicable to the Landmark Village project. The measure promotes use of a trip reduction plan for Business Park users. The Landmark Village project does not propose a Business Park.)*

bb. Provide on-site child care and after-school facilities or contribute to off-site development within walking distance. *(This mitigation measure is not applicable to the Landmark Village project. The measure promotes on-site childcare in Business Park uses. The Landmark Village project does not propose a Business Park.)*

bc. Provide on-site employee services such as cafeterias, banks, etc. *(This mitigation measure is not applicable to the Landmark Village project. The measure requires uses within the Business Park to provide on-site employee amenities such as cafeterias or banks. The Landmark Village project does not propose a Business Park.)*

bd. Establish a shuttle service from residential core areas to the worksite. *(This mitigation measure is not applicable to the Landmark Village project. The measure requires uses within the Business Park to provide shuttle service to residential areas. The Landmark Village project does not propose a Business Park.)*

be. Construct on-site or off-site bus stops (e.g., bus turnouts, passenger benches, and shelters) *(This mitigation measure is not applicable to the Landmark Village project. The measure requires bus stops in Business Park uses. The Landmark Village project does not propose a Business Park.)*

bf. Implement a pricing structure for single-occupancy employee parking and/or provide discounts to ridesharers. *(This mitigation measure is not applicable to the Landmark Village project. The measure requires uses within the Business Park to encourage ridesharing and discourage travel in single occupancy vehicles. The Landmark Village project does not propose a Business Park.)*

bg. Utilize parking in excess of code requirements as on-site park-n-ride lots or contribute to construction of off-site lots. *(This mitigation measure is not applicable to the Landmark Village*

project. The measure requires uses within the Business Park to provide parking in excess of code for park and ride lots. The Landmark Village project does not propose a Business Park.)

bh. Any two of the following:

- Construct off-site bicycle facility improvements, such as bicycle trails linking the facility to designated bicycle commuting routes, or on-site improvements, such as bicycle paths.
- Include bicycle parking facilities, such as bicycle lockers and racks.
- Include showers for bicycling employees' use.

(This mitigation measure is not applicable to the Landmark Village project. The measure requires uses within the Business Park to construct on-site improvements that encourage bicycling. The Landmark Village project does not propose a Business Park.)

bi. Any two of the following:

- Construct off-site pedestrian facility improvements, such as overpasses, wider sidewalks.
- Construct on-site pedestrian facility improvements, such as building access that is physically separated from street and parking lot traffic and walk paths.
- Include showers for pedestrian employees' use.

(This mitigation measure is not applicable to the Landmark Village project. The measure requires uses within the Business Park to provide pedestrian facility improvements. The Landmark Village project does not propose a Business Park.)

bj. Provide shuttles to major rail transit stations and multi-modal centers. *(This mitigation measure is not applicable to the Landmark Village project. The measure requires uses within the Business Park to provide shuttles to transit stations. The Landmark Village project does not propose a Business Park.)*

bk. Contribute to regional transit systems (e.g., right-of-way, capital improvements, etc.). *(This mitigation measure is not applicable to the Landmark Village project. The measure requires uses within the Business Park to contribute towards regional transit improvements. The Landmark Village project does not propose a Business Park.)*

bl. Synchronize traffic lights on streets impacted by development. *(This mitigation measure is not applicable to the Landmark Village project. The measure requires uses within the Business Park to synchronize traffic signals affected by operation of the park. The Landmark Village project does not propose a Business Park.)*

bm. Reschedule truck deliveries and pickups to off-peak hours. *(This mitigation measure is not applicable to the Landmark Village project. The measure requires uses within the Business Park to schedule deliveries at off-peak hours. The Landmark Village project does not propose a Business Park.)*

bn. Implement a lunch shuttle service from a worksite(s) to food establishments. *(This mitigation measure is not applicable to the Landmark Village project. The measure requires uses within the Business Park to implement a lunch shuttle service. The Landmark Village project does not propose a Business Park.)*

bo. Require on-site truck loading zones. *(This mitigation measure is not applicable to the Landmark Village project. The measure requires uses within the Business Park to provide on-site truck loading zones. The Landmark Village project does not propose a Business Park.)*

bp. Install aerodynamic add-on devices to heavy-duty trucks. *(This mitigation measure is not applicable to the Landmark Village project. The measure requires uses within the Business Park to install aerodynamic devices on truck fleets. The Landmark Village project does not propose a Business Park.)*

bq. Implement or contribute to public outreach programs. *(This mitigation measure is not applicable to the Landmark Village project. The measure requires uses within the Business Park to conduct public outreach programs to reduce VMT. The Landmark Village project does not propose a Business Park.)*

Stationary Source Operational Emissions

Residential

br. Use solar or low emission water heaters.

bs. Use central water heating systems.

bt. Use built-in energy-efficient appliances.

bu. Provide shade trees to reduce building heating/cooling needs.

bv. Use energy-efficient and automated controls for air conditioners.

bw. Use double-paned windows.

bx. Use energy-efficient low-sodium parking lot lights.

by. Use lighting controls and energy-efficient lighting.

bz. Use fuel cells in residential subdivisions to produce heat and electricity. (This measure is not yet considered technically or economically feasible. There are presently no commercially available fuel cell applications for individual home use at a reasonable cost.)

ca. Orient buildings to the north for natural cooling and include passive solar design (e.g., daylighting).

cb. Use light-colored roofing materials to reflect heat.

cc. Increase walls and attic insulation beyond Title 24 requirements.

Commercial Uses

cd. Use solar or low emission water heaters.

ce. Use central water heating systems.

cf. Provide shade trees to reduce building heating/cooling needs.

cg. Use energy-efficient and automated controls for air conditioners.

ch. Use double-paned windows.

ci. Use energy-efficient low-sodium parking lot lights.

cj. Use lighting controls and energy-efficient lighting.

ck. Use light-colored roofing materials to reflect heat.

cl. Increase walls and attic insulation beyond Title 24 requirements.

cm. Orient buildings to the north for natural cooling and include passive solar design (e.g., daylighting).

Business Park Uses

cn. Provide shade trees to reduce building heating/cooling needs. *(This mitigation measure is not applicable to the Landmark Village project. The measure requires uses within the Business Park to provide shade trees near structures. The Landmark Village project does not propose a Business Park.)*

co. Use energy-efficient and automated controls for air conditioning. *(This mitigation measure is not applicable to the Landmark Village project. The measure requires uses within the Business Park to use energy efficient air conditioning. The Landmark Village project does not propose a Business Park.)*

cp. Use double-paned windows. *(This mitigation measure is not applicable to the Landmark Village project. The measure requires uses within the Business Park to use energy efficient windows. The Landmark Village project does not propose a Business Park.)*

cq. Use energy-efficient low-sodium parking lot lights. *(This mitigation measure is not applicable to the Landmark Village project. The measure requires uses within the Business Park to use energy efficient parking lot lighting. The Landmark Village project does not propose a Business Park.)*

cr. Use lighting controls and energy-efficient lighting. *(This mitigation measure is not applicable to the Landmark Village project. The measure requires uses within the Business Park to use energy efficient lighting. The Landmark Village project does not propose a Business Park.)*

cs. Use light-colored roofing materials to reflect heat. *(This mitigation is not applicable to the Landmark Village project. The measure requires uses within the Business Park to use light color roofing materials. The Landmark Village project does not propose a Business Park.)*

ct. Orient buildings to the north for natural cooling and include passive solar design (e.g., daylighting). *(This mitigation measure is not applicable to the Landmark Village project. The measure requires uses within the Business Park to orient the structure to account for passive solar design. The Landmark Village project does not propose a Business Park.)*

cu. Increase walls and attic insulation beyond Title 24 requirements. *(This mitigation measure has been omitted because it is not applicable to the Landmark Village project. The measure requires uses within the Business Park to increase wall insulation beyond code requirements. The Landmark Village project does not propose a Business Park.)*

cv. Improved storage and handling or source materials. *(This mitigation measure has been omitted because it is not applicable to the Landmark Village project. The measure requires uses within the Business Park to improve storage and handling. The Landmark Village project does not propose a Business Park.)*

cw. Materials substitution (e.g., use water-based paints, life-cycle analysis). *(This mitigation measure has been omitted because it is not applicable to the Landmark Village project. The measure requires uses within the Business Park to conduct materials substitution in their processes. The Landmark Village project does not propose a Business Park.)*

cx. Modify manufacturing processes (e.g., reduce process stages, closed-loop systems, materials recycling).

(This mitigation measure has been omitted because it is not applicable to the Landmark Village project. The measure addresses manufacturing uses within a Business Park. The Landmark Village project does not propose a Business Park.)

cy. Resource recovery systems that redirect chemicals to new production processes. *(This mitigation measure has been omitted because it is not applicable to the Landmark Village project. The measure addresses manufacturing uses within a Business Park. The Landmark Village project does not propose a Business Park.)*

SP 4.10-10 All non-residential development of 25,000 gross square feet or more shall comply with the County's Transportation Demand Management Ordinance (Ordinance No. 93-0028M) in effect at the time of subdivision. The sizes and configurations of the Specific Plan's non-residential uses are not known at this time and the Ordinance specifies different requirements based on the size of the project under review. All current provisions of the ordinance are summarized in **Appendix 4.10**.

SP 4.10-11 Subdivisions and buildings shall comply with Title 24 of the California Code of Regulations which are current at the time of development.

SP 4.10-12 Lighting for public streets, parking areas, and recreation areas shall utilize energy efficient light and mechanical, computerized or photo cell switching devices to reduce unnecessary energy usage.

SP 4.10-13 Any on-site subterranean parking structures shall provide adequate ventilation systems to disperse pollutants and preclude the potential for a pollutant concentration to occur. *(This mitigation measure it is not applicable to the Landmark Village project. The measure addresses ventilation of subterranean parking garages. The Landmark Village project does not propose such parking facilities.)*

SP 4.10-14 The sellers of new residential units shall be required to distribute brochures and other relevant information published by the SCAQMD or similar organization to new homeowners regarding the importance of reducing VMT and related air quality impacts, as well as on local opportunities for public transit and ridesharing.

c. Mitigation Measures Recommended for this Project

The following project-specific mitigation measures are recommended to mitigate the potentially significant air quality impacts that may occur with implementation of the Landmark Village project. These mitigation measures are in addition to those adopted in the previously certified Newhall Ranch Specific Plan Program EIR. To reflect that these measures relate specifically to the Landmark Village project, the following designation was used below (e.g., "LV 4.9-1").

(1) Construction Mitigation Measures

LV4.9-1 Maintain construction equipment and vehicle engines in good condition and in proper tune as per manufacturers' specifications and per SCAQMD rules, to minimize exhaust emissions.

LV4.9-2 All on-road and off-road construction equipment shall use aqueous fuel, to the extent feasible, as determined by the County of Los Angeles.

Aqueous fuel is a stable emulsion of up to 55 percent water and petroleum-based naphtha (a petroleum product from the earliest stages of the refinery process), with trace amounts of bonding and winterizing agents. It can be used to run both gasoline and diesel engines. Aqueous fuel is clean-burning and, based on information provided in the URBEMIS2002 model for its use in construction equipment, it can reduce NO_x emissions by 14 percent and PM_{10} emissions by 63 percent.

LV4.9-3 All on-road and off-road construction equipment shall employ cooled exhaust gas recirculation technology, to the extent feasible, as determined by the County of Los Angeles.

Cooled exhaust gas recirculation (EGR) reduces CO, VOC, NO_x, and PM_{10} emissions as follows: Oxygen is required for fuel to be consumed in a combustion engine. The high temperatures found within combustion engines cause nitrogen in the surrounding air to react with any unused oxygen from the combustion process to form NO_x. EGR technology directs some of the exhaust gases that have already been used by the engine and no longer contain much oxygen back into the intake of the engine. By mixing the exhaust gases with fresh air, the amount of oxygen entering the engine is reduced. Since there is less oxygen to react with, fewer nitrogen oxides are formed and the amount of nitrogen oxides that a vehicle releases into the atmosphere is decreased. Based on information provided in the URBEMIS2002 model for its use in construction equipment, cooled exhaust gas recirculation technology can reduce CO and VOC emissions by 90 percent, NO_x emissions by 40 percent and PM_{10} emissions by 85 percent.

LV4.9-4 All on-road and off-road construction equipment shall employ diesel particulate filters, which can reduce PM_{10} emissions from construction equipment by as much as 80 percent based on information provided in the URBEMIS2002 model.

Although substantial mitigation is recommended for the project's construction-related emissions, **Mitigation Measures LV 4.9-2** and **4.9-3** are based on technology unproven on a large scale and which may be infeasible. However, if these mitigation measures are found feasible at the time of construction, the project's construction-related CO, VOC, NO_x, and PM_{10} emissions would be reduced substantially, as shown in **Table 4.9-25**, **Estimated Mitigated Construction Emissions**. In particular, implementation of these mitigation measures, if feasible, would reduce CO emissions to less than significant, and the period of VOC exceedances would be reduced from 51 months to less than 2 months. However, even with the implementation of these mitigation measures, if feasible, construction emission thresholds for VOC, NO_x, and PM_{10} emissions would still be exceeded for approximately 48, 90, and 11 months, respectively. As a result, construction air quality impacts are considered significant.

Table 4.9-25
Estimated Mitigated Construction Emissions

Subphase/Emissions Source	Emissions (lbs/day)					Mitigation
	CO	VOC	NO_x	SO_x	PM_{10}	
Weeks 1 thru 19						
Mitigated Emissions Total	247.93	91.79	709.82	0.02	6,765.07	Rule 403
SCAQMD Thresholds	550.00	75.00	100.00	150.00	150.00	Aqueous Fuel
Exceeds Thresholds?	NO	YES	YES	NO	YES	Cooled EGR
Notes: No Demolition, Pavement and Asphalt, or Building Construction during this subphase. Assumes conformance with Fugitive Dust Rule 403.						
Weeks 20 thru 39						
Mitigated Emissions Total	407.61	112.45	1,243.04	0.13	6,736.10	Rule 403
SCAQMD Thresholds	550.00	75.00	100.00	150.00	150.00	Aqueous Fuel
Exceeds Thresholds?	NO	YES	YES	NO	YES	Cooled EGR
Notes: No Demolition or Building Construction during this subphase. Assumes conformance with Fugitive Dust Rule 403, and use of low VOC asphalt.						
Weeks 40 thru 46						
Mitigated Emissions Total	615.15	289.83	2,003.41	0.11	6,708.12	Rule 403
SCAQMD Thresholds	550.00	75.00	100.00	150.00	150.00	Aqueous Fuel
Exceeds Thresholds?	YES	YES	YES	NO	YES	Cooled EGR
Notes: No Demolition during this subphase. Assumes conformance with Fugitive Dust Rule 403, and use of low VOC asphalt.						
Weeks 47 thru 91						
Mitigated Emissions Total	367.22	198.03	1,293.59	0.09	0.00	Aqueous Fuel
SCAQMD Thresholds	550.00	75.00	100.00	150.00	150.00	Cooled EGR
Exceeds Thresholds?	NO	YES	YES	NO	NO	
Notes: No Demolition or Grading during this subphase. Assumes conformance with Fugitive Dust Rule 403, and use of low VOC asphalt.						
Week 92						
Mitigated Emissions Total	421.17	204.32	1,403.05	0.05	0.00	Aqueous Fuel
SCAQMD Thresholds	550.00	75.00	100.00	150.00	150.00	Cooled EGR
Exceeds Thresholds?	NO	YES	YES	NO	NO	
Notes: No Demolition or Grading during this subphase. Assumes conformance with Fugitive Dust Rule 403, and use of low VOC asphalt and architectural coatings.						
Weeks 93 thru 144						
Mitigated Emissions Total	385.62	189.23	1,290.00	0.05	0.00	Aqueous Fuel
SCAQMD Thresholds	550.00	75.00	100.00	150.00	150.00	Cooled EGR
Exceeds Thresholds?	NO	YES	YES	NO	NO	
Notes: No Demolition or Grading during this subphase. Assumes use of low VOC asphalt and architectural coatings.						
Weeks 145 thru 158						
Mitigated Emissions Total	359.40	186.46	1,167.78	0.04	0.00	Aqueous Fuel
SCAQMD Thresholds	550.00	75.00	100.00	150.00	150.00	Cooled EGR
Exceeds Thresholds?	NO	YES	YES	NO	NO	
Notes: No Demolition or Grading during this subphase. Assumes use of low VOC asphalt and architectural coatings.						

Subphase/Emissions Source	Emissions (lbs/day)					Mitigation
	CO	VOC	NO_x	SO_x	PM_{10}	
Weeks 159 thru 178						
Mitigated Emissions Total	210.84	167.17	648.81	0.03	0.00	Aqueous Fuel
SCAQMD Thresholds	550.00	75.00	100.00	150.00	150.00	Cooled EGR
Exceeds Thresholds?	NO	YES	YES	NO	NO	
Notes: No Demolition, Grading, or Pavement and Asphalt during this subphase. Assumes use of low VOC asphalt and architectural coatings.						
Weeks 179 thru 196						
Mitigated Emissions Total	185.74	168.78	576.42	0.03	0.00	Aqueous Fuel
SCAQMD Thresholds	550.00	75.00	100.00	150.00	150.00	Cooled EGR
Exceeds Thresholds?	NO	YES	YES	NO	NO	
Notes: No Demolition, Grading, or Pavement and Asphalt during this subphase. Assumes use of low VOC asphalt and architectural coatings.						
Weeks 197 thru 210						
Mitigated Emissions Total	23.03	90.21	4.31	0.02	0.20	Aqueous Fuel
SCAQMD Thresholds	550.00	75.00	100.00	150.00	150.00	Cooled EGR
Exceeds Thresholds?	NO	YES	NO	NO	NO	
Notes: No Demolition, Grading, or Pavement and Asphalt during this subphase. Assumes use of low VOC architectural coatings.						
Weeks 211 thru 220						
Mitigated Emissions Total	15.00	40.94	2.78	0.01	0.14	Aqueous Fuel
SCAQMD Thresholds	550.00	75.00	100.00	150.00	150.00	Cooled EGR
Exceeds Thresholds?	NO	NO	NO	NO	NO	
Notes: No Demolition, Grading, or Pavement and Asphalt during this subphase. Assumes use of low VOC asphalt and architectural coatings.						
Weeks 221 thru 235						
Mitigated Emissions Total	58.05	18.70	173.21	0.01	0.00	Aqueous Fuel
SCAQMD Thresholds	550.00	75.00	100.00	150.00	150.00	Cooled EGR
Exceeds Thresholds?	NO	NO	NO	NO	NO	
Notes: No Demolition, Grading, or Pavement and Asphalt during this subphase. Assumes use of low VOC architectural coatings.						
Beg. 2015 (196 Weeks) [1]						
Mitigated Emissions Total	110.22	51.5	310.01	0.03	0.00	Aqueous Fuel
SCAQMD Thresholds	550.00	75.00	100.00	150.00	150.00	Cooled EGR
Exceeds Thresholds?	NO	NO	YES	NO	NO	
Notes: No Demolition, Grading, or Pavement and Asphalt during this subphase.						

Source: Impact Sciences, Inc., Calculations can be found in ***Appendix 4.9****.*

[1] As a worst-case scenario, assumes all associated grading and pavement/asphalt is completed during the first three subphases.

(2) Operational Mitigation Measures

(a) Point Source Operational Emissions

LV4.9-5 Any dry cleaners proposing to locate on site shall utilize the services of off-site cleaning operations at already SCAQMD-permitted locations. No on-site dry cleaning operations shall be permitted within Landmark Village.

(b) Mobile Source Operational Emissions

LV4.9-6 The project developer(s) shall coordinate with Santa Clarita Transit to identify appropriate bus stop/turnout locations.

LV4.9-7 Kiosks containing transit information shall be constructed by the project applicant adjacent to selected future bus stops prior to initiation of bus service to the site.

(c) Area Source Operational Emissions

LV4.9-8 Wood-burning fireplaces and stoves shall be prohibited in all residential units. Use of wood in fireplaces shall be prohibited through project Covenants, Conditions, and Restrictions.

d. Emission Reduction Efficiencies for Operational Emissions

Ranges of emission reduction efficiencies for the above-recommended mitigation measures for operational emissions are identified in Table 11-6 of the SCAQMD's *CEQA Air Quality Handbook*.[124] The SCAQMD recommends that the low end of the range should be used when selecting the efficiencies for various projects unless otherwise justified.[125] Not all of the recommended measures would measurably reduce all measured operational-related pollutant levels to less than significant, but their implementation would reduce summertime CO emissions by 9.7 percent, VOC emissions by 15.5 percent, NO_x emissions by 12.0 percent, and PM_{10} emissions by 9,6 percent. The measures would reduce wintertime CO emissions by 37.8 percent, VOC emissions by 83.1 percent, NO_x emissions by 14.0 percent, and PM_{10} emissions by 45.4 percent. The wintertime emissions would be significantly reduced with the mitigation measure that no wood-burning fireplaces or stoves be permitted in the residences. Even with these emissions reductions, project operational air quality impacts would remain significant as shown in **Table 4.9-26, Operational Emissions Reductions** (please see Estimated Emissions Reductions Efficiencies spreadsheets in **Appendix 4.9** for detailed calculations).

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124 No emissions reduction efficiencies are provided for SO_x emissions; however, SO_x emissions of the proposed project would be less than significant.

125 SCAQMD, *CEQA Air Quality Handbook* (Diamond Bar, California: SCAQMD, November 1993).

Table 4.9-26
Operational Emissions Reductions

Emissions Source	Emissions in Pounds per Day				
	CO	VOC	NO_x	SO_x[1]	PM_{10}
Summertime Emissions					
Total Project Emissions	4,104.14	418.92	414.66	2.52	372.02
Reduction in Area Source Emissions	-7.74	-37.07		--	
Reduction in Mobile Source Emissions	-390.74	-28.00		--	
Total Reduced Emissions	3,705.66	353.85		--	
Percent Reduction	9.7%	15.5%		--	
Recommended Threshold:	550.0	55.0	55.0	--	150.0
Exceeds Threshold?	YES	YES	YES	--	YES
Wintertime Emissions					
Total Project Emissions	5,741.55	2,023.47	605.22	4.89	616.4
Reduction in Area Source Emissions	-5.31	-36.79	-12.57	--	-0.02
Reduction from No Wood Burning Fire Places/Stoves	-1,784.09	-1,617.41	-18.37	--	-244.38
Reduction in Mobile Source Emissions	-378.07	-27.25	-53.67	--	-35.65
Total Reduced Emissions	3,574.08	342.02	520.61	--	336.35
Percent Reduction	37.8%	83.1%	14.0%	--	45.4%
Recommended Threshold:	550.0	55.0	55.0	--	150.0
Exceeds Threshold?	YES	YES	YES	NO	YES

Source: Impact Sciences, Inc. Emission reduction calculations are provided in ***Appendix 4.9****. Emission reduction calculations in* ***Appendix 4.9*** *do not reflect point source emissions, so the totals in the appendix are lower than those shown above. Totals in table may not appear to add exactly due to rounding in the computer model calculations.*

[1] *SCAQMD does not provide emission reductions for* SO_x.

9. CUMULATIVE IMPACTS

The *CEQA Air Quality Handbook* identifies possible methods to determine the cumulative significance of land use projects.[126] All of the SCAQMD's methods are based on performance standards and emission reduction targets necessary to attain the federal and state air quality standards identified in the 2003 AQMP. This EIR employs two of the methods: (1) the SCAQMD method of whether or not the project shows a one percent per year reduction in project emissions of CO, VOC, NO_x, SO_x, and PM_{10}, and (2) whether or not the project is consistent with 2003 AQMP, and thus, would not jeopardize attainment of state and federal ambient air quality standards in the Santa Clarita Valley area or the Basin.

The assessment of whether or not the project shows a one percent per year reduction in project emissions of CO, VOC, NO_x, SO_x, and PM_{10} differs from the cumulative impacts analysis methodology used in other sections of this EIR in which all foreseeable future development within a given service boundary or

[126] Ibid., p. 9-12. Written communication with Steve Smith, SCAQMD, November 20, 2003.

geographical area is predicted and its impacts measured. However, this SCAQMD assessment method is consistent with the SCAQMD's overall goal to reduce emissions within the Basin in order to meet the standards set in the 2003 AQMP.

As shown previously in **Table 4.9-26**, above**,** implementation of the recommended mitigation measures would reduce summertime CO emissions by 9.7 percent, VOC emissions by 15.5 percent, NO_x emissions by 12.1 percent, and PM_{10} emissions by 9.6 percent. The measures would reduce wintertime CO emissions by 37.8 percent, VOC emissions by 83.1 percent, NO_x emissions by 14.0 percent, and PM_{10} emissions by 45.4 percent. Since these represent emission reductions on a daily basis, they would be reduced by at least the lower summertime percentages on an annual basis, thereby exceeding the SCAQMD's performance standard for annual emissions reductions. The *CEQA Air Quality Handbook* does not identify any reduction efficiencies for emissions of SO_x. It should be assumed, however, that these measures would reduce emissions of SO_x by a minimum of 1 percent given that the minimum reduction for other mobile emissions is 9.6 percent. Therefore, the project would meet the annual emission reduction target of 1 percent and would not be considered cumulatively significant pursuant to the SCAQMD's recommended approach.

Although this next method is not included in the *CEQA Air Quality Handbook* as a way to assess cumulative air quality impacts, it is determined that the project is within growth forecasts contained in the 2001 RTP, which forms the basis for future air emissions forecasts in the 2003 AQMP. This determination indicates that the project would be consistent with the 2003 AQMP; thus, it would not jeopardize attainment of state and federal ambient air quality standards in the Basin.

Even though the project shows at least a one percent per year reduction in project emissions of CO, VOC, NO_x, and PM_{10}, and likely a similar reduction in SO_x emissions, and even though the project is consistent with 2003 AQMP, as a conservative and "worst-case" approach, the project does increase emissions in an air basin, which is in nonattainment for O_3 (VOC and NO_x as O_3 precursors), PM_{10}, and CO (Los Angeles County). Therefore, the project is considered to result in significant adverse cumulative air quality impacts.

10. CUMULATIVE MITIGATION MEASURES

All known required mitigation measures, as discussed above, have been incorporated into this air quality impact analysis to further reduce and control project-specific emissions. These measures also will help reduce the project's cumulative significant air quality impacts.

11. SIGNIFICANT UNAVOIDABLE IMPACTS

a. Project-Specific Impacts

Although the recommended mitigation measures, if feasible, would reduce the magnitude of construction and operational emissions to some extent, no feasible mitigation exists that would reduce all of these emissions to below the SCAQMD's recommended thresholds of significance. The project's construction-related emissions of VOC, NO_x, and PM_{10}, and operation-related emissions of CO, VOC, and NO_x are considered significant and unavoidable.

LST impacts suggest that PM_{10} emissions could exceed the limitations in SCAQMD Rule 403. While the NO_2 concentrations exceed the LST thresholds, the CAAQS would be exceeded only if (1) the actual background concentrations were as high as those on which the LST thresholds are based during the worst-case construction day; (2) the amount of construction activity (e.g., number and types of equipment, hours of operation) assumed in this analysis actually occurred; and (3) the meteorological conditions in the data set used in the dispersion modeling analysis occurred in the vicinity of the project site on the worst-case construction day.

While the project's air emissions would be unavoidably significant, it is important to note that the project is located in close proximity to job centers, and shopping and recreational amenities, thus reducing the number of VMT to these locations. Furthermore, the site is in close proximity to local transit facilities, contains land for a park and ride lot, and is within 7 miles of a Metrolink station, which links the valley to many parts of Southern California. Consequently, because VMT would be reduced, air emissions would be reduced as well. The project is also consistent with the 2003 AQMP; therefore, based on SCAQMD methods of analysis, project emissions should not jeopardize the long-term attainment of state and federal ambient air quality standards in the Santa Clarita Valley and the region.

b. Cumulative Impacts

The project's mitigated operational-related CO, VOC, and NO_x emissions exceed the SCAQMD's recommended daily emission thresholds of significance for these pollutants; however, based upon the SCAQMD's methods of determining whether or not the project shows a one percent per year reduction in project emissions of CO, VOC, NO_x, SO_x, and PM_{10}, the project would not contribute significant cumulative impacts. Nonetheless, as a conservative and "worst-case" approach, and because the Basin is already in nonattainment for O_3 (VOC and NO_x as O_3 precursors), PM_{10}, and CO (Los Angeles County), any increases in these emissions by the project are considered significant and unavoidable air quality impacts.

4.10 WATER SERVICE

1. SUMMARY

The proposed Landmark Village project would generate a total water demand of 1,038 acre-feet per year (afy),[1] *702 afy of potable water demand, and 336 afy of non-potable demand. Potable water demand (702 afy) would be met by the Valencia Water Company through the use of the project applicant's rights to 7,038 afy of groundwater from the Alluvial aquifer, which is presently used by the applicant for agricultural irrigation. Because this water is already used to support the applicant's existing agricultural uses, there is not expected to be any significant environmental effects resulting from the use of such water to meet the potable demands of the Landmark Village project, which is part of the approved Newhall Ranch Specific Plan area. In addition, due to project conditions, the amount of groundwater that will be used to meet the potable demands of the Newhall Ranch Specific Plan, including the Landmark Village project, cannot exceed the amount of water historically and presently used by the applicant for agricultural uses. Therefore, no net increase in groundwater use will occur with implementation of this project pursuant to the Specific Plan.*

Non-potable water demand (336 afy) would be met through the use of recycled (reclaimed) water from the initial phase of the Newhall Ranch Water Reclamation Plant (WRP), with build-out of the WRP occurring over time as demand for treatment increases with implementation of the Newhall Ranch Specific Plan. Alternatively, if the Newhall Ranch WRP is not operating at the time of project occupancy, the non-potable water demand would be met through the use of recycled water from the existing Valencia WRP, located upstream of the Landmark Village project site.

Accordingly, the proposed project's water demand would be met by relying on two primary sources of water supply, namely, the applicant's agricultural water supplies and recycled water supplied by the Newhall Ranch WRP or the existing Valencia WRP. Because these two independent water sources meet the water needs of the proposed project, no potable water would be needed from the existing or planned water supplies of Castaic Lake Water Agency (CLWA), including imported water from CLWA's State Water Project (SWP) supplies. Nonetheless, CLWA's water supplies, including imported water from the SWP, are assessed in this EIR for informational purposes.

Based on the project-level analysis, an adequate supply of water is available to serve the Landmark Village project, in addition to existing and planned future uses in the Santa Clarita Valley. No significant water supply or water quality impacts are expected from supplying available water to meet the demands of both the project and cumulative development in the valley.

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1 An acre-foot represents 43,560 cubic feet, or 325,850 gallons, of water. An acre-foot of water has been generally defined as "an irrigation-based measurement equaling the quantity of water required to cover an acre of land to a depth of one foot." See, *Brydon v. East Bay Mun. Utility Dist.* (1994) 24 Cal.App.4th 178, 182, fn. 1.

Over the past several years, questions have been raised regarding the reliability of water delivered by the State Water Project, the ability of local water purveyors to deliver an adequate and reliable supply of water to its customers from all sources, and the extent to which ammonium perchlorate discovered in local groundwater reduces the amount of local water available in the valley. Provided below are answers to these questions, in non-technical terms.

a. Where does the Landmark Village water come from (what are the supply sources)?

As discussed above, the projected total water demand for the Landmark Village project is 1,038 afy in a normal/average year. Project water demand increases by approximately 10 percent in a dry year to a total of 1,142 afy. To meet this demand, Valencia Water Company, as the local retail purveyor, would provide water to the Landmark Village project. Water sources expected to serve the Landmark Village project are the applicant's agricultural water from the Alluvial aquifer, which will be treated and used to meet the project's potable demand, and recycled water from the Newhall Ranch WRP (or the existing Valencia WRP), which will be used to meet the project's non-potable demand.

b. How reliable are the water supply sources?

Both the Alluvial Aquifer and the Saugus Formation can meet the groundwater demands for the Santa Clarita Valley under both short- and long-term conditions without creating any significant groundwater impacts. The groundwater component of overall water supply in the Santa Clarita Valley derives from a groundwater operating plan developed by CLWA and the local retail purveyors over the past 20 years to meet water requirements (municipal, agricultural, small domestic), while maintaining the Basin in a sustainable condition (i.e., no long-term depletion of groundwater or interrelated surface water). This operating plan also addresses groundwater contamination issues in the Basin. This operating plan is based on the concept that pumping can vary from year-to-year to allow increased groundwater use in dry periods and increased recharge during wet periods, and to collectively assure that the Basin is adequately replenished through various wet/dry cycles. The operating yield for the Basin has been quantified as ranges of annual pumping volumes. The groundwater operating plan is further described below. The operating plan addresses both the Alluvial aquifer, also referred to as the Alluvium, and the Saugus Formation.

Alluvium – The applicant would meet all of the Landmark Village project's water demands by using its groundwater produced from the Alluvial aquifer in Los Angeles County (County), which is presently committed to agricultural uses. The amount of water historically and presently available from this source is approximately 7,038 afy. The project's potable water demand is estimated to be 702 afy. The water

from the Alluvial aquifer presently used for agriculture would be used to meet all of the project's potable water needs resulting in no net increase in groundwater use.

As stated in the *2005 Santa Clarita Valley Water Report* (*2005 Water Report*) and the *2005 Urban Water Management Plan* (*2005 UWMP*)(See **Appendix 4.10**), the operating plan for the Alluvial aquifer involves pumping from the Alluvial aquifer in a given year, based on local hydrologic conditions in the eastern Santa Clara River watershed. Pumping ranges between 30,000 and 40,000 afy during normal/average and above-normal rainfall years. However, due to hydrogeologic constraints in the eastern part of the Basin, pumping is reduced to between 30,000 and 35,000 afy during locally dry years.

Saugus Formation – The Saugus Formation is not identified as a source of supply for the Newhall Ranch Specific Plan, including the Landmark Village project. However, the operating plan for Saugus pumping is presented as additional information regarding the groundwater basin.

As stated in the *2005 Water Report* and the *2005 UWMP*, pumping from the Saugus Formation in a given year is tied directly to the availability of other water supplies, particularly from the SWP. During average year conditions within the SWP system, Saugus pumping ranges between 7,500 and 15,000 afy. Planned dry-year pumping from the Saugus Formation ranges between 15,000 and 25,000 afy during a dry year and can increase to between 21,000 and 25,000 afy if SWP deliveries are reduced for two consecutive dry years and between 21,000 and 35,000 afy if SWP deliveries are reduced for three consecutive dry years. Such pumping would be followed by periods of reduced (average-year) pumping, at rates between 7,500 and 15,000 afy, to further enhance the effectiveness of natural recharge processes that would recover water levels and groundwater storage volumes after the higher pumping during dry years.

c. Does Landmark Village rely on State Water Project supplies?

No. As indicated above, Landmark Village will use local groundwater and recycled water from local water reclamation plants. However, for the other portions of the Santa Clarita Valley that rely, at least in part, on SWP supplies, the reliability of that water varies depending upon several factors. The primary factors affecting SWP deliveries are the availability of SWP supplies and the SWP Contractors' demands for this water. Climatic conditions and other factors can significantly alter and reduce the availability of SWP water in any year. The amount of water the Department of Water Resources (DWR) determines is available and allocates for delivery in a given year is based on that year's hydrologic conditions, the amount of water in storage in the SWP system, current regulatory and operational constraints, and the SWP Contractors' requests for SWP supplies.

CLWA takes delivery of its SWP water at Castaic Lake, a terminal reservoir of the West Branch. From Castaic Lake, CLWA delivers its SWP supplies to the local retail water purveyors through an extensive

transmission pipeline system. CLWA is one of 29 water agencies (commonly referred to as "SWP Contractors"), with a long-term SWP water supply contract with DWR. Each SWP contractor's SWP water supply contract contains a "Table A," which lists the maximum amount of water a contractor may request each year throughout the life of the contract. The maximum Table A amounts of all SWP Contractors now totals about 4.17 million af. Currently, CLWA's annual Table A Amount is 95,200 acre-feet (af).[2,3]

While Table A identifies the maximum annual amount of water an SWP contractor may request, the amount of SWP water actually available and allocated to SWP Contractors each year is dependent upon the factors described above and can vary significantly from year-to-year. The availability of SWP supplies to CLWA and the other SWP Contractors is generally less than their full Table A Amounts in many years and can be significantly less in dry years.

In an effort to assess the impacts of these varying conditions on SWP supply reliability, DWR issued its Final *State Water Project Delivery Reliability Report* in April 2006 (See **Appendix 4.10**). The report assists SWP Contractors in assessing the reliability of the SWP component of their overall supplies. Applying DWR's computer-based reliability projections to CLWA's maximum Table A Amount yields the following amounts of SWP water availability:

Projected CLWA Table A Amounts Available

Table A Amount	CLWA SWP Water (acre-feet per year)
Total Contractual Amount	95,200
Available in Average Year (71 to 77%)	69,592 to 73,304
Available in Dry Year (32 to 33%)	30,646 to 31,416
Available in Critical Dry Year (4 to 5%)	3,808 to 4,760

d. What is the quality of the Newhall Ranch water?

The quality of the groundwater available from the Alluvial aquifer near the Landmark Village project site has been tested. Results from laboratory testing conducted for Valencia Water Company wells expected

2 CLWA's original SWP water supply contract with DWR was amended in 1966 for a maximum annual Table A Amount of 41,500 af. In 1991, CLWA purchased 12,700 af of annual Table A Amount from a Kern County water district, and in 1999 purchased an additional 41,000 af of annual Table A Amount from another Kern County water district, for a current total annual Table A Amount of 95,200 af.

3 See, **Section 5c** of this EIR.

to serve the Landmark Village project site are provided in **Appendix 4.10** of this EIR. The wells expected to be used are approved by the State Department of Health Services (DHS) and are located just northeast of the Newhall Ranch Specific Plan site in the Valencia Commerce Center. Laboratory testing indicates that all constituents tested were at acceptable levels for drinking water under Title 22. Tests conducted for perchlorate indicated "non-detect," meaning no perchlorate was detected. Groundwater monitoring in Alluvial aquifer wells has shown both chloride and nitrate concentrations to be below (better than) the Basin Plan groundwater objectives. The Basin Plan includes groundwater quality objectives for various constituents. These objectives are designed to protect groundwater for municipal drinking water purposes. As to the potential affect that water disinfection would have on the quality of water found in the Santa Clara River and local groundwater supplies, Valencia Water Company disinfects its groundwater supply with calcium hypochlorite (65 percent available chlorine) to an average dosage of not more than 0.5 mg/L. Valencia indicates that the use of calcium hypochlorite to disinfect groundwater would slightly increase the level of chloride found in groundwater and would still be far below the secondary maximum contaminant level (MCL) for chloride of 250 mg/L. Methyl-Tertiary Butyl Ether (MTBE) has been a concern for the past several years, and on May 17, 2000, DHS adopted a primary MCL for MTBE of 0.013 mg/L. CLWA and the local water purveyors have been testing for MTBE since 1997 and, to date, have not detected it in any of the production wells.

Total Dissolved Solids (TDS) are a measure of the dissolved cations and anions, primarily inorganic salts (calcium, magnesium, potassium, sodium, chlorides, and sulfates). High TDS levels can impair agricultural, municipal supply, and groundwater recharge beneficial uses. Results from laboratory testing conducted for the Valencia Water Company wells show that TDS levels range from 890 to 900 milligrams per liter (mg/l), which meets all water quality standards for drinking water, including the secondary standards for TDS.

e. What is the likelihood of perchlorate contamination of the Landmark Village water sources?

Valencia Water Company investigated the future risk of perchlorate contamination on its new wells. In summary, the approach used to investigate the potential capture of perchlorate-impacted groundwater by the new wells involved three sequential steps: identification of local and regional groundwater flow patterns in the Alluvium, the aquifer in which all four wells are located; application of a single layer groundwater flow model to examine the capture zone of the four-well "well field" under planned operating conditions; and interpretation of potential capture of perchlorate via examination of the well's theoretical independent capture zone relative to the known occurrence of perchlorate in the Alluvium. The latter step was subsequently augmented by considering other factors, such as the locations and magnitude of pumping between the new wells and the known occurrence of perchlorate, which affect the

potential capture of perchlorate by the new wells. Given that the groundwater resources from the Alluvial aquifer for the Landmark Village project would be produced from wells located along Castaic Creek and over 4 miles west of the area known to be perchlorate-contaminated (i.e., the former Whittaker-Bermite facility), the groundwater supplies for this project are not considered to be at risk due to perchlorate contamination released from the former Whittaker-Bermite facility.[4]

f. Will either Landmark Village or perchlorate contamination result in overdrafting the local groundwater basin?

It has been suggested that the amount of water available from local groundwater supplies is overstated and that the effects of perchlorate contamination are not adequately analyzed in the *2005 UWMP* (See **Appendix 4.10**). This EIR contains an analysis of this issue, as does the *2005 UWMP*. An important aspect of this work was completion of the *2005 Basin Yield Report* (**Appendix 4.10**). The primary determinations made in that report are that, despite perchlorate contamination (1) both the Alluvial aquifer and the Saugus Formation are sustainable sources at the operational plan yields stated in the *2005 UWMP* over the next 25 years; (2) the yields are not overstated and will not deplete or "dry up" the groundwater basin; and (3) there is no need to reduce the yields shown in the *2005 UWMP*. Additionally, the Basin Yield Report concluded that neither the Alluvial aquifer nor the Saugus Formation is in an overdraft condition or projected to become overdrafted.

g. Was a SB 610 Water Supply Assessment prepared for the Landmark Village project, and if so, what were the findings of that assessment?

Yes. A water supply assessment was completed. As indicated in the SB 610 Water Supply Assessment for the Landmark Village Project, an adequate supply of water is available to meet the demands of the Landmark Village project in addition to existing and planned future uses in the Santa Clarita Valley (See **Appendix 4.10**). The supply available to meet the project's potable demand is the applicant's groundwater supplies from the Alluvial aquifer, which is presently used for agricultural uses. As stated above, there will be no net increase in groundwater usage due to the conversion of agricultural water to potable supply uses for the project site. The project's non-potable demand will be met by recycled water from the Newhall Ranch WRP or, alternatively, from the existing Valencia WRP, upstream from the project site. Because the applicant is utilizing its own water supplies from independent sources, the project does not result in or contribute to any significant cumulative water supply impacts in the Santa Clarita Valley.

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4 See, *Potential Capture of Perchlorate Contamination*, Valencia Water Company's Wells E14–E17, Prepared by Luhdorff and Scalmanini for the Valencia Water Company, dated April 26, 2006. This report is found in **Appendix 4.10** of this EIR.

h. Were adequate and reliable water supplies available in the Santa Clarita Valley in 2005 to serve the existing population, and if so, would the 2005 supplies have been adequate to also supply water to Landmark Village?

The answer is yes to both questions. **Table 4.10-A**, **Actual (2005) Plus Project Demand and Supply for the Santa Clarita Valley,** illustrates that in 2005 actual (not "paper water") supplies exceeded actual demand in the Santa Clarita Valley by 42,022 af. This condition was due, in part, to the fact that in 2005 the SWP Table A Amounts allocated to SWP water contractors (i.e., CLWA) by DWR was 90 percent of contracted amounts, and that CLWA was able to store 20,000 af of its Table A Amount in the Rosedale-Rio Bravo Groundwater Bank. If the proposed Landmark Village project had been constructed and occupied in 2005, the Santa Clarita Valley would still have had a water surplus of 22,022 af, while still storing 20,000 af of water in the Rosedale-Rio Bravo Groundwater Bank.

Table 4.10-A
Actual (2005) Plus Project Demand and Supply
for the Santa Clarita Valley (acre-feet per year)

		2005
Existing Demand		70,755
Other Demand (agricultural)[1]		12,786
Landmark Village Demand		1,038
	Total Demand	**84,579**
Existing Water Supply Programs:		
Local Supplies		
Alluvial aquifer		38,648
Saugus Formation		6,454
Recycled Water		438
Imported Supplies		
SWP Table A Deliveries [2]		38,001
Rosedale-Rio Bravo Water Bank[3]		20,000
Semitropic Bank Account		17,000
Flexible Storage Account[4]		6,060
	Total Existing Supplies	**126,601**
Surplus		**42,022**

Notes:

[1] *In the Santa Clarita Valley, a total of 12,786 afy is used for agricultural irrigation and other miscellaneous uses. The conversion of the Landmark Village site from agriculture to Specific Plan land uses would reduce irrigation amounts in the valley by the amount used on the Landmark Village site (i.e., 3,242 afy (12,786 – 3,242 = 9,544 afy)).*

[2] *Reflects only the amount of Table A water actually delivered to the Santa Clarita Valley. Additional SWP water was available to CLWA in 2005 that is not reflected in this table.*

[3] *In addition to the SWP amount delivered to the Santa Clarita Valley in 2005, CLWA also stored an additional 20,000 acre-feet in the Rosedale-Rio Bravo Water Bank.*

[4] *This account includes both CLWA and Ventura County flexible storage supplies available to CLWA.*

i. Do adequate and reliable water supplies exist in the Santa Clarita Valley to serve Landmark Village and the existing population during future average, dry and multiple dry years?

Yes. In average years, after adding the proposed project to existing demands, available supplies would exceed demand by over 50,000 af. In dry years, available supplies would exceed demand by approximately 44,000 af (these dry year amounts reflects water supplies that are available to purveyors in dry years. Purveyors would typically secure water from these available supplies only in amounts necessary to meet demand). The reader should again be reminded that CLWA and the local retail purveyors have emphasized developing other water supplies that are diverse and offer considerable flexibility in order to adapt to changing water supply forecasts. When sufficient SWP water is not available, the balance of the valley's demand can be met by a number of alternate supplies (termed "Planned Water Supply Programs") provided by CLWA and the local retail purveyors.

j. Will adequate and reliable water supplies exist in the valley to serve Landmark Village, plus existing and future population during average, dry and multiple dry years?

Yes. In order to analyze the cumulative water impacts of Landmark Village in combination with other expected future growth, the amount and location of growth expected to occur in addition to that of the project was predicted. Cumulative development scenarios are analyzed for this water analysis in order to meet CEQA requirements as well as the requirements of Senate Bill 610. The cumulative scenarios analyzed in this EIR are referred to as the "SB 610 Water Supply Assessment Scenario," the "DMS Build-Out Scenario," and the "Santa Clarita Valley 2030 Build-Out Scenario." Under both scenarios, available supplies would exceed demand in average/normal years, a single-dry year, and multiple dry years through 2030. Therefore, no cumulatively significant water availability impacts would occur due to build out of the Landmark Village project.

k. Does Landmark Village cause significant cumulative impacts on water supplies in the Santa Clarita Valley?

Because available cumulative water supplies exceed demand, even assuming a "worst case" projection of future growth, cumulative development (including the proposed Landmark Village project) would not result in significant unavoidable cumulative impacts on Santa Clarita Valley water resources.

2. INTRODUCTION

a. Relationship of Project to Newhall Ranch Specific Plan Program EIR

Section 2.5 of the Newhall Ranch Revised Analysis, Volume VIII (May 2003), identified and analyzed the existing conditions, potential impacts, and mitigation measures associated with supplying water to the entire Newhall Ranch Specific Plan (See **Appendix 4.10**). This prior analysis found that an adequate supply of water exists to meet the demands of both the Specific Plan and cumulative development without creating any significant water-related impacts. Based on the prior analysis, and the adopted Specific Plan mitigation measures, all water-related impacts were found to be less than significant. The Specific Plan was also found to be consistent with the County's General Plan Development Monitoring System (DMS) requirements.

This project-level EIR is tiering from the previously certified Newhall Ranch Specific Plan Program EIR and Revised Additional Analysis. This section discusses, at a project-level, the Landmark Village project's existing conditions relative to water supplies and demand, the project's impacts on available water supplies, the adopted mitigation measures from the Newhall Ranch Specific Plan Revised Additional Analysis, Volume VIII (May 2003), and any additional mitigation measures recommended by this EIR for the Landmark Village project.

b. Summary of the Newhall Ranch Specific Plan Program EIR Findings

The Newhall Ranch Revised Additional Analysis, Volume VIII (May 2003), identified potentially significant impacts to water resources resulting from implementation of the Newhall Ranch Specific Plan, in conjunction with cumulative development in the Santa Clarita Valley. In response to identified potential significant impacts, the County adopted 22 water-related mitigation measures.[5] Based on the environmental analysis and record, the Board of Supervisors found that adoption of the mitigation measures would reduce potentially significant water-related impacts to less than significant levels.

3. EXISTING CONDITIONS

Water supply and demand in the Santa Clarita Valley is affected by existing conditions, including local climatic conditions, demographics in the region, existing topography and regional area geology and hydrology, surface water flows, effects of drought cycles both locally and regionally, and effects of urbanization in the valley. These existing conditions are thoroughly addressed in Section 2.5 of the

5 See, Mitigation Measures 4.11-1 through 4.11-22 in the adopted Mitigation Monitoring Plan for the Specific Plan (May 2003).

Newhall Ranch Revised Additional Analysis, Volume VIII (May 2003). In addition, these local conditions are evaluated in the following documents:

(a) Water Supply Contract Between the State of California Department of Water Resources and CLWA, 1963 (plus amendments, including the "Monterey Amendment," 1995, and Amendment No. 18, 1999, the transfer of 41,000 acre-feet from Kern County Water Agency to CLWA);[6]

(b) Water Management Program, Valencia Water Company, 2001;

(c) 2002 Semitropic Groundwater Storage Program and Point of Delivery Agreement Among the Department of Water Resources of the State of California, CLWA and Kern County Water Agency;[7]

(d) 2002 Recycled Water Master Plan prepared by Kennedy/Jenks Consultants for CLWA;

(e) 2001 Update Report, Hydrogeologic Conditions in the Alluvial and Saugus Formation Aquifer Systems, July 2002 (*2002 Slade Report*);

(f) Nickel Water contract and environmental documentation (*see*, Newhall Ranch Revised Draft Additional Analysis, Volume II, November 2002, Appendix 2.5(b), (c));

(g) California's Groundwater Bulletin 118, Santa Clara River Groundwater Basin, Santa Clara River Valley East Subbasin (*2003 Update*);

(h) CLWA Capital Improvement Program, prepared by Kennedy/Jenks Consultants, 2005;

(i) Newhall Ranch Revised Additional Analysis, Volume VIII (Final Revised Text, Figures and Tables), dated May 2003;

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6 CLWA's contract rights to SWP water total 95,200 afy, including a water transfer of 41,000 afy approved in 1999 from Wheeler Ridge-Maricopa Water Storage District, a member unit of the Kern County Water Agency. CLWA's EIR prepared in connection with the 41,000-af water transfer was challenged in *Friends of the Santa Clara River v. Castaic Lake Water Agency* (Los Angeles Superior Court, Case No. PC018110). On appeal, the Court of Appeal, Second District, held that since the 41,000 af EIR tiered off the Monterey Agreement EIR that was later decertified, CLWA would also have to decertify its EIR as well and prepare a new EIR (*Friends v. Castaic Lake Water Agency* (2002) 95 Cal. App 4th 1373). CLWA has not been enjoined from using any water that is part of the 41,000 afy transfer. CLWA has since prepared and circulated a new draft EIR for the transfer. CLWA approved and certified the new EIR on December 22, 2004. Two challenges to the new EIR were filed on January 24, 2005, in the Ventura County Superior Court, consolidated, and transferred to Los Angeles County Superior Court (*Planning and Conservation League v. CLWA, et al.*, Case No. BX 0987724). The new certified EIR remains valid unless affected by a future judgment or order of the court.

7 Due to availability of SWP water during 2002, CLWA entered into a groundwater banking agreement in 2002. Pursuant to that agreement, 24,000 acre-feet of SWP water, contracted by CLWA, was stored within the Semitropic Groundwater Storage Program in Kern County so that CLWA may withdraw the water in future years of shortage. The Negative Declaration prepared by CLWA was challenged in *California Water Network v. Castaic Lake Water Agency* (Ventura County Superior Court Case No. CIV 215327). The trial court upheld the adequacy of the Negative Declaration. The Second District Court of Appeal, Sixth Division, affirmed the trial court's decision.

(j) Groundwater Management Plan, Santa Clara River Valley Groundwater Basin, East Subbasin, prepared by Luhdorff & Scalmanini Consulting Engineers, December 2003;

(k) 2005 Santa Clarita Valley Water Report, April 2006 (*2005 Water Report*);

(l) 2004 Santa Clarita Valley Water Report, May 2005 (*2004 Water Report*);

(m) Regional Groundwater Flow Model for the Santa Clarita Valley: Model Development and Calibration, prepared by CH2MHill, April 2004;

(n) Environmental Impact Report - Supplemental Water Project Transfer of 41,000 Acre-Feet of State Water Project Table A Amount (SCH No. 1998041127), prepared by Science Applications International Corporation for CLWA, June 2004;

(o) Analysis of Perchlorate Containment in Groundwater Near the Whittaker-Bermite Property, Santa Clarita, California, prepared by CH2MHill, December 2004;

(p) Analysis of Near-Term Groundwater Capture Areas for Production Wells Located Near the Whittaker-Bermite Property (Santa Clarita, California), prepared by CH2MHill, December 21, 2004;

(q) 2005 Urban Water Management Plan (*2005 UWMP*);

(r) Impact and Response to Perchlorate Contamination, Valencia Water Company Well Q2, prepared by Luhdorff & Scalmanini Consulting Engineers, April 2005 (*Q2 Report*);

(s) Analysis of Groundwater Basin Yield, Upper Santa Clara River Groundwater Basin, East Subbasin, Los Angeles County, California, August 2005 (*2005 Basin Yield Report*);

(t) The State Water Project Delivery Reliability Report, prepared by the California Department of Water Resources, November 2005;

(u) *Interim Remedial Action Plan*, prepared by Kennedy/Jenks Consultants, December 2005 (*IRAP*); and

(v) *Potential Capture of Perchlorate Contamination Valencia Water Company's Wells E14-E17,* prepared by Luhdorff and Scalmanini, Consulting Engineers, April 2006 ("L&S 2006").

Because local existing conditions affect water supply and demand in the valley, including the Landmark Village project site and surrounding areas, please refer to the above-referenced documents for pertinent water supply assessment information. The above-referenced documents are provided in **Appendix 4.10** of this EIR.

4. WATER AGENCIES OF THE SANTA CLARITA VALLEY

a. Castaic Lake Water Agency

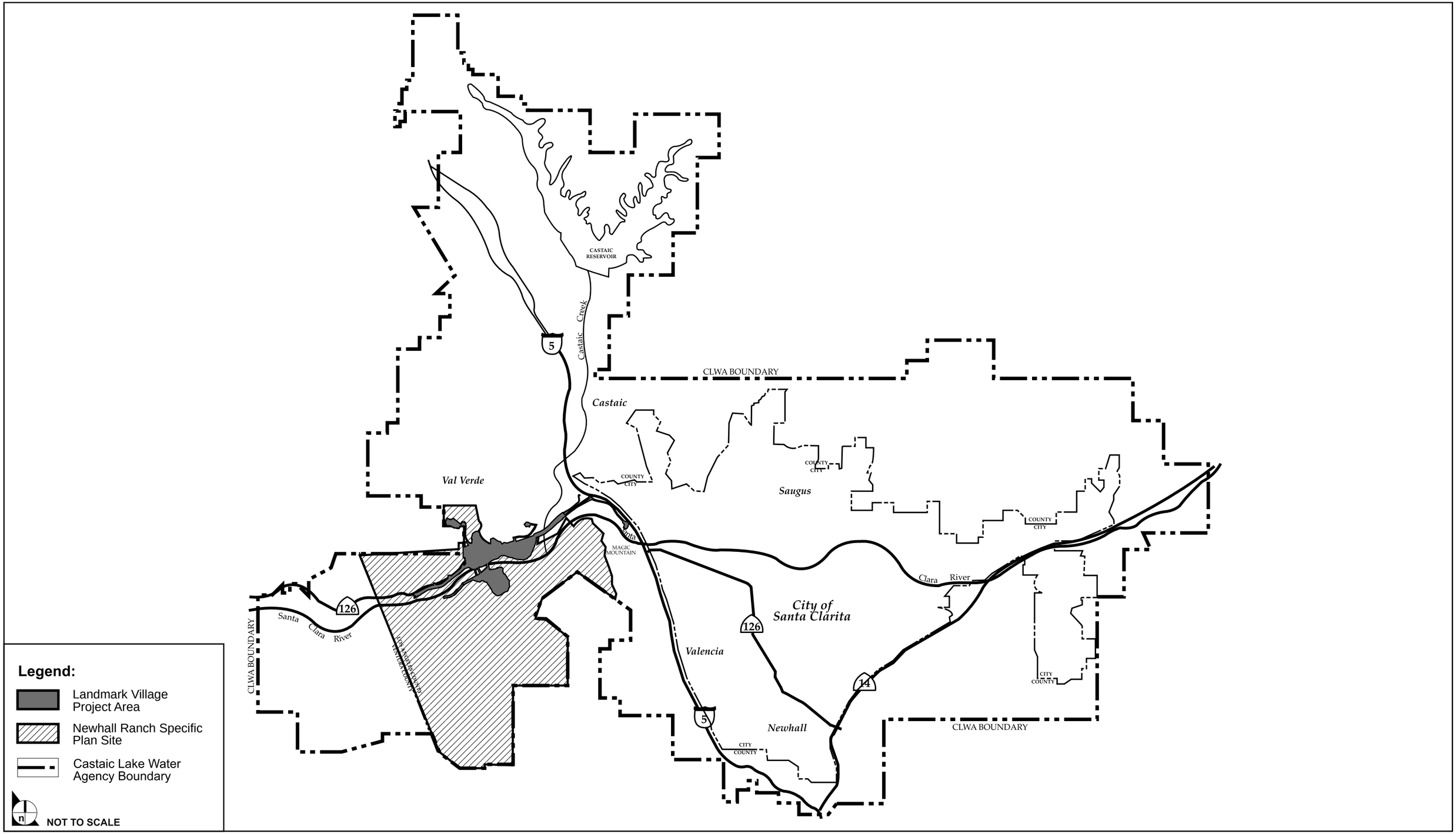
CLWA, a wholesale public water agency, was formed in 1962 through passage of the "Castaic Lake Water Agency Law."[8] At that time, CLWA's purpose was contracting with State of California, through DWR, to acquire and distribute SWP water to its retail water purveyors. The retail purveyors are SCWD, Los Angeles County Waterworks District No. 36, NCWD and Valencia Water Company (VWC).

Since 1962, subsequent legislation broadened CLWA's purpose, which now includes, but is not limited to, the following: (a) Acquire water from the state; (b) Distribute such water wholesale through a transmission system to be acquired or constructed by CLWA; (c) Reclaim (recycle) water; (d) Sell water at retail within certain boundaries; and (e) Exercise other related powers.

The CLWA service area comprises approximately 195 square miles (124,800 acres) in Los Angeles and Ventura counties. CLWA serves the incorporated and unincorporated areas in, or adjacent to, the Santa Clarita Valley. Most of this area, including the incorporated cities, is within the geographic boundaries of Los Angeles County, but it also extends into a small portion of eastern Ventura County. The service area includes largely urban areas, such as the City of Santa Clarita, other smaller communities, and rural areas. The West Branch of the California Aqueduct terminates at Castaic Lake, in the northern portion of the service area. **Figure 4.10-1, Castaic Lake Water Agency Service Area**, depicts the CLWA service area.

Adequate planning for, and the procurement of, a reliable water supply is a fundamental function of the CLWA and the local retail purveyors. CLWA obtains its water supply for wholesale purposes principally from the SWP and has a water supply contract with DWR for 95,200 af of SWP Table A Amount. "Table A" is a term used in SWP water supply contracts. The "Table A Amount" is the annual maximum amount of water to which a SWP Contractor has a contract right to request delivery, and is specified in Table A of each SWP Contractor's water supply contract. The amount of water actually available for delivery in any year may be an amount less than the SWP Contractor's Table A Amount, depending upon hydrologic conditions, the amount of water in storage, the operational constraints and requirements imposed by regulatory agencies to meet environmental water needs, the amount of water requested by other SWP Contractors, climatic conditions, and other factors.

8 See, California Water Code Appendix Section 103-1, 103-15.



SOURCE: PSOMAS and Associates, January 1999, Impact Sciences, Inc. – February 2004

FIGURE **4.10-1**

Castaic Lake Water Agency Service Area

32-92•05/06

CLWA's original SWP water supply contract with DWR was amended in 1966 for a maximum annual Table A amount of 41,500 af. In 1991, CLWA purchased and additional 12,700 af of annual Table A Amount from a Kern County water district. In March 1999, CLWA purchased another 41,000 af of annual Table A Amount from the Wheeler Ridge-Maricopa Water Storage District by way of an amendment to its water supply contract. The amended water supply contract between CLWA and DWR is found in **Appendix 4.10** of this EIR.[9]

CLWA and the local retail purveyors have evaluated the long-term water needs (water demand) within its service area based on applicable county and city plans and has compared these needs against existing and potential water supplies. CLWA prepared the Capital Improvements Program in 1988, and the *2005 UWMP* was recently completed to address water supply and demand forecasts for the CLWA service area.[10] Although information in the *2005 UWMP* was considered, this EIR does not rely on that information, and an independent analysis and determination of water-related impacts was carried out in this EIR for the proposed project.

b. Retail Water Purveyors

Four retail water purveyors provide water service to most residents of the Santa Clarita Valley. A description of the service areas of the local retail purveyors is provided below.

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9 CLWA prepared an EIR to address the environmental consequences of the 41,000-af transfer agreement. The EIR for the 41,000-af transfer agreement was the subject of litigation in Los Angeles County Superior Court (*Friends of the Santa Clara River v. Castaic Lake Water Agency* (Los Angeles County Superior Court, Case No. BS056954). CLWA prevailed in the litigation at the trial court; however, the project opponent (Friends of the Santa Clara River) filed an appeal. In January 2002, the Court of Appeal issued a decision ordering the trial court to decertify the EIR for the 41,000 af transfer agreement on the grounds that it had tiered from another EIR that had been subsequently decertified in other litigation. In doing so, however, the Court of Appeal also examined all of the petitioner's other arguments, found them to be without merit, and held that, if the tiering problem had not arisen, it would have affirmed the earlier trial court judgment upholding the EIR.

As discussed in further detail in a later section of this EIR, the Court of Appeal did not invalidate any portion of the completed 41,000 af transfer agreement. Instead, the Court directed the trial court to vacate certification of the EIR, and to retain jurisdiction until CLWA corrected the tiering technicality by preparing a new EIR. In September 2002, the Los Angeles Superior Court refused to prohibit CLWA from using the 41,000 af of Table A water while a new EIR was being prepared. The trial court decision on remand was appealed by Friends of the Santa Clara River to the appellate court in January 2003. In December 2003, the appellate court denied any relief to Friends and affirmed the trial court's ruling.

CLWA's revised EIR was released for public review and comment in April 2004. It was subsequently certified by the CLWA Board of Directors on December 23, 2004. On January 24, 2005, separate lawsuits challenging the EIR for this same project were filed by California Water Impact Network and Planning and Conservation League in the Ventura County Superior Court. These cases have been consolidated and transferred to Los Angeles County Superior Court and are still pending.

10 On February 25, 2006, a lawsuit challenging the *2005 UWMP* was filed by California Water Impact Network and Friends of the Santa Clara River alleging that the plan violated the UWMP Act because it overstates availability of local groundwater and SWP supplies and it will allegedly facilitate unsustainable urban development resulting in harm to the Santa Clara River and its habitat. CLWA and other named parties oppose the challenge, which is being litigated in the Los Angeles County Superior Court.

The Los Angeles County Waterworks District #36 service area encompasses approximately 7,635 acres and includes the Hasley Canyon area and the unincorporated community of Val Verde. The District obtains its water supply from CLWA and from local groundwater.

The Newhall County Water District (NCWD) service area includes portions of the City of Santa Clarita and unincorporated portions of Los Angeles County in the communities of Newhall, Canyon Country, Saugus and Castaic. The District supplies water from local groundwater and CLWA imported water.

CLWA Santa Clarita Water Division (SCWD) service area includes portions of the City of Santa Clarita and unincorporated portions of Los Angeles County in the communities of Canyon Country, Newhall and Saugus. SCWD supplies water from local groundwater and CLWA imported water.

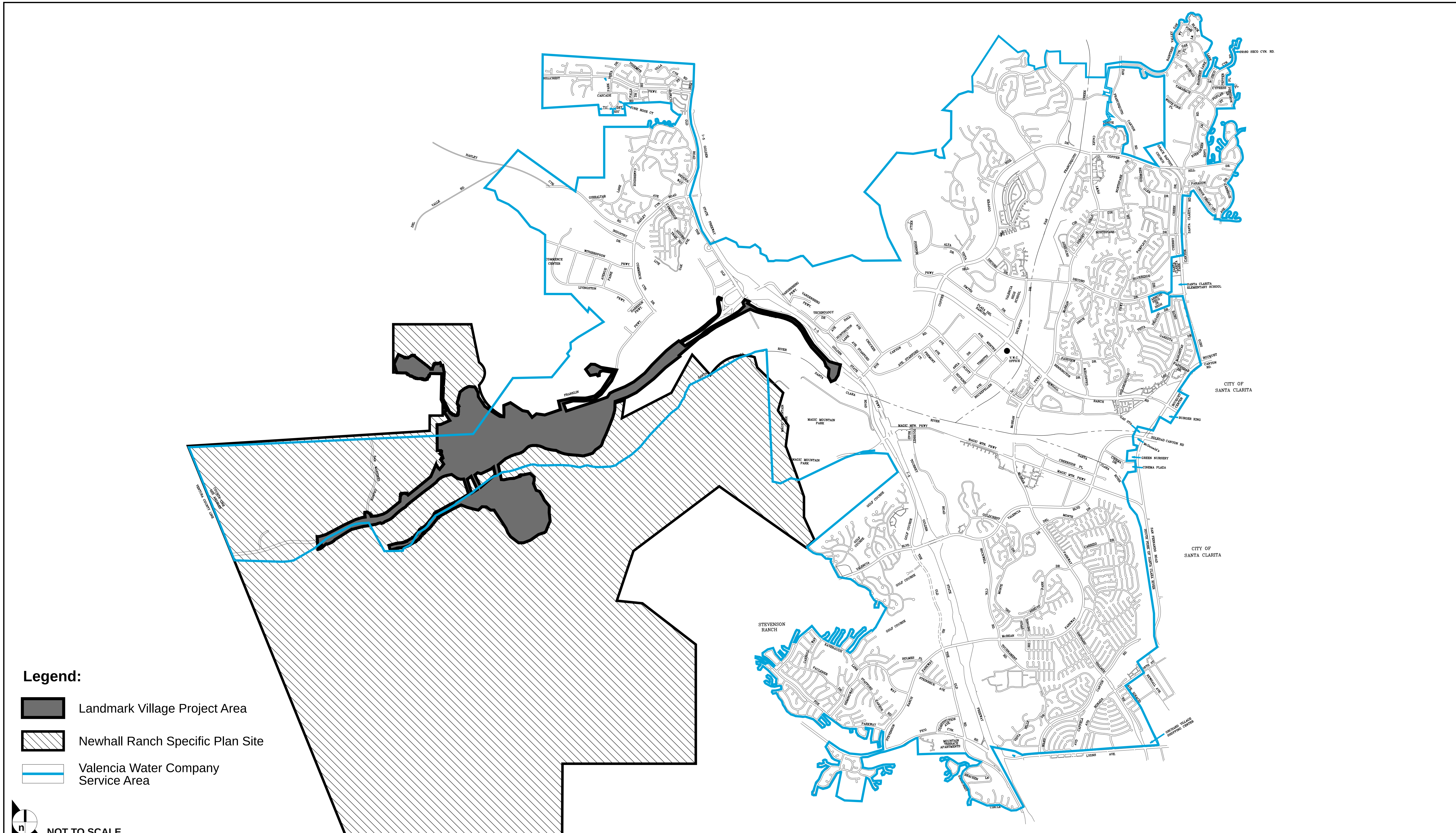
The Valencia Water Company service area includes a portion of the City of Santa Clarita and unincorporated portions of Los Angeles County in the communities of Castaic, Stevenson Ranch and Valencia. Valencia Water Company supplies water from local groundwater, CLWA imported water and recycled water. Valencia is an investor-owned water utility regulated by the California Public Utilities Commission (PUC), and its service area currently includes portions of the Newhall Ranch Specific Plan site, including the Landmark Village project site. As a result, Valencia is the retail water purveyor for the Landmark Village project. **Figure 4.10-2, Valencia Water Company Service Area**, illustrates the CLWA and Valencia Water Company service area, which includes portions of the Newhall Ranch Specific Plan site and the Landmark Village project site.

As of 2005, the retail water purveyors served approximately 66,300 connections in the Santa Clarita Valley. The specific breakdown by purveyor is provided in **Table 4.10-1, Retail Water Service Connections**.

Table 4.10-1
Retail Water Service Connections

Retail Water Purveyor	Connections
CLWA Santa Clarita Water Division (SCWD)	26,979
Los Angeles County Waterworks District #36	1,320
Newhall County Water District (NCWD)	9,204
Valencia Water Company	28,800
Total	**66,303**

Source: 2005 Water Report, *April 2006 (See **Appendix 4.10**).*



SOURCE: Valencia Water Company – February 2006

FIGURE **4.10-2**

Valencia Water Company Service Area

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5. SANTA CLARITA VALLEY WATER SUPPLIES – HISTORIC AND EXISTING USES

The Newhall Ranch Revised Additional Analysis, Section 2.5 (May 2003), provides important water demand and supply information for the Santa Clarita Valley, including the Newhall Ranch Specific Plan and the Landmark Village project site (See **Appendix 4.10**). The *2005 Water Report* and *2005 UWMP* also contain useful local and regional water demand, supply and reliability planning information, particularly in the context of the perchlorate contamination detected in municipal-supply wells in the local groundwater basin (see, **Appendix 4.10**). In addition, the *2005 Basin Yield Report* confirms that the CLWA/purveyor groundwater operating plan for the local groundwater basin in Santa Clarita Valley will not cause detrimental short or long-term effects to the groundwater and surface water resources in the valley and, therefore, the local groundwater basin is sustainable (see, **Appendix 4.10**). Valencia Water Company's *Water Supply Assessment* (WSA) for the proposed project also provides useful information to the County of Los Angeles for its consideration in making a determination on whether there are sufficient water supplies available to serve the Landmark Village project, in addition to existing and planned future uses in the Santa Clarita Valley (See **Appendix 4.10**). Valencia Water Company prepared the WSA for the Landmark Village project, because it is the purveyor that will provide water service to the proposed project.

a. Groundwater Supplies

This section focuses on the available local groundwater supplies in the Santa Clarita Valley, including a summary of the adopted Groundwater Management Plan for the local basin.

(1) Santa Clara River Valley Groundwater Basin - East Subbasin

The project area lies within the groundwater basin identified in DWR Bulletin 118 (2003 Update) as the Santa Clara River Valley Groundwater Basin, East Subbasin (Basin) (See **Appendix 4.10**). The Basin is comprised of two aquifer systems, the Alluvium and the Saugus Formation. The Alluvium (also referred to as the Alluvial aquifer) generally underlies the Santa Clara River and its several tributaries, and the Saugus Formation underlies practically the entire Upper Santa Clara River area. There are also some scattered outcrops of terrace deposits in the Basin that likely contain limited amounts of groundwater. Since these deposits are located in limited areas situated at elevations above the regional water table and are also of limited thickness, they are of no practical significance as aquifers and, consequently, have not been developed for any significant water supply. **Figure 4.10-3, Santa Clara River Valley East Groundwater Basin – East Subbasin** illustrates the mapped extent of the Santa Clara River Valley East

Subbasin, which approximately coincides with the outer extent of the Alluvium and Saugus Formation. The CLWA service area and the location of the two existing water reclamation plants in the valley also are shown on **Figure 4.10-3**.

(2) Adopted Groundwater Management Plan

In 2001, as part of legislation authorizing CLWA to provide retail water service to individual municipal customers, Assembly Bill (AB) 134 included a requirement that CLWA prepare a groundwater management plan in accordance with the provisions of Water Code Section 10753.

CLWA adopted the Groundwater Management Plan (GWMP) on December 10, 2003.[11] The GWMP contains four management objectives, or goals, for the Basin, including (1) development of an integrated surface water, groundwater and recycled water supply to meet existing and projected demands for municipal, agricultural and other water uses; (2) assessment of Basin conditions to determine a range of operational yield values that use local groundwater conjunctively with supplemental SWP supplies and recycled water to avoid groundwater overdraft; (3) preservation of groundwater quality, and active characterization and resolution of groundwater contamination problems, including perchlorate; and (4) preservation of interrelated surface water resources, which includes managing groundwater in a manner that does not adversely impact surface and groundwater discharges or quality to downstream basins.

Prior to preparation and adoption of the GWMP, a local Memorandum of Understanding (MOU) process among CLWA, the purveyors, and United Water Conservation District (UWCD) in neighboring Ventura County had produced the beginning of local groundwater management, now embodied in the GWMP. In 2001, those agencies prepared and executed the MOU (See **Appendix 4.10**). The MOU is a collaborative and integrated approach to several of the aspects of water resource management included in the GWMP. UWCD manages surface water and groundwater resources in seven groundwater basins, all located in Ventura County, downstream of the Basin. As a result of the MOU, the cooperating agencies have undertaken the following measures: (1) Integrated their database management efforts; (2) Developed and utilized a numerical groundwater flow model for analysis of groundwater basin yield and containment of groundwater contamination; and (3) Continued to monitor and report on the status of Basin conditions, as well as on geologic and hydrologic aspects of the overall stream-aquifer system.

The adopted GWMP includes 14 elements intended to accomplish the Basin management objectives listed above. In summary, the plan elements include:

- monitoring of groundwater levels, quality, production and subsidence;

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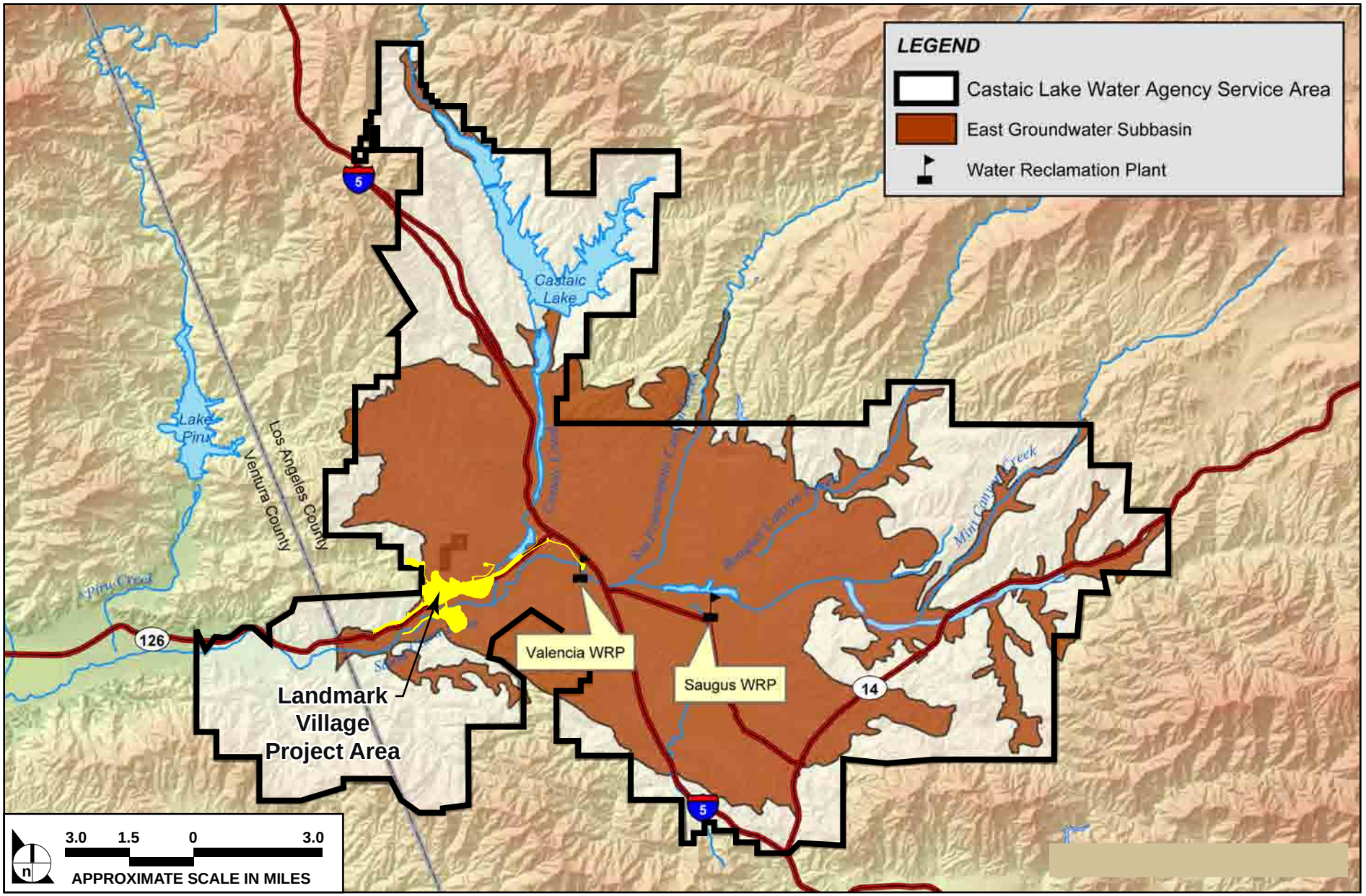
11 CLWA's Groundwater Management Plan, adopted December 10, 2003, is found in **Appendix 4.10** of this EIR.



SOURCE: Luhdorff & Scalmanini Consulting Engineers – January 2006

FIGURE **4.10-3**

Santa Clara River Valley East Groundwater Basin – East Subbasin

- monitoring and management of surface water flows and quality;
- determination of Basin yield and avoidance of overdraft;
- development of regular and dry-year emergency water supply;
- continuation of conjunctive use operations;
- long-term salinity management;
- integration of recycled water;
- identification and mitigation of soil and groundwater contamination, including involvement with other local agencies in investigation, cleanup, and closure;
- development and continuation of local, state and federal agency relationships;
- groundwater management reports;
- continuation of public education and water conservation programs;
- identification and management of recharge areas and wellhead protection areas;
- identification of well construction, abandonment, and destruction policies; and
- provisions to update the groundwater management plan.

Work on a number of the GWMP elements had been ongoing for some time prior to adoption of the GWMP. This work continues on an on-going basis. An important aspect of this work was completion of the *2005 Basin Yield Report* (**Appendix 4.10**). The primary determinations made in that report are that (1) both the Alluvial aquifer and the Saugus Formation are sustainable sources at the operational plan yields stated in the *2005 UWMP* over the next 25 years (see **Appendix 4.10**); (2) the yields are not overstated and will not deplete or "dry up" the groundwater basin; and (3) there is no need to reduce the yields shown in the *2005 UWMP*. Additionally, the Basin Yield Report concluded that neither the Alluvial aquifer nor the Saugus Formation is in an overdraft condition, or projected to become overdrafted.

(3) Available Groundwater Supplies

Groundwater Operating Plan – The groundwater component of overall water supply in the Santa Clarita Valley derives from a groundwater operating plan developed by CLWA and the local retail purveyors over the past 20 years to meet water requirements (municipal, agricultural, small domestic), while maintaining the Basin in a sustainable condition (i.e., no long-term depletion of groundwater or interrelated surface water). This operating plan also addresses groundwater contamination issues in the

Basin, all consistent with both the GWMP and the MOU described above (see **Appendix 4.10**). This operating plan is based on the concept that pumping can vary from year-to-year to allow increased groundwater use in dry periods and increased recharge during wet periods, and to collectively assure that the Basin is adequately replenished through various wet/dry cycles. As described in the GWMP and the MOU, the operating yield concept has been quantified as ranges of annual pumping volumes (see **Appendix 4.10**).

The on-going work of the MOU has produced two important reports. The first report, dated April 2004, documents the development and calibration of the groundwater flow model for the Santa Clarita Valley.[12] The second report, dated August 2005, presents the modeling analysis of the CLWA/retail water purveyor groundwater operating plan for the valley, and concludes that the plan will not cause detrimental short or long-term effects to the groundwater and surface water resources in the valley and, therefore, the plan is a reliable, sustainable component of water supply for the valley.[13] The analysis of sustainability for groundwater and interrelated surface water is described further in Appendix C to the *2005 UWMP* (see, **Appendix 4.10)**.

The groundwater operating plan, summarized in **Table 4.10-2, Groundwater Operating Plan for the Santa Clarita Valley**, is further described below. The operating plan addresses both the Alluvium and Saugus Formation.

Alluvium – As applied to the Newhall Ranch Specific Plan, the applicant would meet all of the Landmark Village project's water demands by using its groundwater produced from the Alluvial aquifer in Los Angeles County, which is presently committed to agricultural uses. The amount of water historically and presently available from this source is approximately 7,038 afy. The project's potable water demand is estimated to be 702 afy. The water from the Alluvial aquifer presently used for agriculture would be used to meet all of the project's potable water needs resulting in no net increase in groundwater use.

As stated in the 2005 Water Report and the *2005 UWMP*, the operating plan for the Alluvial aquifer involves pumping from the Alluvial aquifer in a given year, based on local hydrologic conditions in the eastern Santa Clara River watershed. Pumping ranges between 30,000 and 40,000 afy during

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12 See, *Regional Groundwater Flow Model for the Santa Clarita Valley: Model Development and Calibration*, prepared for the Upper Basin Water Purveyors by CH2MHill, April 2004. This report was updated by CH2MHill in a report entitled, *Calibration Update of the Regional Groundwater Flow Model for the Santa Clarita Valley, Santa Clarita, California*, August 2005. Copies of these two reports are available for public review and inspection in **Appendix 4.10** of this EIR.

13 See, *Analysis of Groundwater Basin Yield, Upper Santa Clara River Groundwater Basin, East Subbasin, Los Angeles County, California*, prepared by CH2MHill in cooperation with Luhdorff & Scalmanini Consulting Engineers, August 2005. This report is available for public review and inspection in **Appendix 4.10** of this EIR.

normal/average and above-normal rainfall years. However, due to hydrogeologic constraints in the eastern part of the Basin, pumping is reduced to between 30,000 and 35,000 afy during locally dry years.

Saugus Formation – The Saugus Formation is not identified as a source of supply for the Newhall Ranch Specific Plan, including the Landmark Village project. However, the operating plan for Saugus pumping is presented as additional information regarding the groundwater basin.

As stated in the 2005 Water Report and the *2005 UWMP*, pumping from the Saugus Formation in a given year is tied directly to the availability of other water supplies, particularly from the SWP. During average year conditions within the SWP system, Saugus pumping ranges between 7,500 and 15,000 afy. Planned dry-year pumping from the Saugus Formation ranges between 15,000 and 25,000 afy during a drought year and can increase to between 21,000 and 25,000 afy if SWP deliveries are reduced for two consecutive years and between 21,000 and 35,000 afy if SWP deliveries are reduced for three consecutive years. Such pumping would be followed by periods of reduced (average-year) pumping, at rates between 7,500 and 15,000 afy, to further enhance the effectiveness of natural recharge processes that would recover water levels and groundwater storage volumes after the higher pumping during dry years.

Table 4.10-2
Groundwater Operating Plan for the Santa Clarita Valley

Aquifer	Groundwater Production (af)			
	Normal Years	Dry Year 1	Dry Year 2	Dry Year 3
Alluvium	30,000 to 40,000	30,000 to 35,000	30,000 to 35,000	30,000 to 35,000
Saugus	7,500 to 15,000	15,000 to 25,000	21,000 to 25,000	21,000 to 35,000
Total	**37,500 to 55,000**	**45,000 to 60,000**	**51,000 to 60,000**	**51,000 to 70,000**

Source: 2005 Water Report *(April 2006) and* 2005 UWMP (see **Appendix 4.10**).

For reference to the groundwater operating plan historical and projected groundwater pumping by retail water purveyor, please refer to **Table 4.10-3, Historical Groundwater Production by the Retail Water Purveyors**, and **Table 4.10-4, Projected Groundwater Production (Normal Year)**.

Table 4.10-3
Historical Groundwater Production by the Retail Water Purveyors

Basin Name	Groundwater Pumped (af)[1]				
	2000	**2001**	**2002**	**2003**	**2004**
Santa Clara River Valley East Subbasin					
CLWA Santa Clarita Water Division					
- Alluvium	11,529	9,896	9,513	6,424	7,146
- Saugus Formation	0	0	0	0	0
LA County Waterworks District #36					
- Alluvium	0	0	0	0	380
- Saugus Formation	0	0	0	0	0
Newhall County Water District					
- Alluvium	1,508	1,641	981	1,266	1,582
- Saugus Formation	2,186	2,432	3,395	2,513	3,739
Valencia Water Company					
- Alluvium	12,179	10,518	11,603	11,707	9,862
- Saugus Formation	1,007	835	965	1,068	1,962
Total	***28,409***	***25,322***	***26,457***	***22,978***	***24,671***
- Alluvium	25,216	22,055	22,097	19,397	18,970
- Saugus Formation	3,193	3,267	4,360	3,581	5,701
% of Total Municipal Water Supply	**47%**	**42%**	**39%**	**34%**	**34%**

Notes:

[1] *Pumping for municipal and industrial uses only. Does not include pumping for agricultural and miscellaneous uses.*

Source: 2005 UWMP (see **Appendix 4.10**).

Table 4.10-4
Projected Groundwater Production (Normal Year)

Basin Name	Range of Groundwater Pumping (af)[1,2,3]				
	2010	2015	2020	2025	2030
Santa Clara River Valley East Subbasin					
CLWA Santa Clarita Water Division					
- Alluvium	6,000–14,000	6,000–14,000	6,000–14,000	6,000–14,000	6,000–14,000
- Saugus Formation	3,000	3,000	3,000	3,000	3,000
LA County Waterworks District #36					
- Alluvium	0	0	0	0	0
- Saugus Formation	500–1,000	500–1,000	500–1,000	500–1,000	500–1,000
Newhall County Water District					
- Alluvium	1,500–3,000	1,500–3,000	1,500–3,000	1,500–3,000	1,500–3,000
- Saugus Formation	3,000–6,000	3,000–6,000	3,000–6,000	3,000–6,000	3,000–6,000
Valencia Water Company					
- Alluvium	12,000–20,000	12,000–20,000	12,000–20,000	12,000–20,000	12,000–20,000
- Saugus Formation	2,500–5,000	2,500–5,000	2,500–5,000	2,500–5,000	2,500–5,000

Notes:
Source: 2005 UWMP *(see **Appendix 4.10**)*
[1] *The range of groundwater production capability for each purveyor varies based on a number of factors, including each purveyor's capacity to produce groundwater, the location of its wells within the Alluvium and Saugus Formation, local hydrology, availability of imported water supplies and water demands.*
[2] *To ensure sustainability, the purveyors have committed that the annual use of groundwater pumped collectively in any given year will not exceed the purveyors' operating plan as described in the Basin Yield Study and reported annually in the Santa Clarita Valley Water Report. As noted in the discussion of the purveyors' operating plan for groundwater in Table 3-6 of the* 2005 UWMP*, the "normal" year quantities of groundwater pumped from the Alluvium and Saugus Formation are 30,000 to 40,000 afy and 7,500 to 15,000 afy, respectively.*
[3] *Groundwater pumping shown for purveyor municipal and industrial uses only.*

Three factors affect the availability of groundwater supplies under the groundwater operating plan. They are (1) sufficient source capacity (wells and pumps); (2) sustainability of the groundwater resource to meet pumping demand on a renewable basis; and (3) protection of groundwater sources (wells) from known contamination, or provisions for treatment in the event of contamination. All three factors are discussed below, and are addressed in further detail in Chapter 5 and Appendices C and D to the *2005 UWMP* (see, **Appendix 4.10**).

(a) Alluvial Aquifer

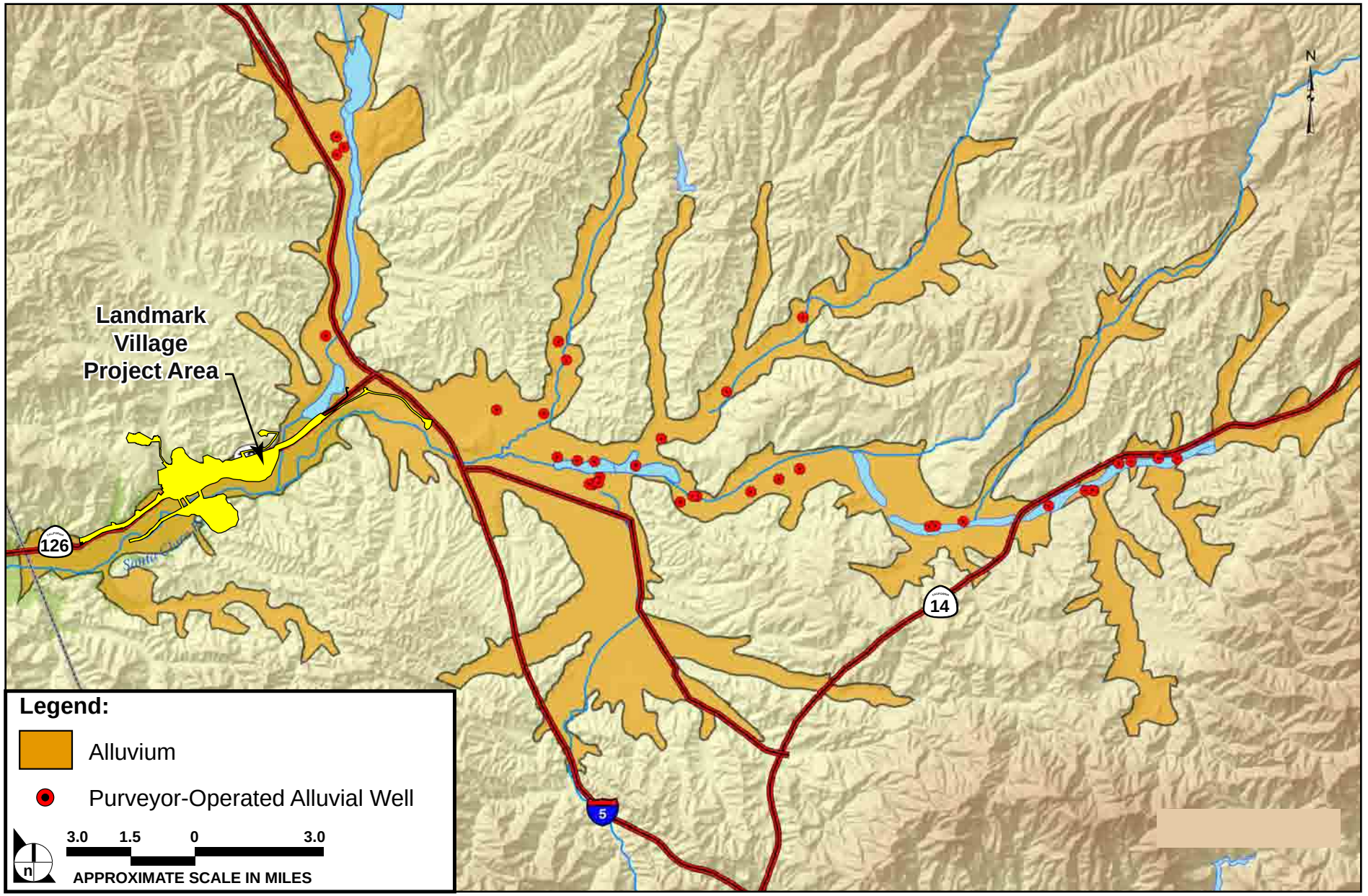
Based on a combination of historical operating experience and recent groundwater modeling analysis, the Alluvial aquifer can supply groundwater on a long-term sustainable basis in the overall range of 30,000 to 40,000 afy, with a probable reduction in dry years to a range of 30,000 to 35,000 afy. Both of those ranges include about 15,000 afy of Alluvial pumping for current agricultural water uses and an estimated pumping of up to about 500 afy by small private pumpers. The dry year reduction is a result of practical

constraints in the eastern part of the Basin, where lowered groundwater levels in dry periods have the effect of reducing pumping capacities in that shallower portion of the aquifer.

Adequacy of Supply. For municipal water supply, with existing wells and pumps, the three retail water purveyors with Alluvial wells (NCWD, SCWD, and VWC) have a combined pumping capacity from active wells (not contaminated by perchlorate) of 36,120 gallons per minute (gpm), which translates into a current full-time Alluvial source capacity of approximately 58,000 afy.[14] Alluvial pumping capacity from all the active municipal supply wells is summarized in **Table 4.10-5, Active Municipal Groundwater Source Capacity – Alluvial Aquifer Wells**. The locations of the various municipal Alluvial wells throughout the Basin are illustrated on **Figure 4.10-4, Municipal Alluvial Well Locations, Santa Clara River Valley, East Groundwater Subbasin**. These capacities do not include one Alluvial Aquifer well that has been inactivated due to perchlorate contamination, the SCWD Stadium well, which represents another 800 gpm of pumping capacity, or full-time source capacity of about 1,290 afy.

In terms of adequacy and availability, the combined active Alluvial groundwater source capacity of municipal wells is approximately 58,000 afy. This is more than sufficient to meet the municipal, or urban, component of groundwater supply from the Alluvium, which is currently 20,000 to 25,000 afy of the total planned Alluvial pumping of 30,000 to 40,000 afy. (The balance of Alluvial pumping in the operating plan is for agricultural and other small private, pumping.)

14 As stated, this figure includes the pumping capacity of Valencia Water Company's Well Q2, which was returned to active service as a result of the permitting and installation of wellhead treatment, which removes perchlorate pumped from the well to a non-detect level.



SOURCE: Luhdorff & Scalmanini Consulting Engineers – January 2006

FIGURE **4.10-4**

Municipal Alluvial Well Locations; Santa Clara River Valley, East Groundwater Subbasin

Table 4.10-5
Active Municipal Groundwater Source Capacity – Alluvial Aquifer Wells

Wells	Pump Capacity (gpm)	Max Annual Capacity (af)	Normal Year Production(1) (af)	Dry-Year Production (af)
NCWD				
Castaic 1	600	960	385	345
Castaic 2	425	680	166	125
Castaic 4	270	430	100	45
Pinetree 1	300	480	164	N/A
Pinetree 3	550	880	545	525
Pinetree 4	500	800	300	N/A
NCWD Subtotal	2,645	4,230	1,660	1,040
SCWD				
Clark	600	960	782	700
Guida	1,000	1,610	1,320	1,230
Honby	950	1,530	696	870
Lost Canyon 2	850	1,370	741	640
Lost Canyon 2A	825	1,330	1,034	590
Mitchell 5B	700	1,120	557	N/A
N. Oaks Central	1,000	1,610	822	1,640
N. Oaks East	950	1,530	1,234	485
N. Oaks West	1,400	2,250	898	N/A
Sand Canyon	750	1,200	930	195
Sierra	1,500	2,410	846	N/A
SCWD Subtotal	10,525	16,920	9,860	6,350
Valencia Water Co.				
Well D	1,050	1,690	690	690
Well E-15	1,400	2,260	N/A	N/A
Well N	1,250	2,010	620	620
Well N7	2,500	4,030	1,160	1,160
Well N8	2,500	4,030	1,160	1,160
Well Q2	1,200	1,930	985	985
Well S6	2,000	3,220	865	865
Well S7	2,000	3,220	865	865
Well S8	2,000	3,220	865	865
Well T2	800	1,290	460	460
Well T4	700	1,120	460	460
Well U4	1,000	1,610	935	935
Well U6	1,250	2,010	825	825
Well W9	800	1,290	600	600
Well W10	1,500	2,410	865	865
Well W11	1,000	1,610	350	350
Valencia Subtotal	22,950	36,950	11,705	11,705
Total Purveyors	**36,120**[1]	**58,100**[2]	**23,225**[2]	**19,095**[2]

Notes:
Source: 2005 UWMP *(see **Appendix 4.10**)*
[1] *Based on recent annual pumping.*
[2] *Currently active wells only; capacity will slightly increase by restoration of perchlorate-contaminated wells.*

Sustainability. Until recently, the long-term renewability of Alluvial groundwater was empirically determined from approximately 60 years of recorded experience. This empirical data confirmed long-term stability in groundwater levels and storage, with some dry period fluctuations in the eastern part of the Basin, over a historical range of total Alluvial pumpage from as low as about 20,000 afy to as high as about 43,000 afy. These empirical observations have been complemented by the development and application of a numerical groundwater flow model, which has been used to predict aquifer response to the planned operating ranges of pumping. The numerical groundwater flow model also has been used to analyze the control of perchlorate contaminant migration under selected pumping conditions that would restore, with treatment, pumping capacity inactivated due to perchlorate contamination detected in some wells in the Basin. The latter use of the model is described in Chapter 5 of the *2005 UWMP*, which addresses the Saugus Formation and the overall approach to the perchlorate contamination found in four Saugus wells (see **Appendix 4.10**).

To examine the yield of the Alluvium or, the sustainability of the Alluvium on a renewable basis, the groundwater flow model was used to examine the long-term projected response of the aquifer to pumping for municipal and agricultural uses in the 30,000 to 40,000 afy range under average/normal and wet conditions, and in the 30,000 to 35,000 afy range under locally dry conditions. To examine the response of the entire aquifer system, the model also incorporated pumping from the Saugus Formation in accordance with the normal (7,500–15,000 afy) and dry year (15,000–35,000 afy) operating plan for that aquifer. The model was run over a 78-year hydrologic period, which was selected from actual historical precipitation to examine a number of hydrologic conditions expected to affect both groundwater pumping and groundwater recharge. The selected 78-year simulation period was assembled from an assumed recurrence of 1980 to 2003 conditions, followed by an assumed recurrence of 1950 to 2003 conditions. The 78-year period was analyzed to define both local hydrologic conditions (normal and dry), which affect the rate of pumping from the Alluvium, and hydrologic conditions that affect SWP operations, which in turn affect the rate of pumping from the Saugus. The resultant simulated pumping cycles included the distribution of pumping for each of the existing Alluvial aquifer wells, for normal and dry years, respectively, as shown in **Table 4.10-5**.

Simulated Alluvial aquifer response to the range of hydrologic conditions and pumping stresses is essentially a long-term repeat of the historical conditions that have resulted from similar pumping over the last several decades. The resultant response consists of (1) generally constant groundwater levels in the middle to western portion of the Alluvium and fluctuating groundwater levels in the eastern portion as a function of wet and dry hydrologic conditions; (2) variations in recharge that directly correlate with wet and dry hydrologic conditions; and (3) no long-term decline in groundwater levels or storage. The Alluvial aquifer is considered a sustainable water supply source to meet the Alluvial portion of the

operating plan for the Basin. This is based on the combination of actual experience with Alluvial aquifer pumping at capacities similar to those planned for the future and the resultant sustainability (recharge) of groundwater levels and storage, and further based on modeled projections of aquifer response to planned pumping rates that also show no depletion of groundwater.

Aquifer Protection. After addressing the issues of pumping capacity and long-term sustainability of the Alluvial aquifer, the remaining key consideration related to current and future use of the Alluvium is the impact of perchlorate contamination. As of this writing, perchlorate has been detected in two Alluvial municipal-supply wells in the basin; however, wellhead treatment has been permitted and installed at one of the two impacted wells, Valencia Water Company's 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 (see **Appendix 4.10**), there has been extensive investigation of the extent of perchlorate contamination, which, in combination with the groundwater modeling previously described, has led to the current plan for integrated control of contamination migration and restoration of impacted pumping (well) capacity in 2006.

In summary, 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.[15]

(b) Saugus Formation

Based on historical operating experience and extensive recent testing and groundwater modeling analysis, the Saugus Formation can supply water on a long-term sustainable basis in a normal range of 7,500 to 15,000 afy, with intermittent increases to 25,000 to 35,000 af in dry years. The dry-year increases, based on limited historical observation and modeled projections, demonstrate that a small amount of the large groundwater storage in the Saugus Formation can be pumped over a relatively short (dry) period.

15 For further information regarding CLWA's groundwater containment, treatment and restoration project, please refer to Appendix E of the *2005 UWMP* (see, **Appendix 4.10**).

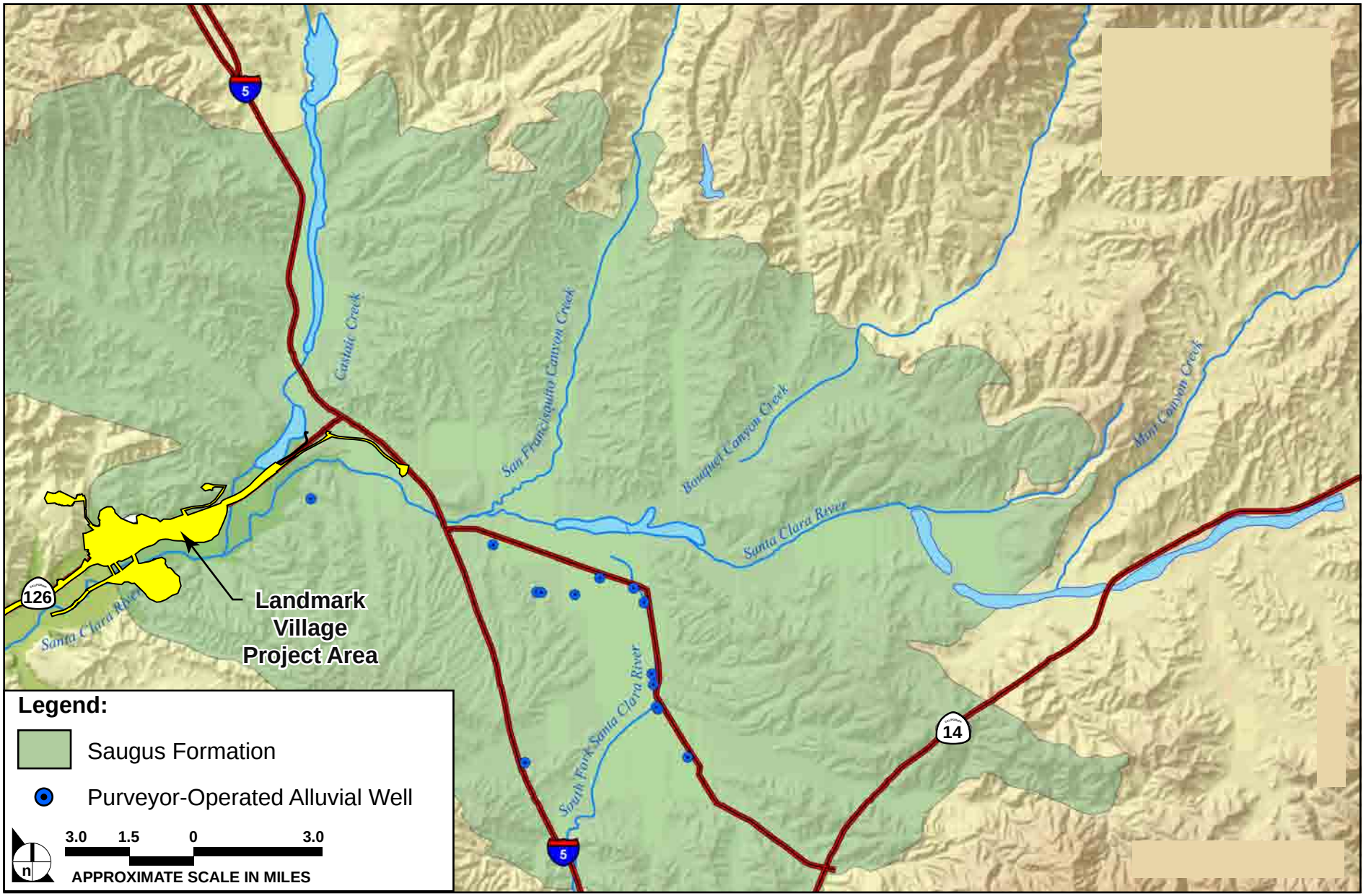
This would be followed by recharge (replenishment) of that storage during a subsequent normal-to-wet period when pumping would be reduced.

Adequacy of Supply. For municipal water supply with existing wells, the three retail water purveyors with Saugus wells (NCWD, SCWD, and VWC) have a combined pumping capacity from active wells (not contaminated by perchlorate) of 14,900 gpm, which translates into a full-time Saugus source capacity of 24,000 afy. Saugus pumping capacity from all the active municipal supply wells is summarized in **Table 4.10-6, Active Municipal Groundwater Source Capacity—Saugus Formation Wells**, and the locations of the various active municipal Saugus wells are illustrated on **Figure 4.10-5, Saugus Well Locations, Santa Clara River Valley, East Groundwater Subbasin**. These capacities do not include the four Saugus wells contaminated by perchlorate, although they indirectly reflect the capacity of one of the contaminated wells, VWC's Well 157, which has been sealed and abandoned, and replaced by VWC's Well 206 in a non-impacted part of the Basin. The four contaminated wells, one owned by NCWD and two owned by SCWD, in addition to the VWC well, represent a total of 7,900 gpm of pumping capacity (or full-time source capacity of about 12,700 afy) inactivated due to perchlorate contamination.

Table 4.10-6
Active Municipal Groundwater Source Capacity—Saugus Formation Wells

Wells	Pump Capacity (gpm)	Max Annual Capacity (af)	Normal Year Production[1] (af)	Dry-Year Production (af)
NCWD				
12	2,300	3,700	1,315	2,044
13	2,500	4,030	1,315	2,044
NCWD Subtotal	4,800	7,730	2,630	4,088
Valencia Water Co.				
159	500	800	50	50
160	2,000	3,220	1,000	1,330
201	2,400	3,870	100	3,577
205	2,700	4,350	1,000	3,827
206	2,500	4,030	1,175	3,500
Valencia Subtotal	10,100	16,270	3,325	12,284
Total Purveyors	**14,900**	**24,000**[2]	**5,955**[2]	**16,372**

Notes:
Source: Valencia Water Company, 2006.
[1] *Based on recent annual pumping.*
[2] *Currently active wells only; additional capacity to meet dry-year operating plan would be met by restoration of contaminated wells and new well construction.*



SOURCE: Luhdorff & Scalmanini Consulting Engineers – January 2006

FIGURE **4.10-5**

Saugus Well Locations; Santa Clara River Valley, East Groundwater Subbasin

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In terms of adequacy and availability, the combined active Saugus groundwater source capacity of municipal wells of 24,000 afy, is more than sufficient to meet the planned use of Saugus groundwater in normal years of 7,500 to 15,000 afy. During the currently scheduled two-year time frame for restoration of impacted Saugus capacity (as discussed further in Chapter 5 of the *2005 UWMP*), this currently active capacity is more than sufficient to meet water demands, in combination with other sources, if both of the next two years are dry. At that time, the combination of currently active capacity and restored impacted capacity, through a combination of treatment at two of the impacted wells and replacement well construction, will provide sufficient total Saugus capacity to meet the planned use of Saugus groundwater during multiple dry-years of 35,000 af, if that third year is also a dry year.

Sustainability. Until recently, the long-term sustainability of Saugus groundwater was empirically determined from limited historical experience. The historical record shows fairly low annual pumping in most years, with one four-year period of increased pumping up to about 15,000 afy that produced no long-term depletion of the substantial groundwater storage in the Saugus. Those empirical observations have now been complemented by the development and application of the numerical groundwater flow model, which has been used to examine aquifer response to the operating plan for pumping from both the Alluvium and the Saugus and also to examine the effectiveness of pumping for both contaminant extraction and control of contaminant migration within the Saugus Formation. The latter aspects of Saugus pumping are discussed in further detail in Chapter 5 of the *2005 UWMP* (see, **Appendix 4.10**).

To examine the yield of the Saugus Formation or, its sustainability on a renewable basis, the groundwater flow model was used to examine long-term projected response to pumping from both the Alluvium and the Saugus over the 78-year period of hydrologic conditions using alternating wet and dry periods as have historically occurred. The pumping simulated in the model was in accordance with the operating plan for the Basin. For the Saugus, simulated pumpage included the planned restoration of recent historic pumping from the perchlorate-impacted wells. In addition to assessing the overall recharge of the Saugus, that pumping was analyzed to assess the effectiveness of controlling the migration of perchlorate by extracting and treating contaminated water close to the source of contamination.

Simulated Saugus Formation response to the ranges of pumping under assumed recurrent historical hydrologic conditions is consistent with actual experience under smaller pumping rates. The response consists of (1) short-term declines in groundwater levels and storage near pumped wells during dry-period pumping; (2) rapid recovery of groundwater levels and storage after cessation of dry-period pumping; and (3) no long-term decreases or depletion of groundwater levels or storage. The combination of actual experience with Saugus pumping and recharge up to about 15,000 afy, now complemented by modeled projections of aquifer response that show long-term utility of the Saugus at 7,500 to 15,000 afy in normal years and rapid recovery from higher pumping rates during intermittent dry periods, shows that

the Saugus Formation can be considered a sustainable water supply source to meet the Saugus portion of the operating plan for the Basin.

Aquifer Protection. The remaining key consideration related to current and future use of the Saugus Formation is the impact of perchlorate contamination. The nature and extent of the contamination, and the plans to contain the migration of perchlorate and restore impacted Saugus well capacity are addressed in CLWA's groundwater containment, treatment and restoration project, as discussed in the *2005 UWMP*, Chapter 5 and Appendix E (**Appendix 4.10**). This project proposes to contain further downstream migration of perchlorate from the former Whittaker-Bermite site, treat water extracted as part of the containment process, and recover lost groundwater production from the impacted wells in the Saugus Formation.

(c) Impacted Alluvial and Saugus Wells

A small group of wells that have been impacted by perchlorate represent a temporary loss of well capacity within the CLWA service area. Of the six wells that were initially removed from active water supply service upon the detection of perchlorate, four wells with a combined flow rate of 7,200 gallons per minute (gpm) remain out of service, as discussed further in Chapter 5 of the *2005 UWMP* (**Appendix 4.10**). However, CLWA and the purveyors have developed an implementation plan that would restore this well capacity. The implementation plan includes a combination of treatment facilities and replacement wells.

Construction of treatment facilities for several of the impacted wells will commence in 2006 and will be operational in 2007 and the production restoration (replacement) wells will be operational by 2010. Additional information on the treatment technology and schedule for restoration of the impacted wells is provided in Chapter 5 of the *2005 UWMP* (see **Appendix 4.10**). Additional information concerning water quality issues and replacement capacity is also provided in Chapter 5 of the *2005 UWMP*.

b. Water Quality in the Alluvial Aquifer and Saugus Formation

Given that the source of potable water for the Landmark Village project is from the local Basin, in particular the Alluvial aquifer, local groundwater quality is an important consideration.

(1) Overview

The groundwater quality of the Alluvial aquifer and the Saugus Formation consistently meets drinking water standards set by the U.S. Environmental Protection Agency (U.S. EPA) and the California Department of Health Services (DHS). The water is delivered by the local retail purveyors in the CLWA

service area for domestic use without treatment, although the water is disinfected by the retail purveyors prior to delivery. An annual Consumer Confidence Report is provided to all Santa Clarita Valley residents who receive water from the local retail water purveyors in the CLWA service area. In that report, there is detailed information about the results of the testing of groundwater quality and treated SWP water supplied to the residents of the Santa Clarita Valley. Water quality regulations are constantly changing as contaminants that are typically not found in drinking water are discovered and new standards are adopted. In addition, existing water quality standards are becoming more stringent in terms of allowable levels in drinking water.

(2) Groundwater Quality – Alluvium

Groundwater quality is a key factor in assessing the Alluvial aquifer as a municipal and agricultural water supply. In terms of the aquifer system, there is no convenient long-term record of water quality, (i.e., water quality data in one or more single wells that spans several decades and continues to the present). Thus, in order to examine a long-term record of water quality in the Alluvium, individual records have been integrated from several wells completed in the same aquifer materials and in close proximity to each other to examine historical trends in general mineral groundwater quality throughout the basin. Based on these records of groundwater quality, wells within the Alluvium have experienced historical fluctuations in general mineral content, as indicated by electrical conductivity (EC), which correlates with fluctuations of individual constituents that contribute to EC. The historic water quality data indicates that, on a long-term basis, there has not been a notable trend and, specifically, there has not been a decline in water quality within the Alluvium.

Specific conductance within the Alluvium exhibits a westward gradient, corresponding with the direction of groundwater flow in the Alluvium. EC is lowest in the easternmost portion of the Basin, and highest in the west. Water quality in the Alluvium generally exhibits an inverse correlation with precipitation and streamflow, with a stronger correlation in the easternmost portion of the Basin, where groundwater levels fluctuate the most. Wet periods have produced substantial recharge of higher quality (low EC) water, and dry periods have resulted in declines in groundwater levels, with a corresponding increase in EC (and individual contributing constituents) in the deeper parts of the Alluvium.

Specific conductance throughout the Alluvium is currently below the Secondary (aesthetic) Upper Maximum Contaminant Level of 1600 micromhos per centimeter (umhos/cm). The presence of long-term consistent water quality patterns, although intermittently affected by wet and dry cycles, supports the conclusion that the Alluvial aquifer is a viable on-going water supply source in terms of groundwater quality.

Perchlorate. The most notable groundwater quality issue in the Alluvium is perchlorate contamination. In 2002, one Alluvial well (Stadium well), located near the former Whittaker-Bermite facility, was inactivated for municipal water supply due to detection of perchlorate slightly below the Notification Level.[16] In early 2005, perchlorate was detected in a second Alluvial well, Valencia Water Company's Well Q2. Valencia Water Company's response was to remove the well from active water supply service and to rapidly seek approval for installation of wellhead treatment and return of the well to service. As part of outlining its plan for treatment and return of the well to service, Valencia Water Company analyzed the impact of the temporary inactivation of the well on its water supply capability; and the analysis determined that Valencia Water Company's other sources are sufficient to meet demand and the inactivation of Well Q2 thus had no impact on Valencia Water Company's water supply capability.[17] Valencia Water Company proceeded through mid-2005 to gain approval for installation of wellhead treatment (ion-exchange as described below), including environmental review, and completed installation of the wellhead treatment facilities in September 2005. Well Q2 was returned to active water supply service in October 2005.

On-going monitoring of all active municipal wells near the Whittaker-Bermite site has shown no detections of perchlorate in any active Alluvial wells. However, based on a combination of proximity to the Whittaker-Bermite site and prevailing groundwater flow directions, complemented by findings in the on-going on-site and off-site investigations by Whittaker-Bermite and the Army Corps of Engineers (ACOE), there is logical concern that perchlorate could impact nearby, down-gradient Alluvial wells (see, *2005 UWMP*, Appendix D of **Appendix 4.10**). As a result, provisions are in place to respond to perchlorate contamination if it should occur. The groundwater model was used to examine capture zones around Alluvial wells under planned operating conditions (pumping capacities and volumes) for the time period through currently scheduled restoration of impacted wells in 2006.[18] The capture zone analysis of Alluvial wells generally near the Whittaker-Bermite site, shown on **Figure 4.10-6, Forecasted**

16 "Notification level" means the concentration level of a contaminant in drinking water delivered for human consumption that the state DHS has determined, based on available specific information, does not pose a significant health risk but warrants notification pursuant to applicable law. Notification levels are non-regulatory, health-based advisory levels established by the state DHS for contaminants in drinking water for which maximum contaminant levels have not been established. Notification levels are established as precautionary measures for contaminants that may be considered candidates for establishment of maximum contaminant levels, but have not yet undergone or completed the regulatory standard setting process prescribed for the development of maximum contaminant levels. Notification levels are not drinking water standards.

17 See, *Impact and Response to Perchlorate Contamination, Valencia Water Company, Well Q2*, prepared for Valencia Water Company by Luhdorff & Scalmanini Consulting Engineers, April 2005. This report is available for public review and inspection in **Appendix 4.10** of this EIR.

18 See, Technical Memorandum entitled, *Analysis of Near-Term Groundwater Capture Areas for Production Wells Located Near the Whittaker-Bermite Property (Santa Clarita, California)*, prepared by CH2MHill, for the Santa Clarita Valley Water Purveyors, dated December 21, 2004. This memorandum is available for public review and inspection in **Appendix 4.10** of this EIR.

Two-Year Groundwater Capture Zones for Active Alluvial Production Wells Located Closest to the Whittaker-Bermite Property Santa Clarita, California, suggests that inflow to those wells will either be upgradient of the contamination site, or will be from the Alluvium beyond where perchlorate is most likely to be transported, with the possible exception of the Valencia Water Company's Pardee wellfield, which includes Wells N, N7, and N8. Although the capture zone analysis does not show the Pardee wells to be impacted, they are considered to be at some potential risk due to the proximity of their capture zone to the Whittaker-Bermite site.

The combined pumping capacity of Valencia Water Company's Pardee wells is 6,200 gpm, which equates to about 10,000 af of maximum annual capacity. However, in the operating plan for both normal and dry year Alluvial pumping, the planned use of those wells represents 2,940 afy of the total 30,000 to 40,000 afy Alluvial groundwater supply. Thus, if the wells were to become contaminated with perchlorate, they would represent an amount of the total Alluvial supply that could be readily replaced, on a short-term interim basis, by utilizing an equivalent amount of imported water from CLWA or by utilizing existing capacity from other Alluvial wells (see, **Table 4.10-5**, above). Furthermore, if the Pardee wells were to become contaminated by perchlorate contamination, Valencia Water Company has made site provisions at its Pardee wellfield for installation of wellhead treatment. Such treatment would be the same methodology as installed at Valencia's Well Q2, and would result in the impacted Pardee wells being promptly returned to active service.

In addition, in June 2005, a work plan was completed for a pilot remediation pumping program in the Northern Alluvium and certain on-site subareas east/southeast, or generally upgradient, of the impacted Stadium well. That program basically involves the establishment of containment, generally along the northern boundary of the Whittaker-Bermite site, upgradient of the Stadium well, by continuous pumping of a former Whittaker-Bermite facility well, at a continuous low capacity, complemented by pumping at several groundwater "hot spots" also generally upgradient of the Stadium well. Due to the low conductivity nature of the aquifer materials at the various "hot spots," pumping for containment at those locations would be from several wells at low pumping capacities. Extracted water would be treated at Whittaker-Bermite's existing on-site treatment system. Generally consistent with the Saugus restoration concept, the Northern Alluvium pumping program would have the concurrent objectives of preventing site-related contaminants from leaving the site and removing some contamination from groundwater such that it can be removed in the on-site treatment process prior to discharge of the water back to the Basin.

(3) Groundwater Quality – Saugus Formation

Similar to the Alluvium, groundwater quality in the Saugus Formation is a key factor in assessing that aquifer as a municipal and agricultural water supply. As with groundwater level data, long-term Saugus groundwater quality data is not sufficiently extensive (few wells) to permit any basin-wide analysis or assessment of pumping-related impacts on quality. As with the Alluvium, EC has been chosen as an indicator of overall water quality, and records have been combined to produce a long-term depiction of water quality. Water quality in the Saugus Formation has not historically exhibited the precipitation-related fluctuations seen in the Alluvium. Based on the historical record over the last 50 years, groundwater quality in the Saugus has exhibited a slight overall increase in EC. More recently, several wells within the Saugus Formation have exhibited an additional increase in EC similar to that seen in the Alluvium. In 2004, monthly data collected by Valencia Water Company for two Saugus wells shows that the overall level of EC remained fairly stable during the year. Levels of EC in the Saugus Formation remain below the Secondary (aesthetic) Upper Maximum Contaminant Level for EC. Groundwater quality within the Saugus will continue to be monitored to ensure that degradation that presents concern relative to the long-term viability of the Saugus as a municipal water supply does not occur.

Perchlorate. As with the Alluvium, the most notable groundwater quality issue in the Saugus Formation is perchlorate contamination. Since 1997, four Saugus wells have been inactivated for water supply service due to the presence of perchlorate. While the inactivation of those wells does not limit the ability of the purveyors to meet water demands, there is a program and schedule in place that involves installation of treatment facilities to both extract contaminated water and control migration in the Saugus Formation, such that the impacted capacity is restored and perchlorate migration is controlled in 2006. To date, there has been no additional detection of perchlorate in any other municipal-supply wells in the Saugus Formation.

In the interim, the question of whether existing active Saugus wells are likely to be contaminated by perchlorate migration prior to the installation of treatment and pumping for perchlorate contamination control has been evaluated by using the groundwater flow model to analyze capture zones of existing active wells through 2006, the scheduled period for permitting, installation of treatment, and restoration of impacted capacity. For that analysis, recognizing current hydrologic conditions and available supplemental SWP supplies, the rate of Saugus pumping was conservatively projected to be in the normal range (7,500 to 15,000 afy) for the near-term. The results of the capture zone analysis, illustrated on **Figure 4.10-7, Forecasted Two-Year Groundwater Capture Zones for Active Saugus Production Wells Located Closest to the Whittaker-Bermite Property Santa Clarita, California**, were that the two nearest downgradient Saugus wells, Valencia Water Company's Wells 201 and 205, would draw water

LEGEND

CONTAMINATED PRODUCTION WELL

- ALLUVIUM
- SAUGUS

UNCONTAMINATED PRODUCTION WELL

- ALLUVIUM
- SAUGUS

MONITORING WELL

- ALLUVIUM
- SAUGUS

TWO-YEAR GROUNDWATER CAPTURE ZONE

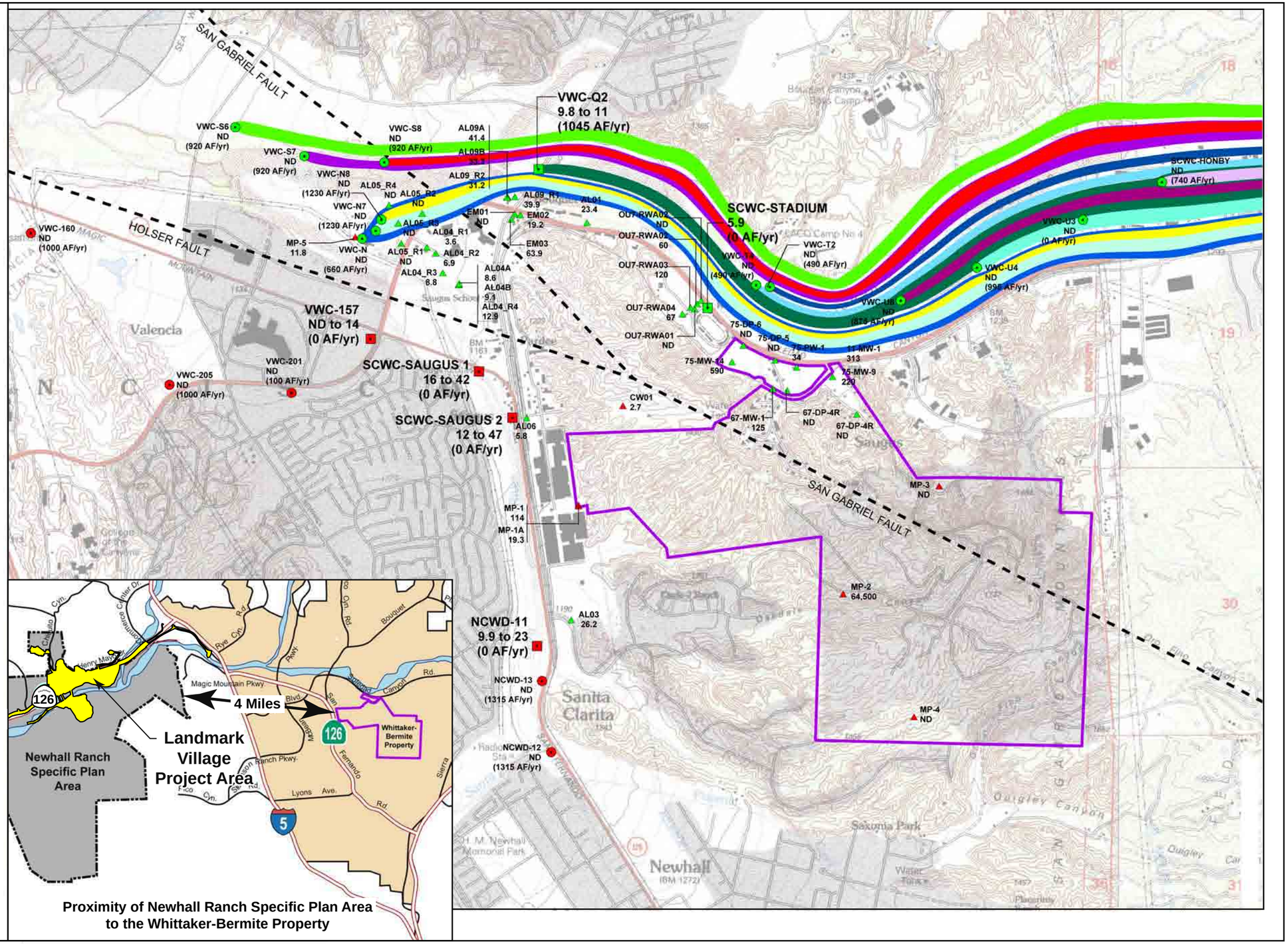
- SCWC-HONBY
- VWC-N
- VWC-N7
- VWC-N8
- VWC-Q2
- VWC-S6
- VWC-S7
- VWC-S8
- VWC-T2
- VWC-T4
- VWC-U4
- VWC-U6
- WHITTAKER-BERMITE PROPERTY BOUNDARY

NOTES:

1. VALUES PRESENTED UNDER WELL SYMBOLS REPRESENT PERCHLORATE CONCENTRATION IN GROUNDWATER (µg/L).
2. PUMPING VALUES IN PARENTHESES ARE ANNUAL PUMPING VOLUMES
3. ND = PERCHLORATE NOT DETECTED IN GROUNDWATER SAMPLE.
4. µg/L = MICROGRAMS PER LITER; AF/yr = acre feet per year
5. FLOWPATHS ARE DELINEATED USING AN EFFECTIVE POROSITY OF 0.10 IN THE ALLUVIAL AQUIFER AND 0.05 IN THE SAUGUS FORMATION.

2000 1000 0 2000

APPROXIMATE SCALE IN FEET



Proximity of Newhall Ranch Specific Plan Area to the Whittaker-Bermite Property

SOURCE: Luhdorff & Scalmanini Consulting Engineers – January 2006

FIGURE **4.10-6**

Forecasted Two-Year Groundwater Capture Zones for Active Alluvial Production Wells Located Closest to the Whittaker-Bermite Property Santa Clarita, California

LEGEND

CONTAMINATED PRODUCTION WELL

- ALLUVIUM
- SAUGUS

UNCONTAMINATED PRODUCTION WELL

- ALLUVIUM
- SAUGUS

MONITORING WELL

- ALLUVIUM
- SAUGUS

TWO-YEAR GROUNDWATER CAPTURE ZONE

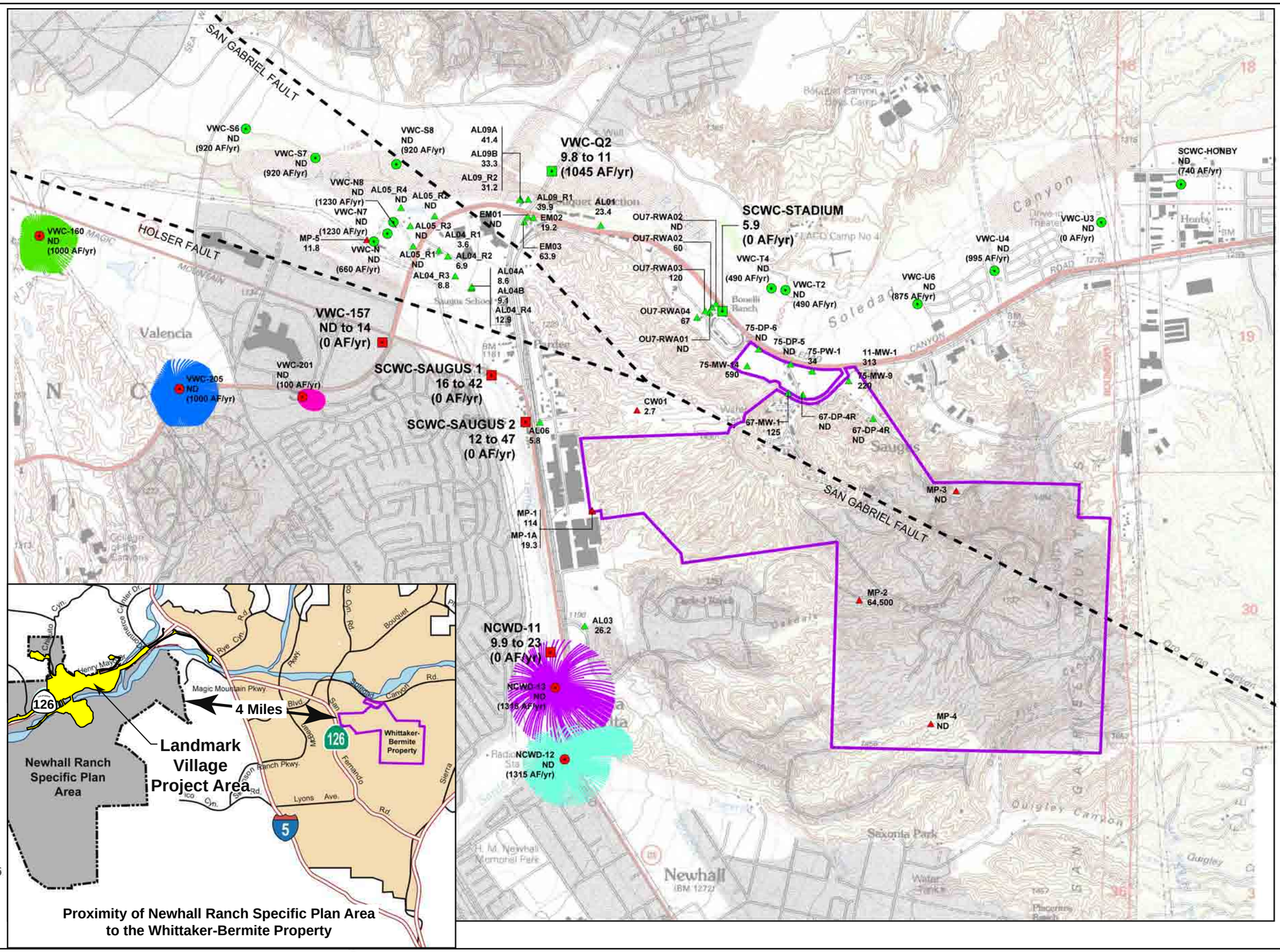
- NC-12
- NC-13
- VWC-160
- VWC-201
- VWC-205
- WHITTAKER-BERMITE PROPERTY BOUNDARY

NOTES:

1. VALUES PRESENTED UNDER WELL SYMBOLS REPRESENT PERCHLORATE CONCENTRATION IN GROUNDWATER (µg/L).
2. PUMPING VALUES IN PARENTHESES ARE ANNUAL PUMPING VOLUMES.
3. ND = PERCHLORATE NOT DETECTED IN GROUNDWATER SAMPLE.
4. µg/L = MICROGRAMS PER LITER; AF/yr = acre feet per year
5. FLOWPATHS ARE DELINEATED USING AN EFFECTIVE POROSITY OF 0.10 IN THE ALLUVIAL AQUIFER AND 0.05 IN THE SAUGUS FORMATION.

2000 1000 0 2000

APPROXIMATE SCALE IN FEET



Proximity of Newhall Ranch Specific Plan Area to the Whittaker-Bermite Property

SOURCE: Luhdorff & Scalmanini Consulting Engineers – January 2006

FIGURE **4.10-7**

Forecasted Two-Year Groundwater Capture Zones for Active Saugus Production Wells Located Closest to the Whittaker-Bermite Property Santa Clarita, California

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from very localized areas around the wells and would not draw water from locations where perchlorate has been detected in the Saugus Formation. As shown on the figure, the capture zone analysis projected Well 201 would potentially draw Saugus groundwater from areas located up to 450 feet east of the well, but was unlikely to draw water from areas farther to the east through that time period. During the same time, Well 205 would potentially draw Saugus groundwater from areas as much as 650 feet to the east and northeast of this well.

As a result, the currently active downgradient Saugus wells are expected to remain active as sources of water supply in accordance with the overall operating plan for the Saugus Formation, given the generally low planned pumping from the nearest downgradient Saugus wells in the operating plan through 2006, after which restored capacity and resultant aquifer hydraulic control are scheduled to be in place.

(4) Perchlorate Treatment Technology

Effective technologies presently exist to treat perchlorate in water in order to meet drinking water standards. In a publication from the U.S. EPA, *Region 9 Perchlorate Update*,[19] the U.S. EPA discussed the current state of perchlorate treatment technology, and the current and planned treatment development efforts being carried out as part of U.S. EPA Superfund program studies, U.S. Air Force research, water utility-funded studies, and the federally funded research effort underway by the East Valley Water District, California and the American Water Works Association Research Foundation (AWWARF). The U.S. EPA also summarized two of the technologies that are in use today, which are capable of removing perchlorate from groundwater supplies, the ion exchange and biological treatment methods.

A number of full-scale perchlorate treatment systems have been implemented in California and other states. In an effort to evaluate the various available treatment technologies, CLWA commissioned an investigation to identify and evaluate alternative treatment processes effective in removing perchlorate. The scope of that investigation included resolving permitting issues pertaining to the construction and certification of a treatment facility, conducting bench-scale and pilot-scale tests to determine treatment process performance, and preparing preliminary capital and operations and maintenance cost estimates.

Three treatment technologies, an ion exchange system and two biological systems, were selected for study. All three systems were determined to be effective in removing perchlorate.[20] However, there was considerable uncertainty with respect to the capital and operations and maintenance costs associated with

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19 See, U.S. EPA Internet website, *Perchlorate*, and *Region 9 Perchlorate Update*, found at http://www.epa.gov/ogwdw/ccl/perchlor/perchlo.html, and included in **Appendix 4.10** of this EIR.

20 See, *Treatment of Perchlorate Contaminated Groundwater from the Saugus Aquifer, TM 3 Bench and Pilot Test Results*, Carollo Engineers, February 2004. A copy of this report is available for public review and inspection in **Appendix 4.10** of this EIR.

each process. Therefore, a technical group comprised of representatives from CLWA, the retail water purveyors, and consultants retained by Whittaker-Bermite agreed to solicit competitive bids for the design, construction, and operation of both ion exchange and biological treatment systems. After thorough evaluation of several bids, the technical group determined that ion exchange is the preferred technology based upon treatment performance, ease of regulatory compliance, and comparison of costs associated with construction and operations and maintenance.

The preferred single-pass ion exchange treatment technology does not generate a concentrated perchlorate waste stream that would require additional treatment before discharge to a sanitary sewer or a brine line (if one is available). This technology incorporates an active resin (a material that attracts perchlorate molecules) that safely removes the perchlorate from water. The resin is contained in pressure vessels and the water is pumped through the vessel. The resin is eventually replaced with new resin after a period of time. The old resin is removed and transported by truck to an approved waste disposal site where it is safely destroyed. This technology is robust and reliable for use in drinking water systems.

DHS has approved operation of perchlorate treatment plants, and those plants currently in operation are listed in **Table 4.10-7**, **Perchlorate Treatment Summary**.

Table 4.10-7
Perchlorate Treatment Summary

Location	Treatment Plant Capacity (gallons per minute)	Concentration of Perchlorate in Groundwater (parts per billion)	Concentration of Perchlorate after Treatment (parts per billion)
1) Valencia Water Company (Santa Clarita Valley – Well Q2)	1,300	<11	ND
2) La Puente Valley County Water District (Baldwin Park)	2,500	<200	ND
3) San Gabriel Valley Water Company (El Monte)	7,800	<80	ND
4) Lincoln Avenue Water Company (Altadena)	2,000	<20	ND
5) City of Riverside	2,000	<60	ND
6) City of Rialto	2,000	<10	ND
7) City of Colton	3,500	<10	ND
8) Fontana Union Water Company	5,000	<15	ND

Source: Perchlorate Contamination Treatment Alternatives, prepared by the Office of Pollution Prevention and Technology Development, Department of Toxic Substances Control, California Environmental Protection Agency, Draft January 2004.
ND = non-detect. The non-detect level represents concentrations less than 4 parts per billion.

Based on (1) the results of CLWA's investigation of perchlorate removal technologies; (2) the technical group's evaluation; and (3) DHS' approval of single-pass ion exchange for treatment in other settings, CLWA and the local retail water purveyors are planning single-pass ion exchange for the treatment technology for restoration of impacted capacity (wells) in accordance with the permitting, testing, and installation process described in the *2005 UWMP* (see **Appendix 4.10**). The wellhead treatment installed at Valencia Water Company's Well Q2 in October 2005 is the same single-pass ion exchange as is planned for restoration of impacted Saugus well capacity.

(5) Groundwater Quality Near the Landmark Village Site

The quality of the groundwater available from the Alluvial aquifer near the Landmark Village project site has been tested. Results from laboratory testing conducted for Valencia Water Company wells expected to serve the Landmark Village project site are provided in **Appendix 4.10** of this EIR. The wells expected to be used are approved by DHS and are located just northeast of the Newhall Ranch Specific Plan site in the Valencia Commerce Center. Laboratory testing indicates that all constituents tested were at acceptable levels for drinking water under Title 22. Tests conducted for perchlorate indicated "non-detect." VWC also investigated the future risk of perchlorate contamination on its new wells. In summary, the approach used to investigate the potential capture of perchlorate-impacted groundwater by the new wells involved three sequential steps: identification of local and regional groundwater flow patterns in the Alluvium, the aquifer in which all four wells are located; application of a single layer groundwater flow model to examine the capture zone of the four-well "well field" under planned operating conditions; and interpretation of potential capture of perchlorate via examination of the wells' theoretical independent capture zone relative to the known occurrence of perchlorate in the Alluvium. The latter step was subsequently augmented by considering other factors, such as the locations and magnitude of pumping between the new wells and the known occurrence of perchlorate, which affect the potential capture of perchlorate by the new wells. Given that the groundwater resources from the Alluvial aquifer for the Landmark Village project would be produced from wells located along Castaic Creek and over 4 miles west of the area known to be perchlorate-contaminated (i.e., the former Whittaker-Bermite facility), the groundwater supplies for this project are not considered to be at risk due to perchlorate contamination released from the former Whittaker-Bermite facility.[21]

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21 See, *Potential Capture of Perchlorate Contamination*, Valencia Water Company's Wells E14 – E17, Prepared by Luhdorff and Scalmanini for the Valencia Water Company, dated April 26, 2006. This report is found in **Appendix 4.10** of this EIR.

(6) Other Groundwater Quality Issues

Chloride/Nitrate. Groundwater monitoring in Alluvial aquifer wells has shown both chloride and nitrate concentrations to be below (better than) the Basin Plan groundwater objectives. The Basin Plan includes groundwater quality objectives for various constituents. These objectives are designed to protect groundwater for municipal drinking water purposes. The water purveyor for the proposed project (the Valencia Water Company) has provided information regarding the quality of water that would be delivered to the proposed project site. As indicated above and in its letter dated March 8, 2006, all drinking water delivered to the proposed project site would meet Title 22 requirements. See, EIR **Appendix 4.10** for a copy of the Valencia letter. Regarding the potential affect that water disinfection would have on the quality of water found in the Santa Clara River and local groundwater supplies, Valencia disinfects its groundwater supply with calcium hypochlorite (65 percent available chlorine) to an average dosage of not more than 0.5 mg/L. Valencia indicates that the use of calcium hypochlorite to disinfect groundwater would slightly increase the level of chloride found in groundwater and would still be far below the secondary MCL for chloride of 250 mg/L. For additional information on this topic, please see this EIR, **Section 4.3, Water Quality**, and **Appendix 4.10** of this EIR.

Methyl-Tertiary Butyl Ether (MTBE). MTBE has been a concern for the past several years, and on May 17, 2000, DHS adopted a primary MCL for MTBE of 0.013 mg/L. CLWA and the local water purveyors have been testing for MTBE since 1997 and, to date, have not detected it in any of the production wells.

Total Dissolved Solids (TDS). As indicated in this EIR, **Section 4.3, Water Quality**, TDS are a measure of the dissolved cations and anions, primarily inorganic salts (calcium, magnesium, potassium, sodium, chlorides, and sulfates). High TDS levels can impair agricultural, municipal supply, and groundwater recharge beneficial uses. Drinking water for Landmark Village will be delivered by the Valencia Water Company from wells in the Valencia Commerce Center. These wells already have been approved for use as sources for drinking water by the DHS. Results from laboratory testing conducted for the Valencia Water Company wells, provided in **Appendix 4.10** of this EIR, show that TDS levels range from 890 to 900 mg/l. TDS is listed by DHS as a Secondary Contaminant, which means it is a "consumer acceptance" regulation, not a health based standard. Recommended TDS levels are:

- Recommended Level – 500 milligrams per liter (mg/l)
- Upper Level – 1,000 mg/l
- Short Term Level – 1,500 mg/l

DHS states that "constituent concentrations ranging to the upper contaminant level are acceptable if it is neither reasonable nor feasible to provide more suitable waters." In addition, DHS states that constituent

concentrations between the Upper and Short Term levels can also be approved (1) if adequate progress is being demonstrated toward providing water of improved mineral quality; and (2) for other compelling reasons approved by the Department. As shown, water from these wells meet all water quality standards for drinking water, including the secondary standards for TDS.

c. Imported Water Supplies

Imported water supplies from CLWA are not needed to serve the Landmark Village project's water demand. However, the following discussion of imported water supplies is presented in this EIR for informational purposes.

(1) State Water Project and Associated Facilities

The SWP is a water supply, storage, and distribution system that includes 28 storage facilities, reservoirs, and lakes; 20 pumping plants; six pumping-generating plants and hydroelectric power plants; and about 660 miles of aqueducts and pipelines.[22]

In the southern Sacramento-San Joaquin Delta (Delta), water is pumped into the 444-mile-long California Aqueduct at the Clifton Court Forebay by the Banks Pumping Plant (or by agreement with the U.S. Bureau of Reclamation, at the Central Valley Project's (CVP) Tracy Pumping Plant). SWP water exports for users south of the Banks and Tracy pumping plants are currently limited by a series of water quality and operational constraints, governed primarily by the SWRCB Water Right Decision 1641 (D-1641), as amended. D-1641 was adopted by the SWRCB in 1999; prior to that time, SWP water exports from the Delta were limited by the SWRCB's Water Right Decision 1485 (adopted in 1978), Order Water Right (WR) 95-6 (adopted in 1995), and Order WR 98-09 (adopted in 1998).

From the southern Delta facilities, water in the California Aqueduct travels along the west side of the San Joaquin Valley and is delivered directly to SWP Contractors or is stored in San Luis Reservoir, the SWP's main storage facility south of the Delta. Water is conveyed via the California Aqueduct to the urban region of the Bay area, and south of San Luis Reservoir, to the primarily agricultural regions in the San Joaquin Valley and the primarily urban regions of the Central Coast and southern California. Water is diverted from the California Aqueduct and delivered directly to SWP Contractors in the central and southern San Joaquin Valley at various locations along the California Aqueduct. The California Aqueduct traverses the west side of the San Joaquin Valley, and water is pumped through a series of four pumping plants (Dos Amigos, Buena Vista, Teerink, and Chrisman) before reaching the Edmonston

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22 Department of Water Resources. 2001. *Bulletin 132-00: Management of the California State Water Project*. December 2001.

Pumping Plant. The Edmonston Pumping Plant pumps water over the Tehachapi Mountain Range, and the California Aqueduct then divides into the East Branch and the West Branch. Water intended for use by CLWA is conveyed through the West Branch to Quail and Pyramid Lakes and then to Castaic Lake, the terminus for the West Branch.

Water Supply and Demand[23] In the early 1960s, DWR began entering into individual water supply contracts with various urban and agricultural public water supply agencies (i.e., SWP Contractors). The total planned annual delivery capability of the SWP and the sum of all SWP Contractors' maximum Table A Amounts specified in the water supply contracts were approximately 4.2 million acre-feet (maf). The initial SWP storage facilities were designed to meet SWP Contractors' water demands in the early years of the project, with construction of additional storage facilities planned as demands increased. Conveyance facilities were generally designed and constructed to deliver full Table A Amounts to SWP Contractors. Water deliveries to SWP Contractors began as initial SWP facilities were completed in the late 1960s and early 1970s; however, no additional SWP storage facilities have been constructed since that time.

From 1990 to 2003, actual SWP annual deliveries of Table A supplies to SWP Contractors ranged from approximately 550,000 af in 1991 to approximately 3.2 maf in 2000. The primary factors affecting the amount of Table A deliveries are the availability of SWP supplies and the SWP Contractors' demands for this water. Climatic conditions and other factors can significantly alter the availability of SWP water in any year. The amount of water DWR determines is available and allocates for delivery in a given year is based on that year's hydrologic conditions, the amount of water in storage in the SWP system, current regulatory and operational constraints, and the SWP Contractors' requests for SWP supplies. Even in years when additional Table A supplies are available, the amount of water DWR allocates is limited to SWP Contractors' requests. The requests of many SWP Contractors during this 14-year period were less than their full Table A Amount, so SWP Contractor requests limited allocations in some years. In addition, since as SWP Contractors' water needs may change during the year (e.g., due to higher than anticipated local precipitation and supplies), they may not take delivery of all of the Table A supply allocated to them. Since historically low Contractor demands have limited deliveries in wetter years when additional supplies were available, historic deliveries only provide an indication of actual SWP delivery capability in supply-limited dry years.

To determine the SWP delivery capability under current and future conditions, DWR uses a computer model (currently, CALSIM II) that simulates operations of the SWP and CVP. DWR's most recently

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23 Bulletin 132-04, *Management of the California State Water Project*, is the most recent published data by DWR for SWP operations and deliveries to SWP Contractors. Because Bulletin 132-04 covers SWP activities through calendar year 2003, the SWP delivery information presented in this EIS/EIR includes information through calendar year 2003, which is the latest year available.

published estimates of SWP delivery capability and reliability are included in its *State Water Project Delivery Reliability Report 2005, Final* (see **Appendix 4.10**). In this report, DWR estimates that annual deliveries of Table A supplies to SWP Contractors will average approximately 2.8 maf under current conditions and 3.2 maf under 2025 conditions (based on estimates of current and 2025 levels of SWP Contractor demands and land and water use upstream of the Bank Pumping Plant,[24] with existing SWP facilities operated under the constraints of D-1641).

A topic of growing concern for water planners and managers is global warming and the potential impacts it could have on California's future water supplies. DWR's *California Water Plan Update 2005* contains the first-ever assessment of such potential impacts in a California Water Plan (see **Appendix 4.10**). Volume 1, Chapter 4 of the Water Plan, *Preparing for an Uncertain Future*, lists the potential impacts of global warming, based on more than a decade of scientific studies on the subject.

Changes in Sierra snowpack patterns (the source of the SWP's water supply in Lake Oroville), hydrologic patterns, sea level, rainfall intensity and statewide water demands are all possible should global warming prove to be increasing through time. Computer models (such as CALVIN) have been developed to show water planners what types of effect climate change could have on the water supply. DWR has committed to continue to update and refine these models based on on-going scientific data collection, and to incorporate this information into future California Water Plans, so that agencies like CLWA and the purveyors can plan accordingly.

DWR also addresses global warming in its report, *SWP Delivery Reliability Report 2005, Final*, noting that until the impacts of climate change on precipitation and runoff are better quantified, future weather patterns are usually assumed to be similar to those of the past (see **Appendix 4.10**). DWR also acknowledges that this assumption has an inherent uncertainty, especially given the evolving information on the potential effects of global climate change and indicates that as information regarding climate change becomes better defined, it will be helpful in guiding the development of statewide strategies for the future management and development of water resources facilities, including the SWP.

CLWA Imported Water Supplies and Facilities. CLWA receives SWP water through the terminus of the West Branch of the California Aqueduct at Castaic Lake. Water supplies (whether derived from local or imported water supplies) require treatment (filtration and disinfection) prior to distribution. SWP water from Castaic Lake is treated at the Earl Schmidt Filtration Plant (ESFP) and Rio Vista Water Treatment

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24 Land and water use upstream of the Banks Pumping Plant affects the amount of water flowing into the Delta. In general, increases in the amount of water flowing into the Delta can increase SWP supplies, while decreases in the amount of water flowing into the Delta (due to increased water use upstream or a variety of other factors) can decrease SWP supplies.

Plant (RVWTP) (both owned and operated by CLWA), and is distributed to the four retail water purveyors through a system of pipelines.

The RVWTP is planned for future expansion from its current 30 million gallons per day (mgd) treatment capacity to 60 mgd, and eventually to 90 mgd as demands for treated water increase. ESFP operates at a treatment capacity of 56 mgd. The current combined capacity of the two treatment plants is approximately 86 mgd.

Santa Clarita Valley Water Supply. The current water supply for the Santa Clarita Valley is derived from both local and imported sources. The principal components of this supply are imported water from the SWP and local groundwater from both the Alluvial aquifer and the Saugus Formation. Since 2003, these water supplies have been augmented by the initiation of deliveries from CLWA's recycled water program.

In addition to these supplies, which are available and used to meet service area demands every year, CLWA also has several storage programs that are planned for use under temporary shortage situations (e.g., during drier years when imported supplies are limited). These storage programs improve the reliability of CLWA's overall supplies by enabling existing supplies that are unneeded in wetter years to be stored for use in drier years, but they do not increase the supplies available to meet service area demand every year. A variety of future water sources (including desalted ocean water, increased Saugus Formation production, and other imported water sources) could be developed to supply future development planned for the CLWA service area.

Table 4.10-8, Summary of Current Water Supplies and Banking Programs, summarizes the water supplies from existing water sources that are available to meet demands in the CLWA service area.

Table 4.10-8
Summary of Current Water Supplies and Banking Programs
(Average/Normal Years)[1]

Water Supply Sources	Supply (AF)					
	2005	*2010*	*2015*	*2020*	*2025*	*2030*
Existing Supplies						
SWP Table A Supply[2]	64,740	66,640	69,500	71,400	73,300	73,300
Flexible Storage Account (CLWA)[3]	4,680	4,680	4,680	4,680	4,680	4,680
Flexible Storage Account (Ventura County)[3, 4]	0	1,380	1,380	0	0	0
Local Supplies						
Alluvial Aquifer	35,000	35,000	35,000	35,000	35,000	35,000
Saugus Formation	5,000	11,000	11,000	11,000	11,000	11,000
Recycled Water	1,700	1,700	1,700	1,700	1,700	1,700
Total Supplies	112,080	121,360	123,260	123,780	125,680	125,680
Existing Banking Programs[3]						
Semitropic Water Bank[5]	50,870	50,870	0	0	0	0
RRBWSD Storage Program[6]	0	21,450	21,450	21,450	21,450	21,450
Total Existing Banking Programs	50,870	72,320	21,450	21,450	21,450	21,450

Notes:

Source: CLWA, 2005 *(see **Appendix 4.10**).*

1 *The values shown under "Existing Supplies" are supplies projected to be available in average/normal years (based on the average delivery over an historic 72-year hydrologic period from 1922 to 1994). The values shown under "Existing Banking Programs" are either total amounts currently in storage, or the maximum capacity of program withdrawals.*

2 *SWP supplies are calculated by multiplying CLWA's Table A Amount of 95,200 af by percentages of average deliveries projected to be available taken from Table 6-1 of DWR's* SWP Delivery Reliability Report 2005, *Final (April 2006). The 2005 and 2010 SWP supply numbers vary slightly from those shown in the* 2005 UWMP *due to minor refinements made by DWR when it finalized the* 2005 Reliability Report *(see **Appendix 4.10**).*

3 *Supplies shown are total amounts that can be withdrawn, and would typically be used only during dry years.*

4 *Initial term of the Ventura County entities' flexible storage account is 10 years (from 2006 to 2015).*

5 *Supplies shown are the total amount currently in storage, and would typically be used only during dry years. Once the current storage amount is withdrawn, this supply would no longer be available and in any event, is not available after 2013.*

6 *Supply shown is the total amount that can be withdrawn in a given year and would typically be used only during dry years.*

Imported SWP Water. Under existing supplies in **Table 4.10-8**, above, SWP supply estimates are based on the data presented in DWR's *SWP Delivery Reliability Report, 2005, Final* (April 2006), with SWP water supplies allocated among SWP Contractors in accordance with their water supply contract provisions

currently in effect (see **Appendix 4.10**).[25] **Table 4.10-9, SWP Table A Supply for Single-Dry and Multiple-Dry Years**, shows SWP supplies projected to be available in a single dry year (based on a repeat of the worst-case hydrologic conditions of 1977) and over a multiple-dry-year period (based on a repeat of the worst-case four-year drought 1931–1934).

Table 4.10-9
SWP Table A Supply (in Percent of Maximum CLWA Table A Amount) for Single-Dry and Multiple-Dry Years[1]

Supply Source	Single Dry Year[2]	Multiple Dry Years[3]
SWP Table A Supply/Delivery		
2005		
Table A Supply (af)	3,800	30,500
% of Table A Amount	4%	32%
2025/2030		
Table A Supply (af)	4,800	31,400
% of Table A Amount	5%	33%

Notes:

Sources: 2005 UWMP *and* SWP Delivery Reliability Report *2005, Final (April 2006) (see* ***Appendix 4.10****).*

[1] *The percentages of Table A Amount projected to be available are taken from Table 6.1 of DWR's* SWP Delivery Reliability Report 2005*, Final (April 2006). Supplies are calculated by multiplying CLWA's Table A Amount of 95,200 af by these percentages.*

[2] *Based on the worst-case historic single dry year of 1977.*

[3] *Supplies shown are annual averages over four consecutive dry years, based on the worst-case historic four-year dry period of 1931–1934.*

Local Groundwater Supplies. As shown on **Table 4.10-8**, above, the primary local water supply in the CLWA service area is groundwater extracted from the Alluvial aquifer and from the underlying Saugus Formation. Most water wells within the CLWA service area are drilled into the Alluvial aquifer. In his recent updated report on the Alluvial aquifer, Slade (2002) identified the operational yield of the Alluvial aquifer to be about 30,000 to 40,000 af in normal weather years, and 30,000 to 35,000 af in dry years.

The Saugus Formation contains much greater quantities of groundwater than the Alluvial aquifer. Storage capacity within the Saugus Formation is estimated to be 1.65 million af (Slade 2002). Based on the amount of water in storage and the historic aquifer performance, Slade (2002) identified that production from the Saugus Formation for dry period water supply could be increased from 15,000 to 20,000 afy, and

25 The water supply contracts between DWR and the SWP Contractors include provisions regarding how total available SWP water supplies are allocated among SWP Contractors. The allocation provisions currently in effect are as they were amended by the Monterey Amendment. The Monterey Amendment has been in effect for ten years, but pursuant to litigation, is undergoing a second environmental review by DWR (see **Appendix 4.10**).

ultimately to 35,000 afy if dry conditions continue. The increase to 35,000 afy would be temporary and would need to return to, or be reduced below, the historical range of 7,500 to 15,000 afy once rainfall patterns returned to normal in order to naturally replenish storage and avoid long-term adverse effects to the aquifer.

Recycled Water Supplies. As shown on **Table 4.10-8**, above, since 2003, local water supplies have been augmented by the initiation of deliveries from CLWA's recycled water program. CLWA currently has rights to use 1,700 afy of recycled water. This supply is assumed to be available in an average/normal year, a single-dry year, and in each year of a multiple dry year period.

In the *2005 UWMP*, CLWA projects an increase of 15,700 afy in the supply of recycled water by 2030, for a total recycled water supply of 17,400 afy (see **Appendix 4.10**). Similar to the existing recycled water supply, the 15,700 afy of planned recycled water supply is assumed to be available in an average/normal year, single-dry year, and in each year of a multiple dry year period.

As the Newhall Ranch Specific Plan is developed, recycled water also would be available to the Specific Plan from the Newhall Ranch WRP. Water from the Newhall Ranch WRP would be used to meet the non-potable demands of the Specific Plan. Areas that would use recycled water include common areas, slopes, landscaped areas and parks.

CLWA Storage Programs. As shown on **Table 4.10-8**, above, CLWA participates in several storage programs: (a) SWP flexible storage account; (b) Temporary storage under groundwater banking agreements with the Semitropic Water Storage District (SWSD); and (c) Storage under the Rosedale-Rio Bravo Water Storage District (RRBWSD) Groundwater Storage, Banking, Exchange, Extraction and Conjunctive Use Program (RRBWSD Storage Program). CLWA plans to withdraw water from these storage programs under temporary shortage situations, such as during drier years when imported supplies are limited.

In its SWP flexible storage account, CLWA has access to 4,684 af of water in Castaic Lake. Under the terms of the Monterey Amendment to the SWP water supply contract, CLWA may withdraw up to this amount of water from flexible storage and use it in addition to its Table A supply, and must then replace any water withdrawn within five years of withdrawal (see **Appendix 4.10**). CLWA has recently negotiated with Ventura County water agencies to obtain the use of their flexible storage account. This will allow CLWA access to another 1,376 af of storage in Castaic Lake (rounded to 1,380 af in **Table 4.10-8**, above). CLWA access to this additional storage will be available on a year-to-year basis for 10 years, beginning in 2006. Consequently, for the 10-year period, CLWA could have access to up to an additional 6,060 af annually from this program.

Pursuant to a groundwater banking agreement with SWSD, in 2002, CLWA was able to store on a short-term basis (10 years or less) some of its allocated SWP Table A supply. CLWA withdrawals of up to 21,600 af of the amount stored must be completed within 10 years of its storage. Similarly, in 2004, CLWA was able to store on a short-term basis (10 years or less) some of its allocated 2003 SWP Table A supply pursuant to another groundwater banking agreement with SWSD. CLWA withdrawals of up to an additional 29,270 af of the amount stored must be completed within 10 years of its storage. Thus, CLWA currently has a total of 50,870 af of stored water supplies available for use in dry years from the SWSD banking program.

CLWA's participation in the RRBWSD Storage Program was approved by the Board of Directors in October 2005, and 21,450 af of CLWA's Table A Amount was stored in the program between November 2005 and January 2006. This is a long-term banking and exchange project that would last through 2035, the length of CLWA's water supply contract with DWR, although it may be extended beyond that date concomitant with any extension of the water supply contract.

CLWA Service Area Water Demand. Table 4.10.10, CLWA's Projected Water Demands, shows CLWA's 2005 and projected water demands based on the *2005 UWMP*. CLWA's demands vary from year-to-year depending on local hydrologic and meteorological conditions, with demands generally increasing in years of below average local precipitation and decreasing in years of above average local precipitation. In 2001, CLWA signed the MOU Regarding Urban Water Conservation in California (MOU) on behalf of the CLWA service area. By signing the MOU, CLWA became a member of the California Urban Water Conservation Council (CUWCC) and pledged to implement all cost-effective Best Management Practices (BMPs) for water conservation. CLWA has estimated that conservation measures within the service area can reduce the urban demand water demand by about 10 percent.

Table 4.10-10
CLWA's Projected Water Demands

	Demand (af)						Annual
	2005	*2010*	*2015*	*2020*	*2025*	*2030*	Increase
All Purveyors	73,700	86,100	97,100	106,500	119,400	129,300	2.20%
Agricultural/Private Uses	15,600	13,950	12,300	10,650	9,000	9,000	--
Conservation[1]	-7,370	-8,610	-9,710	-10,650	-11,940	-12,930	--
Total (w/conservation)	81,930	91,440	99,690	106,500	116,460	125,370	1.30%

Notes:

[1] *Assumes 10 percent reduction on urban portion of demand resulting from conservation BMPs.*

Source: CLWA, 2005.

(2) Litigation Effects on Availability of Imported Water

For the past few years, there have been a series of litigation challenges concerning imported water supplies in the Santa Clarita Valley. The litigation challenges have given rise to claims that there is uncertainty regarding the availability and reliability of imported SWP water supplies in the Santa Clarita Valley.

The purpose of this section is to disclose these litigation challenges and their effects on the availability and reliability of imported water supplies in the Santa Clarita Valley. In summary, as discussed below, it has been determined, based on substantial evidence in the record, that the litigation challenges are not likely to affect the short-term or long-term availability or reliability of imported water supplies as projected in the *2005 UWMP* and other reports, studies, and documents cited in this EIR.

(a) Litigation Concerning CEQA Review of the Monterey Agreement

In Planning and Conservation League v. Department of Water Resources (2003) 83 Cal.App. 4th 892, the Court of Appeal, Third Appellate District, decertified an EIR prepared by the Central Coast Water Agency (CCWA) to address the "Monterey Agreement" (see **Appendix 4.10**). The Monterey Agreement was a statement of principles to be incorporated into an omnibus amendment of the long-term contracts between the DWR and water contractors governing the supply of water under the SWP. The Monterey Agreement was the culmination of negotiations between DWR and most of the 29 SWP Contractors to settle disputes arising out of the allocation of water during times of shortage. Twenty-seven of the 29 SWP Contractors executed the Monterey Amendments to their water supply contracts in 1996. The Monterey Agreement contemplated revisions in the methodology of allocating water among contractors and provided a mechanism for the permanent transfer of Table A water amounts from one contractor to another. The Monterey Agreement was implemented by the execution of legally binding contracts with DWR (Monterey Amendments).

Although the court set aside the Monterey EIR prepared by CCWA, it did not set aside, invalidate, or otherwise vacate the Monterey Agreement or the Monterey Amendments. No court has ordered any stay or suspension of the Monterey Agreement pending certification of a new EIR. DWR and the SWP Contractors continue to abide by the Monterey Agreements, as implemented by the Amendments, as the operating framework for the SWP.

Following decertification of the original Monterey EIR, the PCL litigants entered into the Monterey Settlement Agreement in 2003, designating DWR as the lead agency for the preparation of an EIR to address the Monterey Agreement. DWR is currently in the process of preparing that EIR. The Monterey Settlement Agreement also declared that certain water transfers between contracting agencies were

"final." A 41,000-afy Kern-Castaic transfer (discussed further below) was not among those "final" transfers but rather was recognized as a permanent transfer, which was still subject to the then-pending litigation in Los Angeles Superior Court challenging the EIR prepared for that transfer. (*Friends of the Santa Clarita River v. Castaic Lake Water Agency*, see discussion below.) DWR's Monterey EIR will analyze the potential environmental effects relating to the Monterey transfers, including a focused analysis of the 41,000-afy transfer, which will be provided as part of a broader analysis of past and future permanent transfers of Table A Amounts.

(b) Litigation Concerning CEQA Review of the 41,000-afy Transfer

Of CLWA's 95,200 af annual Table A Amount, 41,000 afy was permanently transferred to CLWA in a contract approved by DWR in 1999 by Wheeler Ridge-Maricopa Water Storage District, a member unit of the Kern County Water Agency. CLWA prepared an EIR in connection with the 41,000-afy water transfer, which was challenged in *Friends of the Santa Clara River v. Castaic Lake Water Agency* (Los Angeles County Superior Court, Case No. BS056954) ("*Friends*"). The original trial court decision was completely in favor of CLWA. On appeal, the Court of Appeal, Second Appellate District, held that since CLWA's original EIR tiered from the Monterey EIR that was later decertified (see supra, *Planning and Conservation League v. Dept. of Water Resources* (2000) 83 Cal. App. 4th 892, above), CLWA also would have to decertify its EIR as well and prepare a revised EIR. The court refused, however, to enjoin CLWA from using any part of the 41,000-afy transfer pending preparation of a new EIR.

The original EIR for the 41,000-afy transfer having been decertified, CLWA prepared and circulated a revised Draft EIR for the 41,000-afy transfer, received and responded to public comments regarding the revised Draft EIR, and held two separate public hearings concerning the revised Draft EIR. CLWA approved the revised EIR for the 41,000-afy transfer on December 22, 2004, and lodged the certified EIR with the Los Angeles Superior Court as part of its return to the trial court's writ of mandate in *Friends*. Thereafter, the *Friends* petitioners voluntarily dismissed the *Friends* action in February 2005.

In January 2005, two new legal challenges to CLWA's revised EIR for the 41,000-afy transfer were filed in the Ventura County Superior Court by the Planning and Conservation League and by the California Water Impact Network. These cases have been consolidated and transferred to Los Angeles County Superior Court and are still pending.

The new pending challenges to the adequacy of CLWA's revised EIR for the 41,000-afy transfer, and DWR's pending preparation of a new Monterey EIR, arguably, introduce an element of potential uncertainty regarding the 41,000-afy transfer, although based on a review of all the surrounding circumstances, these events do not significantly affect the reliability of the transfer amount, and,

therefore, it is still appropriate for the County to conclude that CLWA and VWC properly included the transfer amount as part of CLWA's 95,200 afy Table A Amount, for several reasons.

First, the 41,000-afy transfer was completed in 1999 in a DWR/CLWA water supply contract amendment approved by DWR. Since 2000, DWR has allocated and annually delivered the water in accordance with the completed transfer.[26] In connection with that transfer, CLWA paid approximately $47 million for the additional 41,000 afy Table A supply, the monies have been accepted by the Wheeler Ridge-Maricopa Water Storage District, a member unit of the Kern County Water Agency, the sale price has been financed through the sale of CLWA tax-exempt bonds, and, as noted, DWR has expressly approved and amended CLWA's long-term water supply contract to reflect the increase in CLWA's SWP Table A Amount and the permanent transfer/reallocation of SWP Table A supply between SWP Contractors. This contract has never been set aside but continues in full force and effect.

Second, the Court of Appeal held that the only defect in the 1999 CLWA EIR was that it tiered from the Monterey EIR, which was later decertified. This defect has now been remedied by CLWA's preparation and certification of a revised EIR that did not tier from the Monterey EIR. This new CLWA EIR must be deemed to be legally adequate until and unless it is set aside by a court.

Third, the Monterey Settlement Agreement expressly authorized the operation of the SWP in accordance with the Monterey Amendments. The Monterey Amendments, which are still in effect and have not been set aside by any court, authorized SWP Contractors to transfer unneeded SWP supply amounts to other contractors on a permanent basis. Specifically, the Monterey Agreement provisions authorized 130,000 af of agricultural SWP Contractors' entitlements to be available for sale to urban SWP Contractors. CLWA's 41,000 af acquisition was a part of the 130,000 af of SWP Table A supply that was transferred, consistent with the Monterey Amendments. Although DWR is still in the process of preparing the EIR to address the Monterey Agreement, the court in the PCL litigation refused to set aside the Monterey Agreement pending preparation of that EIR.

Fourth, the Court of Appeal in *Friends* refused to enjoin the 41,000-afy transfer, and instead required CLWA to prepare a revised EIR, which EIR CLWA has now completed and certified.

Fifth, CLWA's amended water supply contract documenting the 41,000-afy transfer remains in full force and effect, and no court has ever questioned the validity of the contract or enjoined the use of this portion of CLWA's Table A Amount.

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26 This contract was never legally challenged and, therefore, is considered permanent and in full force and effect.

For all these reasons, the County is entitled to rely on CLWA's and VWC's determination that it is reasonable to include the 41,000-afy transfer in its calculation of available water supplies.

With respect to the new Monterey EIR, CLWA has concluded that its use of the 41,000 afy is not legally bound to the Monterey Agreement litigation or to DWR's new EIR for the Monterey Agreement and may occur independently of that Agreement. That DWR did not oppose CLWA's completion and certification of the new EIR for the water transfer, independent of DWR's new Monterey Agreement EIR, supports this view. Thus, the pending legal challenges to CLWA's revised EIR and DWR's preparation of a new Monterey EIR are not expected to impact the amount of water available to CLWA as a result of the completed 41,000-afy transfer.

The CLWA 41,000 af transfer also has been the subject of recent court decisions. The first court case involved a published appellate court decision in litigation entitled, *California Oak Foundation v. City of Santa Clarita* (2005) 133 Cal.App.4th 1219. In the *California Oak Foundation* decision, the Court of Appeal invalidated an EIR under CEQA for the Gate-King project located in the City of Santa Clarita, because the EIR did not explain how demand for water would be met if the 41,000 afy transfer were set aside, or why it is appropriate to rely on the 41,000 afy transfer in any event. The above analysis in this document explains in detail why it is appropriate to rely on the CLWA 41,000 afy transfer as part of CLWA's overall SWP water supplies.

The second court case involved a separate legal challenge to an EIR under CEQA for the West Creek project located in Los Angeles County. This separate legal challenge was brought in Santa Barbara County Superior Court in *Santa Clarita Organization for Planning the Environment v. County of Los Angeles*, Case No. 1043805 (*West Creek* litigation). After a hearing, the Santa Barbara Superior Court issued an Order determining that the EIR prepared for the West Creek project contained substantial evidence in the record to support the County's decision to rely on the 41,000-afy transfer for planning purposes. The Order noted that substantial evidence appeared in the record to support the County's decision to rely on the 41,000-afy transfer, while acknowledging and disclosing the potential uncertainties involving the 41,000-afy transfer created by pending litigation. The Order summarized the evidence, including the fact that (a) DWR continues to allocate and deliver the water in accordance with the amended water supply contract authorizing the 41,000 afy transfer; (b) neither the Monterey Agreement litigation, nor the Monterey Settlement Agreement set aside any of the water transfers made under the Monterey Agreement, including the 41,000 af transfer; (c) the courts have not enjoined CLWA's use of the 41,000 af transfer; and (d) CLWA has prepared and certified a revised EIR on the 41,000 af transfer and that EIR is presumed adequate despite pending legal challenges. A copy of the Santa Barbara Superior Court Order in the *West Creek* litigation is provided in **Appendix 4.10** of this EIR. The *West Creek* decision is currently on appeal.

The third court case involved another challenge to an EIR under CEQA for the Riverpark project located in the City of Santa Clarita, County of Los Angeles. This legal challenge was brought in Los Angeles County Superior Court in *Sierra Club, et al. v. City of Santa Clarita*, Case No. BS 098722 (*Riverpark* litigation).

After a hearing in the *Riverpark* litigation, the Los Angeles County Superior Court issued a decision determining that the City had properly relied on the 41,000 afy water transfer for planning purposes, and rejected petitioners' claims that legal uncertainties surrounding the 41,000 afy transfer due to other litigation (e.g., *Planning and Conservation League v. Department of Water Resources* (2000) 83 Cal.App.4th 892; *Friends of Santa Clara River v. CLWA* (2002) 95 Cal.App.4th 1373; and *California Oak Foundation v. City of Santa Clarita* (2005) 133 Cal.App.4th 1219) precluded the City from relying on water from that transfer for planning purposes. The court also determined that the 41,000-afy transfer was sufficiently certain and that the Monterey Settlement Agreement did not preclude the City from relying on the transfer in its EIR for the Riverpark project pending DWR's preparation of its Monterey Agreement EIR. Finally, the court found that substantial evidence in the EIR and record supported the City's decision that water from the 41,000-afy transfer could be relied on as part of CLWA's supplies. A copy of the Los Angeles County Superior Court decision in the *Riverpark* litigation is provided in **Appendix 4.10** of this EIR. The *Riverpark* decision is expected to be the subject of an appeal.

(c) Litigation Concerning the Adequacy of the *2005 UWMP*

In February 2006, the California Water Impact Network and Friends of the Santa Clara River ("Petitioners") filed another lawsuit, challenging the adequacy of the 2005 Urban Water Management Plan (UWMP) on multiple grounds. The main arguments presented in this suit are that the UWMP allegedly overstates the reliability of both groundwater and surface water supplies, fails to provide an adequate discussion of perchlorate contamination, fails to adequately address the reliability of the 41,000-afy transfer, relies on a flawed model for predicting SWP deliveries, fails to address the effect of global warming and regulatory water quality controls on water deliveries from the SWP, and fails to identify the impact of private wells on the Santa Clarita River watershed.

The County acknowledges that a challenge to the adequacy of the *2005 UWMP* has been filed but concludes that it may assume that the recently adopted UWMP is legally adequate, unless and until it is set aside by a court of competent jurisdiction. That has not occurred. Moreover, under Water Code Section 10910(c)(2), water supply assessments are entitled to rely the most recently adopted UWMP if the projected water demand associated with the proposed project was accounted for in the most recently adopted UWMP. The *Water Supply Assessment* prepared by Valencia Water Company for Landmark Village complied with Section 10910(c)(2) and incorporated data from the most recently adopted UWMP.

Further, the allegations of legal inadequacy made by petitioners were raised in the multiple hearings before the CLWA during its review of the UWMP prior to adoption of the document. CLWA responded to, and rejected, these allegations of inadequacy.

(3) Summary of County's Conclusions About Effect of Litigation on Sufficiency of Water Supplies

This EIR acknowledges that multiple court challenges have been filed challenging the sufficiency of water supplies. Based on the status of these challenges, their likely outcome, and the fact that no court has yet set aside any of the water transfers or other physical activities approved under any of the challenged documents, the County has determined that there is substantial evidence in the record to support the conclusions in the *2005 UWMP*, the 2005 Water Report, and the Landmark Village WSA that there is sufficient water to serve this project as well as anticipated cumulative development.

6. PROPOSED PROJECT IMPROVEMENTS

As shown on **Figure 4.10-8, Landmark Village Potable Water System Infrastructure**, the proposed water delivery system consists of one new water tank and three pressure regulating stations connected to a network of 18- to 20-inch water mains that generally follow the southern right-of-way for State Route 126 (SR-126) and major roadways. A network of 8-inch lines located within the planned roadway network would distribute the water for connection to laterals located on individual lots.

A single water pressure zone (Zone 1A) overlies the project site, and is supplied potable water via the three pressure regulating stations from Zone 1 that will provide all the potable water supply for the system serving Zone 1A, which contains the proposed Landmark Village VTTM 53108. Pressure Zone 1 serves uses at an elevation of less than 1,160 feet above mean sea level (MSL) and is comprised of three storage tanks with a combined storage capacity of 8.3 million gallons and numerous sources of supply consisting of existing groundwater wells and CLWA turnouts.

Potable water demands for Landmark Village will be met by using groundwater produced from the Alluvial aquifer from newly constructed replacement wells located within the Valencia Commerce Center that have been approved and permitted by the California DHS. These wells replaced older wells used for irrigation that are no longer active having been permanently closed as directed by DHS. In August 2004, Valencia received an amended water supply permit from DHS for approval and construction of four domestic water supply wells. Two of the four replacement wells are needed for the project and will operate by delivering water to Zone 1 and then regulated into Zone 1A to meet the demands of project. The additional wells will be used to meet future needs when needed.

Landmark Village Project Area
LANDMARK VILLAGE
WELL E15
WELL E14
WELL E16
WELL E17
COMMERCE CENTER DRIVE
ZONE IA 2.0 MG POST OFFICE
ZONE IA PRV
EXISTING ZONE I 2.5 MG POST OFFICE
WOLCOTT WAY
HIGHWAY 126
FUTURE BRIDGE
ALTERNATE WATER TREATMENT PLANT SITES
SANTA CLARA RIVER
CASTAIC CREEK
CHIQUITO CANYON RD
FUTURE BRIDGE
Legend:
ZONE IA
PROPOSED
ZONE I
EXISTING
PROPOSED
PRESSURE REDUCING VALVE
WATER TANK
EXISTING WELL
WTP
PROPOSED ALTERNATIVE WATER TREATMENT PLANT SITES
1500 750 0 1500
APPROXIMATE SCALE IN FEET

SOURCE: Penfield & Smith – September 2005

FIGURE **4.10-8**

Landmark Village Potable Water System Infrastructure

32-92•05/06

Zone 1A will require construction of a new potable water tank. This new potable water tank would be constructed near an existing water tank located in the Valencia Commerce Center, but at a slightly lower elevation. Two 20-inch potable water lines located within two 3.5-foot-wide by 5-foot-deep trenches would extend approximately 5,600 lineal feet from the tank along the existing Wolcott Road alignment, crossing SR-126 and into the proposed subdivision. This main would also extend to the Newhall Ranch WRP along the south SR-126 right-of-way from the west side of the tract map site. Construction is estimated to last 3 to 4 months.

The new potable water tank would consist of an aboveground welded steel tank supported by a reinforced concrete ring footing, with a storage capacity of 2.0 million gallons. The new tank would be designed and constructed to meet American Water Works Association (AWWA), National Sanitary Foundation (NSF), and other industry standards for domestic water storage. With the new water tank, a total of 10.3 million gallons of storage capacity would be available to meet the emergency and fire-flow storage capacity requirements necessary to support the project upon completion. The proposed Zone 1A water system consisting of one tank and three pressure regulating stations from Zone 1 provide redundant sources of supply and storage to enhance the system's reliability, safety, and efficiency.

Project improvements also include abandonment and relocation of existing agricultural wells used to irrigate cultivated fields on site and on other portions of Newhall Ranch. These existing wells and associated piping would be relocated or properly abandoned, as necessary, to continue to meet on-going agricultural needs elsewhere on Newhall Ranch.

The Landmark Village Project proposes to use reclaimed water for landscape irrigation purposes and other allowable uses. The proposed delivery system for reclaimed (non-potable) water is illustrated on **Figure 4.10-9, Preliminary Reclaimed Water Storage System**. Currently, reclaimed water is only available at the Valencia Water Reclamation Plant along the Old Road east of the project. Concurrent with buildout of the project reclaimed water will become available from the Newhall Ranch Water Reclamation Plant west of the project. To supply reclaimed water to Landmark Village and provide for a backbone system to serve other areas of Newhall Ranch, a reclaimed piping system will be constructed from the proposed Newhall Ranch Water Reclamation Plant through the Landmark Village project to the existing Valencia Water Reclamation Plant No. 32. This pipeline would be constructed starting from the west along the SR-126 right of way approximately 10,000 feet to the proposed subdivision. The line will pass through the subdivision approximately 11,000 feet along the future spine road alignment. The line will then continue eastward where it will connect with the existing Valencia Water Reclamation Plant. This reclaimed waterline will extend east along the north and south right of way of State Route 126 and the south right of way of Henry Mayo Drive. This portion of the reclaimed waterline would measure approximately 10,000 linear feet. At the point where SR-126 merges with Interstate 5 (I-5), the line would

then head south along the western right of way along The Old Road where it would connect to the existing Valencia Plant. This southerly section is approximately 6,200 feet. Construction of the reclaimed waterlines would take approximately 12 months. The reclaimed water would be pressurized through the existing pump station at the Valencia Plant or through the proposed pump station at the Newhall Ranch Water Reclamation Plant.

Storage would be required for the reclaimed water system. 500,000 gallons of storage would be provided at the Newhall Ranch Water Reclamation as a fore bay for the pump station. Additional operational storage would be required and this storage is currently proposed to be provided by converting the 3.3 million gallon Round Mountain Tank which is currently being used for potable water into a reclaimed water reservoir. Reclaimed Water would be delivered to this tank through the pipeline that is connected to the Valencia Plant. To utilize this tank pipes would be extended southward in the Old Road and then follow the Santa Clarita trails system eastward to connect to the existing Round Mountain Tank. Another storage option was considered which would have required a new tank be constructed. This tank would have required construction of pipeline from the project approximately 5,000 feet north in Chiquito Canyon Road and then 2,000-foot westward from Chiquito Canyon Road to a 1-acre site. This site would have been graded for construction for a reservoir. The current preferred site is the Round Mountain site.

7. PROJECT IMPACTS

a. Significance Threshold Criteria

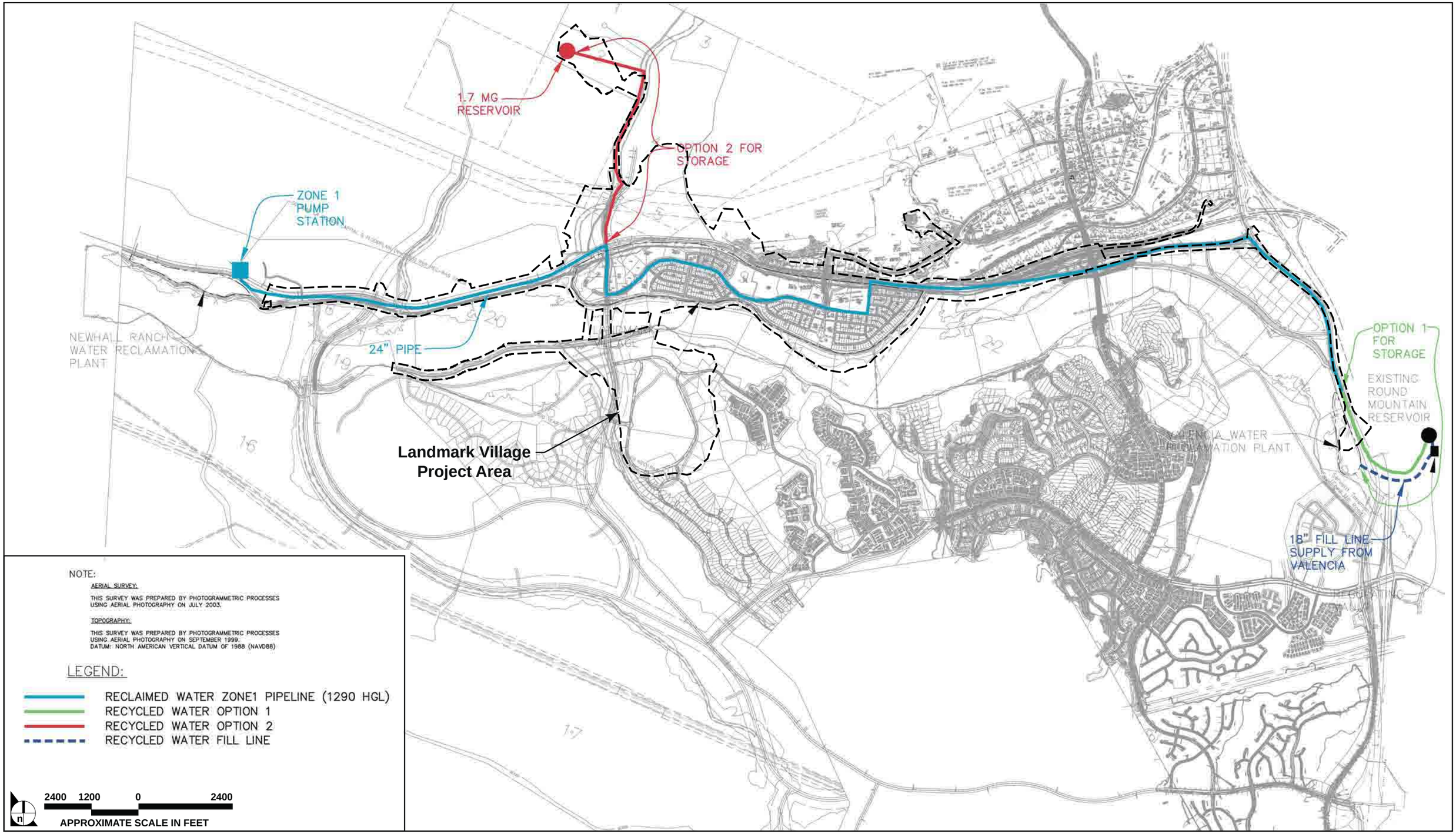
The criteria listed below are based on Appendix G of the *CEQA Guidelines* (2005). The proposed Landmark Village project would normally have a significant impact on water resources if it would:

- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted); or

- Have insufficient water supplies available to serve the project from existing entitlements and resources, or new or expanded entitlements are needed.

According to the County of Los Angeles Environmental Document Reporting Procedures and Guidelines,[27] the County also requires an analysis of adverse impacts on water availability when a project cannot be served by the existing area water system facilities due to inadequate water supplies to meet the domestic demands, and/or fire flows for fire protection.

27 See, County of Los Angeles Department of Regional Planning, *Environmental Document Reporting Procedures and Guidelines*, (Los Angeles, California: adopted by the County Board of Supervisors 17 November 1987), Appendix D.



SOURCE: Newhall Land – January 2006

FIGURE **4.10-9**

Preliminary Reclaimed Water Storage System

b. Environmental Impacts Associated With The Landmark Village Water Supplies

Water Supply Impacts. As indicated in the *SB 610 Water Supply Assessment* for the Landmark Village project, an adequate supply of water is available to meet the demands of the Landmark Village project in addition to existing and planned future uses in the Santa Clarita Valley (see **Appendix 4.10**). The supply available to meet the project's potable demand is the applicant's groundwater supplies from the Alluvial aquifer, which is presently used for agricultural uses. As stated above, there will be no net increase in groundwater usage due to the conversion of agricultural water to potable supply uses for the project site. The project's non-potable demand will be met by recycled water from the Newhall Ranch WRP or, alternatively from the existing Valencia WRP, upstream from the project site. Because the applicant is utilizing its own water supplies from independent sources, the project does not result in or contribute to any significant cumulative water supply impacts in the Santa Clarita Valley. Accordingly, as documented further below in the section assessing the Landmark Village water demand and supplies, sufficient water supplies are available to serve the project from existing supplies without creating the need for any new or expanded water entitlements or facilities. The available water supplies also are sufficient to meet the domestic demands and fire flows for the Landmark Village project.

Groundwater Supply Impacts. Supplying water to the Landmark Village project also would not substantially deplete groundwater supplies, because the previous discussion in this EIR of available local groundwater supplies confirms that there are sufficient local groundwater supplies to support the planned land uses of the Landmark Village project site, in addition to existing and future cumulative development in the valley. As stated above, groundwater supplies were recently evaluated in the *2005 UWMP* and the 2005 *Basin Yield Report*. This evaluation resulted in the following findings: (a) Both the Alluvial aquifer and the Saugus Formation are reasonable and sustainable sources of local water supplies at the yields stated in the *2005 UWMP*; (b) The yields are not overstated and will not deplete or "dry-up" the groundwater basin; and (c) There is no need to reduce the yields for purposes of planning, as shown in both the *2005 UWMP* and the 2005 *Basin Yield Report* (see **Appendix 4.10**). In addition, both the *2005 UWMP* and 2005 *Basin Yield Report* determined that neither the Alluvial aquifer nor the Saugus Formation is in an overdraft condition, or projected to become overdrafted.

Groundwater Recharge Impacts. The supplying of water to the Landmark Village project also would not interfere substantially with groundwater recharge, because the best available evidence shows that no adverse impacts to the recharge of the Basin 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, based on the memorandum prepared by CH2MHill (*Effect of Urbanization on Aquifer Recharge in the Santa Clarita Valley*, February 22, 2004; **Appendix 4.10**), no

significant project-specific or cumulative impacts would occur to the groundwater basin with respect to aquifer recharge. This is because urbanization in the Santa Clarita Valley has been accompanied by long-term stability in pumping and groundwater levels, and the addition of imported SWP 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.

Specific to the recharge of the Saugus Formation, a technical memorandum was prepared by Luhdorff & Scalmanini Consulting Engineers in March 2006 in response to a condition required by the Newhall Ranch Specific Plan. This technical memorandum is entitled, "*Evaluation of Groundwater Recharge Methods for the Saugus Formation in the Newhall Ranch Specific Plan Area,*" and included in **Appendix 4.10** of this EIR. The technical memorandum evaluated the need for identifying land areas within the Specific Plan area for recharge of the Saugus Formation. It concluded that there was no need to set aside land area for artificial recharge of the Saugus Formation within the Specific Plan area. This conclusion is based on the following findings:

- Saugus Formation is generally recharged in the east to central portion of the basin, well east of the Newhall Ranch Specific Plan area. Groundwater flow in the basin is generally east to west with resulting groundwater discharge at the western end of the basin.
- The Specific Plan area overlies a small portion of the Saugus Formation at the far western end of the basin, where the basin is discharging water that flows downstream toward Ventura County.
- Historical observations for several decades have shown that there have been no long-term changes in groundwater storage or levels and that natural recharge processes have sustained groundwater levels, including long-term, essentially constant, high groundwater levels—without the need for artificial recharge operations to augment natural recharge to the basin.
- The future operating plan for the basin has been evaluated in both the *2005 UWMP* and the 2005 *Basin Yield Report* and neither document calls for attempts to artificially recharge the basin (see **Appendix 4.10**).
- If artificial recharge of the Saugus Formation were to become desirable for some reason in the future, while there is no need for artificial recharge in the western part of the basin, recharge to the Saugus Formation is hydrogeologically feasible through injection wells. This mechanism, if needed in the future, would alleviate the need to set aside land area for artificial recharge purposes, and would likely occur in the eastern portion of the Saugus Formation, not within the Newhall Ranch Specific Plan area.

Perchlorate Impacts on Groundwater Supply. The detection of perchlorate in local groundwater supplies has raised concerns over the reliability of local groundwater supplies, in particular the Saugus Formation, where four wells have been removed from active service as a result of perchlorate. As discussed in both this EIR and the *2005 UWMP*, Chapter 5 and Appendix D (**Appendix 4.10**), planning for

remediation of the perchlorate and restoration of the impacted well capacity is substantially underway. While that work is being completed, non-impacted production facilities can be relied upon for the quantities of water projected to be available from the Alluvial aquifer and Saugus Formation during the time necessary to restore perchlorate-impacted wells. CLWA, the local retail water purveyors, the DTSC, and the ACOE continue to monitor and work closely on the remediation of perchlorate-impacted wells. The following text presents a summary of the status of perchlorate remediation and restoration of perchlorate-impacted groundwater supply. (A detailed discussion of pertinent events related to perchlorate contamination, containment, remediation, and water supply restoration is also included in the *2005 UWMP*, Appendix D [**Appendix 4.10**].) This discussion illustrates that work toward the ultimate remediation of the perchlorate contamination, including the reactivation of impacted groundwater supply wells, has progressed on several integrated fronts over the last five years.

(1) Perchlorate Impacted Water Purveyor Wells

As discussed above, perchlorate was detected in four Saugus Formation production wells near the former Whittaker-Bermite site in 1997. As a result, these wells (SCWD's Wells, Saugus 1 and Saugus 2, NCWD's Well NC-11, and VWC's Well V-157) were removed from service. In 2002, perchlorate was detected in the SCWD Stadium well, located in the Alluvial aquifer, directly adjacent to the former Whittaker-Bermite site. This Alluvial well also has been removed from service.

Since the detection of perchlorate and resultant inactivation of impacted wells, the purveyors have been conducting regular monitoring of active wells near the Whittaker-Bermite site. In April 2005, that monitoring detected the presence of perchlorate in Valencia Water Company's Well Q2, an Alluvial well located immediately northwest of the confluence of Bouquet Creek and the Santa Clara River. The location of this well is also shown on **Figures 4.10-6** and **4.10-7**. As a result of the detection and confirmation of perchlorate in its Well Q2, Valencia Water Company removed the well from active service and pursued rapid permitting and installation of wellhead treatment in order to return the well to water supply service. In October 2005, Valencia Water Company also restored the pumping capacity of Well Q2 with the start-up of wellhead treatment designed to effectively remove perchlorate.

In January 2005, Valencia Water Company permanently closed well V-157 and, in September 2005, completed the construction of new Saugus well V-206 located in an area of the Saugus Formation not impacted by perchlorate. Valencia Water Company's V-206 is operational and replaces the pumping capacity temporarily impacted by the detection of perchlorate at former well V-157. In summary, three Saugus wells (Saugus 1 and 2 and NC-11) and one Alluvial well (SCWD Stadium well) remain off-line due to perchlorate contamination.

Locations of the impacted wells and other nearby non-impacted wells, relative to the Whittaker-Bermite site are shown on **Figures 4.10-6** and **4.10-7**.

(2) Restoration of Perchlorate Impacted Water Supply

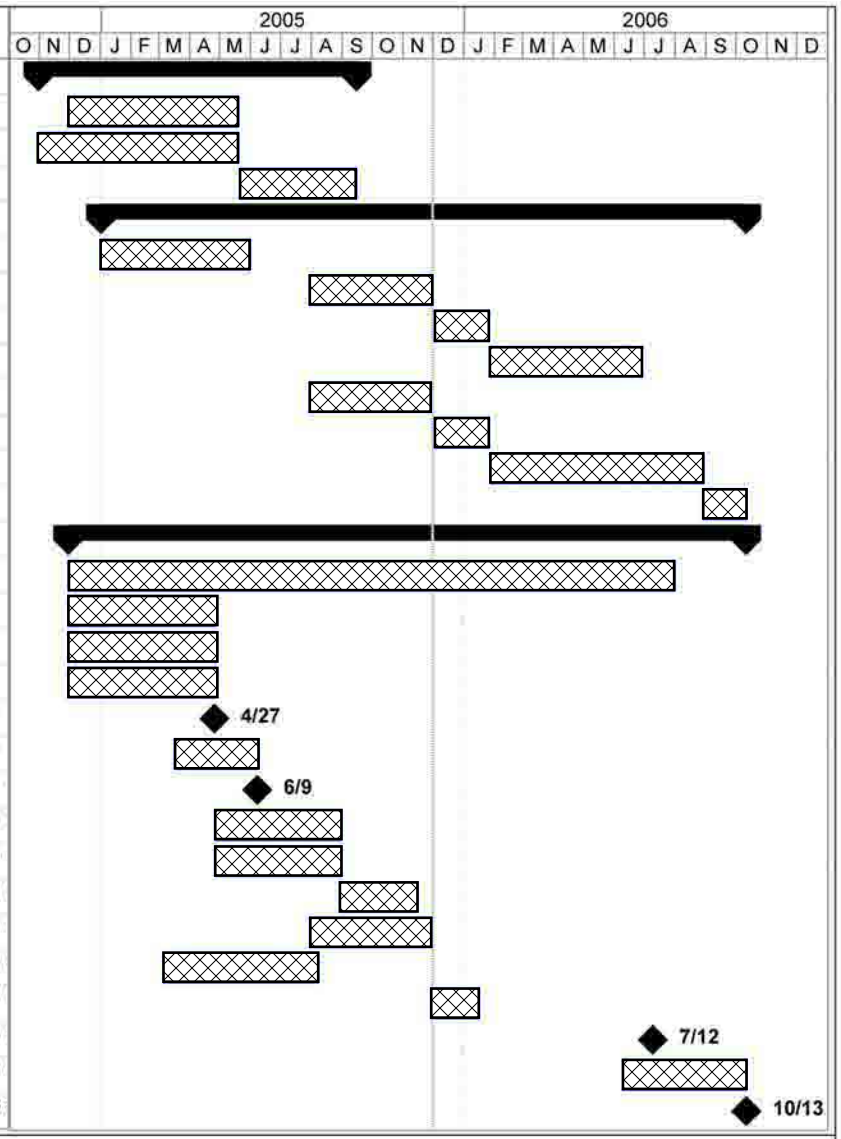
Since the detection of perchlorate in the four Saugus wells in 1997, CLWA and the retail water purveyors have recognized that one element of an overall remediation program would most likely include pumping from impacted wells, or from other wells in the immediate area, to establish hydraulic conditions that would control the migration of contamination from further impacting the aquifer in a downgradient (westerly) direction. Thus, CLWA and the retail water purveyors expect that the overall perchlorate remediation program could include dedicated pumping from some or all of the impacted wells, with appropriate treatment, such that two objectives could be achieved. The first objective is control of subsurface flow and protection of downgradient wells, and the second is restoration of some or all of the contaminated water supply. Not all impacted capacity is required for control of groundwater flow. The remaining capacity would be replaced by construction of replacement wells at non-impacted locations.

In cooperation with state regulatory agencies and investigators working for Whittaker-Bermite, CLWA and the local retail water purveyors developed an off-site plan that focuses on the concepts of groundwater flow control and restored pumping capacity and is compatible with on-site and possibly other off-site remediation activities. Specifically relating to water supply, the plan includes the following:

- Constructing and operating a water treatment process that removes perchlorate from two impacted wells such that the produced water can be used for municipal supply.
- Hydraulically containing the perchlorate contamination that is moving from the Whittaker-Bermite site toward the impacted wells by pumping the wells at rates that will capture water from all directions around them.
- Protecting the downgradient non-impacted wells through the same hydraulic containment that results from pumping two of the impacted wells.
- Restoring the annual volumes of water pumped from the impacted wells before they were inactivated and also restoring the wells' total capacity to produce water in a manner consistent with the retail water purveyors' operating plan for groundwater supply described above.

The current schedule for implementation of the plan to restore contaminated water supply (wells) is illustrated on **Figure 4.10-10, Preliminary Implementation Schedule**. Included in the schedule is a planned extended test of the wells that will be returned to service as part of restoring contaminated water supply and that will also be operated to extract contaminated water and control the migration of contamination in the aquifer.

ID	Task Name	Duration	Start	Finish
1	**DTSC Approval Activities**	**230 days**	**Mon 11/1/04**	**Fri 9/16/05**
2	Feasibility Study	6.15 mons	Wed 12/1/04	Fri 5/20/05
3	Draft RAP	29 wks	Mon 11/1/04	Fri 5/20/05
4	Final RAP	4.25 mons	Mon 5/23/05	Fri 9/16/05
5	**Implementation Activities**	**465 days**	**Mon 1/3/05**	**Fri 10/13/06**
6	Easements and ROW	5.4 mons	Mon 1/3/05	Wed 6/1/05
7	Treatment Design	4.4 mons	Mon 8/1/05	Wed 11/30/05
8	Treatment Bidding & Contracting	2 mons	Mon 12/5/05	Fri 1/27/06
9	Treatment Construction	5.5 mons	Mon 1/30/06	Fri 6/30/06
10	Pipeline Design	4.4 mons	Mon 8/1/05	Wed 11/30/05
11	Pipeline Bidding & Contracting	2 mons	Mon 12/5/05	Fri 1/27/06
12	Pipeline Construction	7.7 mons	Mon 1/30/06	Thu 8/31/06
13	System Startup	1.55 mons	Fri 9/1/06	Fri 10/13/06
14	**DHS Approval Activities (97-005)**	**488 days**	**Wed 12/1/04**	**Fri 10/13/06**
15	DHS Coordination	21.8 mons	Wed 12/1/04	Wed 8/2/06
16	TM1: Source Water Assessment	5.3 mons	Wed 12/1/04	Wed 4/27/05
17	TM2: Raw Water Quality Characterization	5.3 mons	Wed 12/1/04	Wed 4/27/05
18	TM3: Source Water Protection	5.3 mons	Wed 12/1/04	Wed 4/27/05
19	DHS Workshop No. 1	0 days	Wed 4/27/05	Wed 4/27/05
20	TM4: Effective Monitoring & Treatment	3 mons	Fri 3/18/05	Thu 6/9/05
21	DHS Workshop No. 2	0 days	Thu 6/9/05	Thu 6/9/05
22	TM5: Human Health Risk Assessment	4.5 mons	Thu 4/28/05	Wed 8/31/05
23	TM6: Alternative Source Assessment	4.5 mons	Thu 4/28/05	Wed 8/31/05
24	DHS Review of TMs 5 & 6	2.75 mons	Thu 9/1/05	Wed 11/16/05
25	Prepare 97-005 Engineer's Report	4.4 mons	Mon 8/1/05	Wed 11/30/05
26	CEQA Initial Study and Draft MND	5.55 mons	Mon 3/7/05	Mon 8/8/05
27	Permit Application	1.7 mons	Thu 12/1/05	Tue 1/17/06
28	Public Hearing	0 days	Wed 7/12/06	Wed 7/12/06
29	DHS Evaluation	4.5 mons	Mon 6/12/06	Fri 10/13/06
30	Obtain DHS Permit	0 days	Fri 10/13/06	Fri 10/13/06



Project: CLWA 97-005_r2
Date: Thu 12/1/05

Task
Split
Progress
Milestone
Summary
Project Summary
External Tasks
External Milestone
Deadline

SOURCE: Luhdorff & Scalmanini Consulting Engineers – January 2006

FIGURE **4.10-10**

Preliminary Implementation Schedule

Concurrent with the testing of the wells, several specific ion exchange resins will be tested to evaluate their performance and longevity. The two key activities that comprise the majority of effort required for implementation of the plan are general facilities-related work (design and construction of well facilities, treatment equipment, pipelines, etc.) and permitting work. Both activities are planned and scheduled concurrently, resulting in planned completion (i.e., restoration of all impacted capacity) in 2007. Notable recent accomplishments toward implementation include completion of the Final Interim Remedial Action Plan (RAP) in December 2005 and completion of environmental review with the adoption of a Mitigated Negative Declaration in September 2005.

In light of the preceding, with regard to the adequacy of groundwater as the local component of water supply for the Santa Clarita Valley, the impacted capacity will remain unavailable through 2006, during which time the non-impacted groundwater supply will be sufficient to meet near-term water requirements as described in Chapter 3 of the *2005 UWMP* (see **Appendix 4.10**). Thereafter, the total groundwater capacity will be sufficient to meet the full range of normal and dry-year conditions as provided in the CLWA/retail water purveyor groundwater operating plan for the Basin.

Returning the contaminated Saugus wells to municipal water supply service by installing treatment requires issuance of permits from DHS before the water can be considered potable and safe for delivery to customers. The permit requirements are contained in DHS Policy Memo 97-005 for direct domestic use of impaired water sources.

Before issuing a permit to a water utility for use of an impaired source as part of the utility's overall water supply permit, DHS requires that studies and engineering work be performed to demonstrate that pumping the wells and treating the water will be protective of public health for users of the water. The 97-005 Policy Memo requires that DHS review the local retail water purveyor's plan, establish appropriate permit conditions for the wells and treatment system, and provide overall approval of returning the impacted wells to service for potable use. Ultimately, the CLWA/local retail water purveyor plan and the DHS requirements are intended to ensure that the water introduced to the potable water distribution system has no detectable concentration of perchlorate.

The DHS 97-005 Policy Memo requires, among other things, the completion of a source water assessment for the impacted wells intended to be returned to service. The purpose of the assessment is to determine the extent to which the aquifer is vulnerable to continued migration of perchlorate and other contaminants of interest from the Whittaker-Bermite site. The assessment includes the following:

- Delineation of the groundwater capture zone caused by operating the impacted wells
- Identification of contaminants found in the groundwater at or near the impacted wells

- Identification of chemicals or contaminants used or generated at the Whittaker-Bermite facility
- Determination of the vulnerability of pumping the impacted wells to these contaminant sources

CLWA is currently working directly with the retail water purveyors and its consultants on development of the DHS 97-005 Policy Memo permit application. Two coordination workshops have already been held with DHS. Drafts of all six elements of the 97-005 Policy Memo have been submitted to DHS and the retail purveyors for review, including: the Source Water Assessment, Raw Water Quality Characterization, Source Protection Plan, Effective Monitoring and Treatment Evaluation, Human Health Risk Assessment, and the Alternatives Sources Evaluation. The Engineer's Report, which summarizes these six elements for the 97-005 process, is anticipated to be complete by the end of March 2006. The CEQA process for the "CLWA Groundwater Containment, Treatment, and Restoration Project," for which the 97-005 process is being conducted, was completed in August 2005.[28]

As listed above, DHS 97-005 Policy Memo requires an analysis to demonstrate contaminant capture and protection of other nearby water supply wells. The development and calibration of a numerical groundwater flow model of the entire basin had been initiated as a result of a 2001 MOU among the Upper Basin Water Purveyors (CLWA, CLWA SCWD, LACWWD #36, NCWD, and VWC) and the United Water Conservation District in Ventura County.

The groundwater model was initially intended for use in analyzing the operating yield and sustainability of groundwater in the Basin. However, the model was adaptable to analyze both the sustainability of groundwater under an operational scenario that includes full restoration of perchlorate-contaminated supply and the containment of perchlorate near the Whittaker-Bermite property (i.e., by pumping some of the contaminated wells). In 2004, DTSC reviewed and approved the development and calibration of the regional model. After DTSC approval, the model was used to simulate the capture and control of perchlorate by restoring impacted wells, with treatment. The results of that work are summarized in a report entitled, *Analysis of Perchlorate Containment in Groundwater Near the Whittaker-Bermite Property, Santa Clarita, California* (CH2MHill, December 2004) (see **Appendix 4.10**). The modeling analysis indicates that the pumping of impacted wells SCWD-Saugus 1 and SCWD-Saugus 2 on a nearly continual basis will effectively contain perchlorate migrating westward in the Saugus Formation from the Whittaker-Bermite property. The modeling analysis also indicates that (1) no new production wells are needed in the Saugus Formation to meet the perchlorate containment objective; (2) impacted well NCWD-11 is not a required component of the containment program; and (3) pumping at SCWD-Saugus 1 and SCWD-Saugus 2 is necessary to prevent migration of perchlorate to other portions of the Saugus Formation. This report, and the accompanying modeling analysis, was approved by DTSC in November 2004. With that

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28 For further information regarding this project, please refer to Appendix E of the *2005 UWMP* in **Appendix 4.10**.

approval, the model is now being used to support the source water assessment and the balance of the permitting process required by DHS.

Landmark Village Water Demand Impacts. The Landmark Village project site is presently used for crop production. A variety of crops are produced on the site, including alfalfa and vegetables. The project site has been farmed for many decades. The project applicant, Newhall Land, owns and operates agricultural wells in Los Angeles County. Total production from Newhall's agricultural wells is annually reported to the State Water Resources Control Board. Furthermore, the total amount of Newhall's agricultural water production is reported in the annual Santa Clarita Valley water reports, which address the years 1997 through 2004.[29]

The average annual amount of water that has been pumped and used for Newhall's agricultural operations in Los Angeles County from 1996 to 2000 is approximately 7,038 afy. The agricultural land on the Landmark Village site ultimately would be taken out of farming production as it is converted to non-agricultural project land uses. Since the water is already used to support Newhall's agricultural uses, there are not expected to be any significant adverse effects resulting from the use of this water to meet the potable demands of the Landmark Village project, which is part of the approved Newhall Ranch Specific Plan area. In addition, due to project conditions, the amount of groundwater that will be used to meet the potable demands of the Newhall Ranch Specific Plan, including the Landmark Village project, cannot exceed the amount of water historically and presently used by the applicant for agricultural uses. Therefore, no net increase in groundwater use will occur with implementation of the Specific Plan and this project.

At present, the Landmark Village project site contains 373 acres of irrigated agricultural land, which results in the use of an average of approximately 3,242 acre-feet of water per year. As the project site is converted to Specific Plan uses, this amount of water would be available for use on the Newhall Ranch Specific Plan site, including the Landmark Village project. The potable water demand for Landmark Village is approximately 702 afy, leaving approximately 2,540 afy of water available for other portions of the Specific Plan. The project water demand is summarized in **Table 4.10-11, Summary of Landmark Village Water Demand**.

29 As part of the Newhall Ranch Specific Plan mitigation program, annual water reports have been prepared and submitted to the County of Los Angeles and the City of Santa Clarita since 1997. The 1998 through 2004 Santa Clarita Valley water reports are available for public review and inspection at the County of Los Angeles, Department of Regional Planning, Daryl Koutnik, 320 W. Temple Street, Room 1346, Los Angeles, California 90012 (213) 974-6467, and are incorporated by reference.

Table 4.10-11
Summary of Landmark Village Water Demand (acre-feet)

Land Use	Water Demand	
	Potable	Non-Potable
Residential Development		
Medium	105	38
High	557	80
Subtotals	**662**	**118**
Nonresidential Development		
Mixed-Use Commercial		
Retail	6	16
Office	29	16
Schools	2	14
Subtotals	**37**	**46**
Open Space and Parks		
Recreation		
Community Parks	2	83
Neighborhood Parks	1	21
Major Open Areas		
Community Slopes	0	68
Subtotals	**3**	**172**
Totals	**702**	**336**
Total Water Demand		**1,038**[1]

Notes:

[1] *This represents the project water demand in a normal/average year. In a dry year, the project's total water demand is anticipated to increase by 10 percent (1,142 afy), because of water demand increases under dry year conditions.*

The remaining portion of this section identifies the water sources that will be available to meet the water demand generated by buildout of the Landmark Village project.

Landmark Village Water Supply Impacts. As discussed above, the projected total water demand for the Landmark Village project is 1,038 afy in a normal/average year. Project water demand increases by approximately 10 percent in a dry year to a total of 1,142 afy. To meet this demand, Valencia Water Company, as the local retail purveyor, would provide water to the Landmark Village project. Water sources expected to serve the Landmark Village project are the applicant's agricultural water from the Alluvial aquifer, which will be treated and used to meet the project's potable demand, and recycled water from the Newhall Ranch WRP (or the existing Valencia WRP), which will be used to meet the project's non-potable demand. These water supplies are assessed further below.

(3) Non-Potable Supplies

(a) Newhall Ranch Recycled Water

A total of 336 afy of recycled water would be needed to serve the Landmark Village project site. Recycled (reclaimed) water from the proposed Newhall Ranch WRP would be used to meet the non-potable water demands of the Landmark Village project. The recycled water from the Newhall Ranch WRP would be used on the project for irrigation of common areas, slopes and other landscaped areas. The availability of this source would occur in stages, mirroring the staged construction of the Newhall Ranch WRP. Construction of the Newhall Ranch WRP is expected to be staged as demand for treatment increases with implementation of the Newhall Ranch Specific Plan.

(4) CLWA Recycled Water

If the Newhall Ranch WRP is not operating at the time of Landmark Village project occupancy, the non-potable water demand of the Landmark Village project would be met through the use of recycled water from the existing Valencia WRP, located upstream of the Landmark Village project site. CLWA would temporarily serve the project site with recycled water from the existing Valencia WRP. Ultimately, however, all recycled water needed on the Landmark Village site would be provided by the Newhall Ranch WRP.

(5) Potable Supplies

(a) Newhall Agricultural Water

The project applicant would meet the potable water demands of the Landmark Village project by using the water from the Alluvial aquifer that the applicant historically and presently uses for agricultural irrigation purposes on its land in Los Angeles County. No additional water would be pumped; instead, the water presently used to irrigate crops would be pumped from sanitary-sealed municipal supply wells (as compared to open-air agricultural wells), treated at the wellhead to meet Title 22 drinking water standards, and then used to meet the project's potable demand, as agricultural areas are taken out of production. The total amount of water previously and presently used for agriculture that is available to the Newhall Ranch Specific Plan is approximately 7,038 afy in both average and dry years. The Landmark Village project would use approximately 702 of the 7,038 afy to meet its potable water demand.

The agricultural land would ultimately be taken out of farming production as it is converted to non-agricultural Specific Plan land uses. Since the water is already used to support Newhall's agricultural uses, there are not expected to be any significant environmental effects resulting from the water being used to meet the potable demands of the Landmark Village project. The amount of groundwater that will

be used to serve the potable demands of the Landmark Village project would not exceed the amount of water historically used for the agricultural uses that are taken out of production.

Impacts Assessment of Existing Conditions Plus Project Water Demand and Supply. This section describes the existing development demand in the Santa Clarita Valley, plus the project water demand, measured against existing supplies. **Table 4.10-12**, **Existing Plus Project Demand and Supply for the Santa Clarita Valley**, illustrates that existing supplies exceed project demand, in conjunction with existing demand in the Santa Clarita Valley.

Table 4.10-12
Existing Plus Project Demand and Supply for the Santa Clarita Valley
(acre-feet per year)

	2005
Existing Demand	70,755
Other Demand (agricultural)[1]	12,786
Landmark Village Demand	1,038
Total Demand	**84,579**
Existing Water Supply Programs:	
Local Supplies	
Alluvial aquifer	38,648
Saugus Formation	6,454
Recycled Water	438
Imported Supplies	
SWP Table A Deliveries[2]	38,001
Rosedale-Rio Bravo Water Bank[3]	20,000
Semitropic Bank Account	17,000
Flexible Storage Account[4]	6,060
Total Existing Supplies	**126,601**
Surplus	**42,022**

Notes:

[1] *In the Santa Clarita Valley, a total of 12,786 afy is used for agricultural irrigation and other miscellaneous uses. The conversion of the Landmark Village site from agriculture to Specific Plan land uses would reduce irrigation amounts in the valley by the amount used on the Landmark Village site (i.e., 3,242 afy (12,786 – 3,242 = 9,544 afy)).*

[2] *Reflects only the amount of Table A water actually delivered to the Santa Clarita Valley. Additional SWP water was available to CLWA in 2005 that is not reflected in this table.*

[3] *In addition to the SWP amount delivered to the Santa Clarita Valley in 2005, CLWA also stored an additional 20,000 acre-feet in the Rosedale-Rio Bravo Water Bank.*

[4] *This account includes both CLWA and Ventura County flexible storage supplies available to CLWA.*

8. CUMULATIVE WATER DEMAND AND SUPPLY ANALYSIS

The following discussion focuses on the cumulative impacts to water availability for the Santa Clarita Valley. The analysis evaluates cumulative impacts under the following three future water demand and supply scenarios:

Scenario 1. Existing development within the CLWA service area, plus near-term projections, plus the project (referred to as the SB 610 Water Demand and Supply Scenario).

Scenario 2. Existing development within the CLWA service area, plus County General Plan DMS projections, plus the project (referred to as the DMS Build-Out Scenario).

Scenario 3. Buildout within the CLWA service area by 2030, plus active pending General Plan Amendment requests, plus the project (referred to as the Santa Clarita Valley 2030 Build-Out Scenario).

a. SB 610 Water Demand and Supply Scenario

As indicated previously, the Valencia Water Company prepared a SB 610 Water Supply Assessment (WSA) for the Landmark Village project. A copy of the WSA is found in **Appendix 4.10** of this EIR. In the WSA, Valencia Water Company concludes there will be a sufficient water supply available at the time the Landmark Village project is ready for occupancy to meet the needs of the project in addition to existing and other planned future uses.

Valencia Water Company's current service area-wide demand is approximately 30,000 afy.[30] As mentioned previously, the Landmark Village project will require approximately 1,038 afy at buildout. The average year, dry year and multiple dry-year water assessment are presented below. These assessments are based on the *2005 UWMP* (see **Appendix 4.10**).

Average Year Water Assessment. The *2005 UWMP* and WSA indicate that no shortages are anticipated within the CLWA service area in an average water year through 2030 if planned water supply programs are developed as estimated. Total projected water demands for the CLWA through the year 2030 are compared with the supplies projected to be available to meet demands in this analysis. The following table, **Table 4.10-13, Projected Average/Normal Year Supplies and Demands**, summarizes the data from the *2005 UWMP*, *2005 Water Report*, and WSA (see **Appendix 4.10**).

30 This represents year 2005 demand. Dry year demand is approximately 10 percent higher.

Table 4.10-13
Projected Average/Normal Year Supplies and Demands

Water Supply Sources	Supply (af)				
	2010	2015	2020	2025	2030
Existing Supplies					
Wholesale (Imported)	*67,600*	*69,500*	*71,400*	*73,300*	*73,300*
SWP Table A Supply (1)	67,600	69,500	71,400	73,300	73,300
Flexible Storage Account (CLWA) (2)	0	0	0	0	0
Flexible Storage Account (Ventura County) (2)	0	0	0	0	0
Local Supplies					
Groundwater	*46,000*	*46,000*	*46,000*	*46,000*	*46,000*
Alluvial Aquifer	35,000	35,000	35,000	35,000	35,000
Saugus Formation	11,000	11,000	11,000	11,000	11,000
Recycled Water	1,700	1,700	1,700	1,700	1,700
Total Existing Supplies	115,300	117,200	119,100	121,000	121,000
Existing Banking Programs					
Semitropic Water Bank (2)	0	0	0	0	0
Rosedale-Rio Bravo (2)	0	0	0	0	0
Total Existing Banking Programs	0	0	0	0	0
Planned Supplies					
Local Supplies					
Groundwater	*0*	*0*	*0*	*0*	*0*
Restored wells (Saugus Formation) (2)	0	0	0	0	0
New Wells (Saugus Formation) (2)	0	0	0	0	0
Recycled Water (3)	0	1,600	6,300	11,000	15,700
Transfers					
Buena Vista-Rosedale (4)	11,000	11,000	11,000	11,000	11,000
Total Planned Supplies	11,000	12,600	17,300	22,000	26,700
Planned Banking Programs					
Additional Planned Banking (2)	0	0	0	0	0
Total Planned Banking Programs	0	0	0	0	0
Total Existing and Planned Supplies and Banking	126,300	129,800	136,400	143,000	147,700
Total Estimated Demand (w/o conservation) (5)	100,050	109,400	117,150	128,400	138,300
Conservation (6)	(8,600)	(9,700)	(10,700)	(11,900)	(12,900)
Total Adjusted Demand	91,450	99,700	106,450	116,500	125,400

Source: 2005 UWMP *(see **Appendix 4.10**).*

Notes:

(1) SWP supplies are calculated by multiplying CLWA's Table A Amount of 95,200 af by percentages of average deliveries projected to be available (71% in 2010 and 77% in 2025/2030, taken from Table 6-5 of DWR's "Excerpts from Working Draft of 2005 State Water Project Delivery Reliability Report" (November 2005).

(2) Not needed during average/normal years.

(3) Recycled water supplies based on projections provided in the 2005 UWMP, *Chapter 4, Recycled Water.*

(4) CLWA is in the process of acquiring this supply, primarily to meet the potential demands of future annexations to the CLWA service area. This acquisition is consistent with CLWA's annexation policy under which it will not approve potential annexations unless additional water supplies are acquired. Currently proposed annexations have a demand for about 4,000 afy of this supply which, if approved, would leave the remaining 7,000 afy available to meet demands within the existing CLWA service area.

(5) Demands are for uses within the existing CLWA service area. Demands for any annexations to the CLWA service area will be added if and when such annexations are approved. Currently proposed annexations have a demand for about 4,000 afy and, given supplies CLWA is in the process of acquiring, potential future annexations with demands up to an additional 7,000 afy could eventually be approved (see Footnote 4).

(6) Assumes 10 percent reduction on urban portion of total demand resulting from conservation best management practices, as discussed in the 2005 UWMP, *Chapter 7.*

Single Dry Year Water Assessment. Table 4.10-14, Projected Single-Dry Year Supplies and Demands, summarizes the existing and planned water supplies available to Valencia, CLWA and the other retail water purveyors over the 25 year planning period should a single-dry event occur, similar to the drought that occurred in California in 1977. Demand during single-dry years was assumed to increase by 10 percent. During prolonged dry periods, experience indicates that a reduction in demand of 10 percent is achievable through the implementation of conservation best management practices.

It should be noted that dry year supplies available above demand reflect water supplies that would be called upon by purveyors in dry years. Purveyors would typically secure water from these supplies only in amounts necessary to meet demand.

Table 4.10-14

Projected Single-Dry Year Supplies and Demands

Water Supply Sources	Supply (af)				
	2010	2015	2020	2025	2030
Existing Supplies					
Wholesale (Imported)	*9,860*	*9,860*	*8,480*	*9,480*	*9,480*
SWP Table A Supply (1)	3,800	3,800	3,800	4,800	4,800
Flexible Storage Account (CLWA)	4,680	4,680	4,680	4,680	4,680
Flexible Storage Account (Ventura County) (2)	1,380	1,380	0	0	0
Local Supplies					
Groundwater	*47,500*	*47,500*	*47,500*	*47,500*	*47,500*
Alluvial Aquifer	32,500	32,500	32,500	32,500	32,500
Saugus Formation	15,000	15,000	15,000	15,000	15,000
Recycled Water	1,700	1,700	1,700	1,700	1,700
Total Existing Supplies	59,060	59,060	57,680	58,680	58,680
Existing Banking Programs					
Semitropic Water Bank (3)	17,000	0	0	0	0
Rosedale-Rio Bravo (6)	20,000	20,000	20,000	20,000	20,000
Total Existing Banking Programs	37,000	20,000	20,000	20,000	20,000
Planned Supplies					
Local Supplies					
Groundwater	*10,000*	*10,000*	*20,000*	*20,000*	*20,000*
Restored wells (Saugus Formation)	10,000	10,000	10,000	10,000	10,000
New Wells (Saugus Formation)	0	0	10,000	10,000	10,000
Recycled Water (4)	0	1,600	6,300	11,000	15,700
Transfers					
Buena Vista-Rosedale (5)	11,000	11,000	11,000	11,000	11,000
Total Planned Supplies	21,000	22,600	37,300	42,000	46,700
Planned Banking Programs					
Additional Planned Banking (7)	0	20,000	20,000	20,000	20,000
Total Planned Banking Programs	0	20,000	20,000	20,000	20,000
Total Existing and Planned Supplies and Banking	117,060	121,660	134,980	140,680	145,380
Total Estimated Demand (w/o conservation) (8) (9)	110,100	120,300	128,900	141,200	152,100
Conservation (10)	(9,500)	(10,700)	(11,700)	(13,100)	(14,200)
Total Adjusted Demand	100,600	109,600	117,200	128,100	137,900

Source: 2005 UWMP (see **Appendix 4.10**).

Notes:

(1) SWP supplies are calculated by multiplying CLWA's Table A Amount of 95,200 af by percentages of single dry deliveries projected to be available for the worst case single dry year of 1977 (4% in 2010 and 5% in 2025/2030), taken from Table 6-5 of DWR's "Excerpts from Working Draft of 2005 State Water Project Delivery Reliability Report"(November 2005).

(2) Initial term of the Ventura County Entities' flexible storage account is 10 years from (2006 to 2015).

(3) The total amount of water currently in storage is 50,870 af, available through 2013. Withdrawals of up to this amount are potentially available in a dry year, but given possible competition for withdrawal capacity with other Semitropic banking partners in extremely dry years, it is assumed here that about one third of the total amount stored could be withdrawn.

(4) Recycled water supplies based on projections provided in the 2005 UWMP, *Chapter 4, Recycled Water.*

(5) CLWA is in the process of acquiring this supply, primarily to meet the potential demands of future annexations to the CLWA service area. This Acquisition is consistent with CLWA's annexation policy under which it will not approve potential annexations unless additional water supplies are acquired. Currently proposed annexations have a demand for about 4,000 afy of this supply which, if approved, would leave the remaining 7,000 afy available for potential future annexations. Unless and until any such annexations are actually approved, this supply will be available to meet demands within the existing CLWA service area.

(6) CLWA banked 20,000 af in late 2005 in the Rosedale-Rio Bravo Water Banking and Recovery Program by CLWA Board of Directors.

(7) Assumes additional planned banking supplies available by 2014.

(8) Assumes increase in total demand of 10 percent during single-dry years.

(9) Demands are for uses within the existing CLWA service area. Demands for any annexations to the CLWA service area will be added if and when such annexations are approved. Currently proposed annexations have a demand for about 4,000 afy and, given supplies CLWA is in the process of acquiring, potential future annexations with demands up to an additional 7,000 afy could eventually be approved (see Footnote 5).

*(10) Assumes 10 percent reduction on urban portion of total normal year demand resulting from conservation best management practices [urban portion of total normal year demand x 1.10] * 0.10), as discussed in the* 2005 UWMP, *Chapter 7*

Multiple Dry Year Water Assessment. Table 4.10-15, Projected Multiple-Dry Year Supplies and Demands, summarizes the existing and planned water supplies available to Valencia, CLWA and the other retail water purveyors over the 25 year planning period should a four year multiple dry year event occur, similar to the drought that occurred in California during the years 1931 to 1934. Demand during dry years was assumed to increase by 10 percent. During prolonged dry periods, experience indicates that a reduction in demand of 10 percent is achievable through the implementation of conservation best management practices.

Information concerning "Planned Water Supply," as listed below, from the *2005 UWMP* and WSA are included to indicate examples of how CLWA would add reliability and flexibility to its water supply portfolio. Programs such as these will be analyzed by CLWA and contracts entered into as need and cost-effectiveness are determined through time. Future water supply assessments will reflect these contractual agreements. As shown, water supplies exceed demand by 7,070 to 18,370 acre-feet in multiple dry years. Again, it should be noted that dry year supplies available above demand reflect water supplies that would be called upon by purveyors in dry years. Purveyors would typically secure water from these supplies only in amounts necessary to meet demand.

Table 4.10-15

Projected Multiple-Dry Year Supplies and Demands (1)

Water Supply Sources	2010	2015	2020	2025	2030
Existing Supplies					
Wholesale (Imported)	*32,010*	*32,910*	*32,570*	*32,570*	*32,570*
SWP Table A Supply (2)	30,500	31,400	31,400	31,400	31,400
Flexible Storage Account (CLWA) (3)	1,170	1,170	1,170	1,170	1,170
Flexible Storage Account (Ventura County) (3)	340	340	0	0	0
Local Supplies					
Groundwater	*47,500*	*47,500*	*47,500*	*47,500*	*47,500*
Alluvial Aquifer	32,500	32,500	32,500	32,500	32,500
Saugus Formation (4)	15,000	15,000	15,000	15,000	15,000
Recycled Water	1,700	1,700	1,700	1,700	1,700
Total Existing Supplies	81,210	82,110	81,770	81,770	81,770
Existing Banking Programs					
Semitropic Water Bank (3)	12,700	0	0	0	0
Rosedale-Rio Bravo (7) (8)	5,000	15,000	15,000	15,000	15,000
Total Existing Banking Programs	17,700	15,000	15,000	15,000	15,000
Planned Supplies					
Local Supplies					
Groundwater	*6,500*	*6,500*	*6,500*	*6,500*	*6,500*
Restored wells (Saugus Formation) (4)	6,500	6,500	5,000	5,000	5,000
New Wells (Saugus Formation) (4)	0	0	1,500	1,500	1,500
Recycled Water (5)	0	1,600	6,300	11,000	15,700
Transfers					
Buena Vista-Rosedale (6)	11,000	11,000	11,000	11,000	11,000
Total Planned Supplies	17,500	19,100	23,800	28,500	33,200
Planned Banking Programs					
Additional Planned Banking (8) (9)	0	5,000	15,000	15,000	15,000
Total Planned Banking Programs	0	5,000	15,000	15,000	15,000
Total Existing and Planned Supplies and Banking	116,410	121,210	135,570	140,270	144,970
Total Estimated Demand (w/o conservation) (10) (11)	110,100	120,300	128,900	141,200	152,100
Conservation (12)	(9,500)	(10,700)	(11,700)	(13,100)	(14,200)
Total Adjusted Demand	100,600	109,600	117,200	128,100	137,900

Notes:

Source: 2005 UWMP *(see **Appendix 4.10**).*

(1) Supplies shown are annual averages over four consecutive dry years (unless otherwise noted).

(2) SWP supplies are calculated by multiplying CLWA's Table A Amount of 95,200 af by percentages of deliveries projected to be available for the worst case four-year drought of 1931-1934 (32% in 2010 and 33% in 2025/2030), taken from Table 6-5 of DWR's "Excerpts from Working Draft of 2005 State Water Project Delivery Reliability Report" (November 2005).

(3) Based on total amount of storage available divided by 4 (4-year dry period). Initial term of the Ventura County entities' flexible storage account is 10 years (from 2006 to 2015).

(4) Total Saugus pumping is the average annual amount that would be pumped under the groundwater operating plan, as summarized in Table 3-6 ([11,000+15,000+25,000+35,000]/4).

(5) Recycled water supplies based on projections provided in the 2005 UWMP, Chapter 4, Recycled Water.

(6) CLWA is in the process of acquiring this supply, primarily to meet the potential demands of future annexations to the CLWA service area. This acquisition is consistent with CLWA's annexation policy under which it will not approve potential annexations unless additional water supplies are acquired. Currently, proposed annexations have a demand for about 4,000 afy of this supply which, if approved, would leave the remaining 7,000 afy available for potential future annexations. Unless and until any such annexations are actually approved, this supply will be available to meet demands within the existing CLWA service area.

(7) CLWA banked 20,000 af in late 2005 in the Rosedale-Rio Bravo Water Banking and Recovery Program.

(8) Average dry year period supplies could be up to 20,000 af for each program depending on storage amounts at the beginning of the dry period.

(9) Assumes additional planned banking supplies available by 2014.

(10) Assumes increase in total demand of 10 percent during dry years.

(11) Demands are for uses within the existing CLWA service area. Demands for any annexations to the CLWA service area will be added if and when such annexations are approved. Currently proposed annexations have a demand for about 4,000 afy and, given supplies CLWA is in the process of acquiring, potential future annexations with demands up to an additional 7,000 afy could eventually be approved (see Footnote 6).

*(12) Assumes 10 percent reduction on urban portion of total normal year demand resulting from conservation best management practices ([urban portion of total normal year demand x 1.10] * 0.10), as discussed in the* 2005 UWMP, *Chapter 7.*

b. DMS Build-Out Scenario

The DMS Build-Out Scenario entails existing development, buildout of the near-term subdivision projects listed in the County's DMS, plus a portion of the Newhall Ranch Specific Plan, plus the project. The analysis of this cumulative development scenario is required by the County for the cumulative analysis of water service. The County's DMS lists all pending, recorded and approved projects for which land divisions have been filed within County unincorporated lands and within the City of Santa Clarita. The City plus County unincorporated areas together constitute the County's Santa Clarita Valley Planning Area.

Table 4.10-16, Scenario 1: DMS Build-Out Scenario Demand and Supply for the Santa Clarita Valley, below, illustrates both the cumulative water demand (existing plus DMS) and supply for the Santa Clarita Valley. This cumulative water demand is compared to the near-term projected Santa Clarita Valley water supplies and the additional Newhall Ranch Specific Plan water supplies. As shown, there is an adequate supply of water expected in both average years and dry years and no cumulative water supply impacts would occur. In fact, the table shows that water supplies exceed demand for the DMS development scenario by 31,095 af in average years and by 23,513 to 23,963 af in dry years. However, it should be noted that dry year supplies available above demand reflect water supplies that would be available to purveyors in dry years. Purveyors would typically secure water from these supplies only in amounts necessary to meet demand.

Table 4.10-16
Scenario 1: DMS Build-Out Scenario Demand and Supply for the Santa Clarita Valley
(acre-feet)

	Average Years	Dry Years	
		Multiple Dry	Single Dry
Santa Clarita Valley Demand			
- Existing Plus DMS Demand[1]	99,770	109,747	109,747
- Landmark Demand	1,038	1,142	1,142
- Less Conservation		(11,089)	(11,089)
Total	**100,808**	**99,800**	**99,800**
Santa Clarita Valley Supply[2]			
- Local Supply			
a. Groundwater			
Alluvial aquifer	35,000	32,500	32,500
Less Newhall Ranch Agricultural Water	(3,402)	(4,534)	(4,534)
Saugus Formation	11,000	15,000	15,000
Restored Impacted Wells		6,500	10,000
Saugus Formation (new)	-	-	-
b. Newhall Ranch Agricultural Water	3,402	4,534	4,534
c. Recycled Water	3,300	3,300	3,300
Newhall Ranch WRP Supply	2,103	2,103	2,103
- Imported Supplies			
a. SWP Table A Amount[3]	69,500	31,400	3,800
b. Additional Planned Banking		5,000	20,000
c. Flexible Storage Account		1,510	6,060
d. Buena Vista-Rosedale Transfer	11,000	11,000	11,000
e. Rosedale-Rio Bravo Groundwater Bank		15,000	20,000
Total Supplies	**131,903**	**123,313**	**123,763**
Total Supplies above Demand[4]	**31,095**	**23,513**	**23,963**

Notes:
(1) Complete buildout of DMS land uses is estimated to occur in 2015.
(2) Source: 2005 UWMP, 2005 Water Report *(April 2005) (see* ***Appendix 4.10****).*
(3) Dry-year supplies above demand reflect water supplies that would be available to purveyors in dry years. Purveyors would typically secure water from these available supplies only in amounts necessary to meet demand.
(4) The surplus shown above is the net water available for banking programs (e.g., Rosedale-Rio Bravo Groundwater Banking Project, other groundwater banking projects, etc.).

c. DMS General Plan Consistency

The purpose of this subsection is to assess the Landmark Village project's consistency with the County's General Plan DMS policies as they relate to water supply. As indicated previously in this section, the County's General Plan includes provisions known as the DMS to give decision makers information about

the existing capacity of available public services at the time a new development proposal is considered in the four major Urban Expansion Areas of the County of Los Angeles General Plan (Antelope Valley, Santa Clarita Valley, Malibu/Santa Monica Mountains, and East San Gabriel Valley).[31] The goal of DMS is to identify what new public facilities will be required for the new development, and to ensure that the appropriate cost of any expansion of facilities will be paid for by that new development, and not assumed by the taxpayers.

In accomplishing the goal stated above, the DMS determines the availability of school, fire, sewerage, library, water and road services and facilities on an individual and cumulative basis. The DMS data used for this analysis includes the following:

(a) Inventory information reports for water, sewer and library services in the Santa Clarita Valley;

(b) Service Provider Reports for the water wholesaler (CLWA) and water retailers in Santa Clarita Valley and County Sanitation Districts 26 and 32; and

(c) A list of all pending, approved, and recorded projects where land divisions have been filed within both the unincorporated area of the County and the City of Santa Clarita.

The DMS also works toward ensuring that the expansion costs of new development are paid for by that development.

To ensure new development is located in close proximity to services and existing development, DMS states that in no event is the proposed development to be located beyond 1 mile of an existing development or service. Also, DMS states that new development is to be located within, generally, 5 miles of commercial services and job opportunities.

The DMS includes a computerized database that incorporates information supplied by service providers and determines capital facility capacity and demand placed on the system by existing, pending, approved and recorded projects for which land divisions have been filed within the four major Urban Expansion Areas. The DMS is used to quantitatively determine project and cumulative impacts on many County and other public services. In EIRs, wherever a proposed development project would result in an exceedance of applicable County infrastructure or facilities (such as water supply), a significant impact is identified and mitigation is recommended as appropriate. The General Plan DMS requirements apply to "subdivisions" proposed within the Santa Clarita Valley.

This analysis addresses water supply requirements resulting from buildout of all pending, recorded, and approved projects listed in the County's DMS, plus the Landmark Village project and a portion of the

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31 Resolution of the County of Los Angeles Board of Supervisors, Plan Amendment Case No. S.P. 86-173.

Newhall Ranch Specific Plan. As indicated in **Table 4.10-16**, there is sufficient water supply for the demand of the Landmark Village project and all pending approved and recorded projects in DMS. In fact, available water supplies would exceed demand by 31,095 acre-feet in average years and by 23,513 to 23,963 acre-feet in dry years (dry year supplies available above demand reflect water supplies that would be available to purveyors in dry years. Purveyors would typically secure water from these supplies only in amounts necessary to meet demand). Therefore, the Landmark Village project is not expected to create any significant cumulative water availability impacts under the County's DMS analysis.

In addition to ensuring that an adequate supply of water is available for a project, DMS requirements also indicate that the project in question must be located within 1 mile of an existing development or service and that the development be located within generally 5 miles of commercial services and job opportunities. The Landmark Village site is located within the retail water service area of Valencia Water Company. It is also within the wholesale service area of CLWA.

Based on the information provided in this analysis, the Landmark Village project is consistent with the General Plan DMS policies as they relate to water supplies.

d. Santa Clarita Valley 2030 Build-Out Scenario

The Santa Clarita Valley 2030 Build-Out Scenario entails buildout of lands under the current land-use designations indicated in the County's Areawide Plan and the City of Santa Clarita's General Plan by the year 2030, plus the proposed Landmark Village project, plus all known active pending General Plan Amendment requests for additional urban development in the County unincorporated area and the City of Santa Clarita.

Table 4.10-17, **Scenario 2: Santa Clarita Valley 2030 Build-Out Scenario Water Supplies**, and **Table 4.10-18**, **Scenario 2: Santa Clarita Valley 2030 Build-Out Scenario Water Demand and Supply**, summarize the cumulative water demand and supply for this build-out scenario. As shown, the Landmark Village project is not expected to create any significant cumulative water availability impacts in either average or dry years. In addition, under the buildout scenario, there are adequate water supplies for the project, with no significant cumulative water supply impacts occurring in either average or dry years. In fact, the two tables show that water supplies exceed demand under this scenario in average and dry years in 2030.

Dry year supplies available above demand reflect water supplies that would be called upon by purveyors in dry years. Purveyors would typically secure water from these supplies only in amounts necessary to meet demand. For a dry year, when reliability of the SWP could be reduced, CLWA would utilize both

dry year supplies available from the Saugus aquifer, and water banking and conjunctive use projects as indicated in **Table 4.10-17**, below.

Table 4.10-17
Scenario 2: Santa Clarita Valley 2030 Build-Out Scenario Water Supplies (afy)

	Average Years	Single Dry Year	Multiple Dry Years
Santa Clarita Valley Water Supplies (1)			
Local Supply			
a. Groundwater			
Alluvial Aquifer	35,000	32,500	32,500
Saugus Formation	11,000	15,000	15,000
Restored Impacted Wells		10,000	10,000
Saugus Formation (New Wells)		10,000	10,000
b. Reclaimed Water	12,442	12,442	12,442
Newhall Ranch WRP Supply	5,258	5,258	5,258
Imported Supplies			
a. SWP Table A Amount (2)	73,300	4,800	31,400
b. Newhall Nickel Water	1,607	1,607	1,607
c. Newhall Semitropic Groundwater Bank Storage		712	712
d. Additional Planned Banking		20,000	15,000
e. Buena Vista-Rosedale Transfer	11,000	11,000	11,000
f. Flexible Storage Account		4,680	1,170
g. Rosedale-Rio Bravo Groundwater Bank		20,000	15,000
Total Supply	149,607	147,999	161,089

Source: 2005 UWMP *(see **Appendix 4.10**).*
(1) SWP maximum allocation reduced in average years to approximately 77% of maximum allocation and in dry years to approximately 4 to 33% of maximum allocation.
(2) In any given year, the actual amount of SWP water deliveries could be above or below these model projections.

As depicted in **Table 4.10-18**, purveyors have access to an amount of water supplies that exceed demand during dry conditions. Therefore, no cumulatively significant water availability impacts would occur due to buildout of the Landmark Village project.

Because cumulative water supplies exceed demand, cumulative development (including the proposed Landmark Village project) would not result in significant unavoidable cumulative impacts on Santa Clarita Valley water resources. Therefore, cumulative mitigation measures are not required.

Table 4.10-18
Scenario 2: Santa Clarita Valley 2030 Build-Out Scenario Water Demand and Supply
(acre-feet)

	Buildout (year 2030)	
	Average Years	**Dry Years[c]**
Santa Clarita Valley Water Supplies[a]	**149,607**	**147,999–161,089**
Total Build-Out Demand[b]	125,370	138,300
Total Surplus	**24,237**	**9,699–22,789**

[a] *Source:* 2005 UWMP *and the SB 610 Water Supply Assessment for the Landmark Village Project.*
[b] *Demand is increased by approximately 10% in dry years.*
[c] *Dry year supplies available above demand reflect water supplies that would be called upon by purveyors in dry years. Purveyors would typically secure water from these supplies only in amounts necessary to meet demand.*

9. MITIGATION MEASURES

The County already has imposed mitigation measures required to be implemented as part of the Newhall Ranch Specific Plan. These mitigation measures, as they relate to water resources, are found in the previously certified Newhall Ranch Additional Analysis, Volume VIII (May 2003) and the adopted Mitigation Monitoring Plan for the Specific Plan (May 2003). The project applicant has committed to implementing the applicable mitigation measures from the Newhall Ranch Specific Plan to ensure that future development of the project site would not result in water-related impacts, and would not adversely affect adjacent properties.

a. Mitigation Measures Required by the Adopted Newhall Ranch Specific Plan, as They Relate to the Landmark Village Project

The following mitigation measures (Mitigation Measure Nos. 4.11-1 through 4.11-22, below) were adopted by the County in connection with its approval of the Newhall Ranch Specific Plan (May 2003). The applicable mitigation measures will be implemented to mitigate the potentially significant water-related impacts associated with the proposed Landmark Village project. These measures are preceded by "SP," which stands for Specific Plan.

SP 4.11-1 The proposed Specific Plan shall implement a water reclamation system in order to reduce the Specific Plan's demand for imported potable water. The Specific Plan shall install a distribution system to deliver non-potable reclaimed water to irrigate land uses suitable to accept reclaimed water, pursuant to Los Angeles County Department of Health Standards. (*Consistent with this measure, the Project Description section of this EIR discusses the fact that the*

Landmark Village project will install and implement a recycled water delivery system in order to reduce the project's demand for imported potable water. As required by this measure, recycled (reclaimed) water would be used to irrigate land uses suitable to accept recycled water, pursuant to Los Angeles County Department of Health standards.)

SP 4.11-2 Landscape concept plans shall include a palette rich in drought-tolerant and native plants. (*Consistent with this measure, the Landmark Village project's landscape plans shall include a palette rich in drought-tolerant and native plants.*)

SP 4.11-3 Major manufactured slopes shall be landscaped with materials that will eventually naturalize, requiring minimal irrigation. (*Consistent with this measure, the Landmark Village project's grading/landscape plans shall include a note requiring landscaping with materials that will eventually naturalize, requiring minimal irrigation.*)

SP 4.11-4 Water conservation measures as required by the State of California shall be incorporated into all irrigation systems. (*Consistent with this measure, the Landmark Village project shall incorporate into all of its irrgation systems, water conservation measures required by the State of California.*)

SP 4.11-5 The area within each future subdivision within Newhall Ranch shall be annexed to the Valencia Water Company prior to issuance of building permits. (*This measure is not applicable to the Landmark Village project, because the project site is already located within the Valencia Water Company's service area.*)

SP 4.11-6 In conjunction with the submittal of applications for tentative tract maps or parcel maps which permit construction, and prior to approval of any such tentative maps, and in accordance with the requirements of the Los Angeles County General Plan DMS, as amended, Los Angeles County shall require the applicant of the map to obtain written confirmation from the retail water agency identifying the source(s) of water available to serve the map concurrent with need. If the applicant of such map cannot obtain confirmation that a water source(s) is available for buildout of the map, the map shall be phased with the timing of an available water source(s), consistent with the County's DMS requirements. (*Consistent with this measure, Valencia Water Company, the retail water purveyor for the Landmark Village project, has issued its SB 610 water supply assessment for the project, confirming the availability of water to serve the project concurrent with need.*)

SP 4.11-7 Prior to commencement of use, all uses of recycled water shall be reviewed and approved by the State of California Health and Welfare Agency, Department of Health Services.

(*Consistent with this measure, the Landmark Village project's recycled water delivery system shall be reviewed and approved by the State of California Health and Welfare Agency, Department of Health Services.*)

SP 4.11-8 Prior to the issuance of building permits that allow construction, the applicant of the subdivision shall finance the expansion costs of water service extension to the subdivision through the payment of connection fees to the appropriate water agency(ies). (*Consistent with this measure, prior to issuance of building permits, the applicant for the Landmark Village project shall pay for and construct the required water service extension to the Landmark Village subdivision.*)

SP 4.11-9 Pursuant to Public Resources Code §21081(a)(2), the County shall recommend that the Upper Santa Clara Water Committee (or Santa Clarita Valley Water Purveyors), made up of the Castaic Lake Water Agency, Los Angeles County Waterworks District No. 36, Newhall County Water District, Santa Clarita Water Division of CLWA and the Valencia Water Company, prepare an annual water report that will discuss the status of groundwater within the Alluvial and Saugus Aquifers, and State Water Project water supplies as they relate to the Santa Clarita Valley. The report will also include an annual update of the actions taken by CLWA to enhance the quality and reliability of existing and planned water supplies for the Santa Clarita Valley. In those years when the Committee or purveyors do not prepare such a report, the applicant at its expense shall cause the preparation of such a report that is acceptable to the County to address these issues. This annual report shall be provided to Los Angeles County who will consider the report as part of its local land use decision-making process. (*As an update, a total of seven annual water reports have been prepared and provided to the County of Los Angeles, the City of Santa Clarita and other interested persons and organizations from 1998 through 2004. The latest 2005 Water Report is included in* ***Appendix 4.10*** *of this EIR.*)

SP 4.11-10 Pursuant to Public Resources Code §21081(a)(2), the County shall recommend that Castaic Lake Water Agency (CLWA), in cooperation with other Santa Clarita Valley retail water providers, continue to update the *UWMP* for Santa Clarita Valley once every five years (on or before December 31) to ensure that the County receives up-to-date information about the existing and planned water supplies in the Santa Clarita Valley. The County will consider the information contained in the updated *UWMP* in connection with the County's future local land use decision-making process. The County will also consider the information contained in the updated *UWMP* in connection with the County's future consideration of any Newhall Ranch tentative subdivision maps allowing construction. (*CLWA and other local*

retail water purveyors have completed the 2005 UWMP in the fall 2005. The County will consider the information contained in the adopted 2005 UWMP in connection with the Landmark Village project.)

SP 4.11-11 With implementation of the proposed Saugus ASR program, ASR wells shall be spaced so that adjacent non-project wells will not lose pumping capacity as a result of drawdown occurring during pumping of the ASR wells. (*This measure is not applicable to the Landmark Village project, because the Saugus ASR program is not needed to satisfy the water demands of the Santa Clarita Valley.*)

SP 4.11-12 With implementation of the proposed Saugus ASR program, the ultimate number of ASR wells to be constructed shall be sufficient to inject the ultimate target injection volume of 4,500 afy and withdraw the ultimate target withdraw volume of 4,100 afy. (*This measure is not applicable to the Landmark Village project, because the Saugus ASR program is not needed to satisfy the water demands of the Santa Clarita Valley.*)

SP 4.11-13 With implementation of the proposed Saugus ASR program, ASR wells shall be constructed in the following two general areas:

(a) South of the Santa Clara River and west of Interstate 5. This location includes areas within the Newhall Ranch Specific Plan boundary. (This area is referred to as the "south ASR well field."); and

(b) North of the Santa Clara River and west of Castaic Creek. (This location is referred to as the "north ASR well field.")

(*This measure is not applicable to the Landmark Village project, because the Saugus ASR program is not needed to satisfy the water demands of the Santa Clarita Valley.*)

SP 4.11-14 The Saugus Groundwater Banking/ASR program injection water must meet the water quality requirements of the State Regional Water Quality Control Board, Los Angeles Region. The water extracted for use on the Specific Plan site shall meet the Title 22 drinking water standards of the State Department of Health Services. (*This measure is not applicable to the Landmark Village project, because the Saugus ASR program is not needed to satisfy the water demands of the Santa Clarita Valley.*)

SP 4.11-15 Groundwater historically and presently used for crop irrigation on the Newhall Ranch Specific Plan site and elsewhere in Los Angeles County shall be made available by the Newhall Land and Farming Company, or its assignee, to partially meet the potable water demands of the Newhall Ranch Specific Plan. The amount of groundwater pumped for this purpose shall not exceed 7,038 AFY. This is the amount of groundwater pumped

historically and presently by the Newhall Land and Farming Company in Los Angeles County to support its agricultural operations. Pumping this amount will not result in a net increase in groundwater use in the Santa Clarita Valley. To monitor groundwater use, the Newhall Land and Farming Company, or its assignee, shall provide the County an annual report indicating the amount of groundwater used in Los Angeles County and the specific land upon which that groundwater was historically used for irrigation. For agricultural land located off the Newhall Ranch Specific Plan site in Los Angeles County, at the time agricultural groundwater is transferred from agricultural uses on that land to Specific Plan uses, The Newhall Land and Farming Company, or its assignee, shall provide a verified statement to the County's Department of Regional Planning that Alluvial aquifer water rights on that land will now be used to meet Specific Plan demand. (*Consistent with this measure, the applicant will provide the County with the required annual report, and the report will be included in* ***Appendix 4.10*** *of this EIR.*)

SP 4.11-16 The agricultural groundwater used to meet the needs of the Specific Plan shall meet the drinking water quality standards required under Title 22 prior to use. (*Consistent with this measure, the agricultural groundwater used to meet the needs of the Landmark Village project shall meet the drinking water quality standards required under Title 22 prior to use.*)

SP 4.11-17 In conjunction with each project-specific subdivision map for the Newhall Ranch Specific Plan, the County shall require the applicant of that map to cause to be prepared a supplemental or subsequent Environmental Impact Report, as appropriate, pursuant to CEQA requirements. By imposing this EIR requirement on each Newhall Ranch tentative subdivision map application allowing construction, the County will ensure that, among other things, the water needed for each proposed subdivision is confirmed as part of the County's subdivision map application process. This mitigation requirement shall be read and applied in combination with the requirements set forth in revised Mitigation Measure 4.11-6, above, and in Senate Bills 221 and 610, as applicable, regardless of the number of lots in a subdivision map. (*This measure has been satisfied by the County requiring preparation of this EIR for the Landmark Village project.*)

SP 4.11-18 The storage capacity purchased in the Semitropic Groundwater Banking Project by the Newhall Ranch Specific Plan applicant shall be used in conjunction with the provision of water to the Newhall Ranch Specific Plan. The applicant, or entity responsible for storing Newhall Ranch water in this groundwater bank, shall prepare an annual status report indicating the amount of water placed in storage in the groundwater bank. This report shall be made available annually and used by Los Angeles County in its decision-making

processes relating to buildout of the Newhall Ranch Specific Plan. (*This measure is not applicable to the Landmark Village project, because the water to be stored in the Semitropic Groundwater Banking Project is not needed to satisfy the water demand of the project or cumulative development in the Santa Clarita Valley.*)

SP 4.11-19 A Memorandum of Understanding (MOU) and Water Resource Monitoring Program has been entered into between United Water Conservation District and the Upper Basin Water Purveyors, effective August 20, 2001.[32] The MOU/Water Resource Monitoring Program, when executed, will put in place a joint water resource monitoring program that will be an effective regional water management tool for both the Upper and Lower Santa Clara River areas as further information is developed, consistent with the MOU. This monitoring program will result in a database addressing water usage in the Saugus and Alluvium aquifers over various representative water cycles. The parties to the MOU intend to utilize this database to further identify surface water and groundwater impacts on the Santa Clara River Valley. The applicant, or its designee, shall cooperate in good faith with the continuing efforts to implement the MOU and Water Resource Monitoring Program.

As part of the MOU process, the United Water Conservation District and the applicant have also entered into a "Settlement and Mutual Release" agreement, which is intended to continue to develop data as part of an on-going process for providing information about surface and groundwater resources in the Santa Clara River Valley. In that agreement, the County and the applicant have agreed to the following:

> *"4.3 Los Angeles County and Newhall will each in good faith cooperate with the parties to the MOU and will assist them as requested in the development of the database calibrating water usage in the Saugus and Alluvium aquifers over multi-year water cycles. Such cooperation will include, but not be limited to, providing the parties to the MOU with historical well data and other data concerning surface water and groundwater in the Santa Clara River and, in the case of Newhall, providing Valencia Water Company with access to wells for the collection of well data for the MOU.*
>
> *4.4 Los Angeles County and Newhall further agree that the County of Los Angeles will be provided with, and consider, the then-existing data produced by the MOU's monitoring program in connection with, and prior to, all future Newhall Ranch subdivision approvals or any other future land use entitlements implementing the Newhall Ranch Specific Plan. If the then-existing data produced by the MOU's monitoring program identifies significant impacts to surface water or groundwater*

32 See, Appendix F to Final Additional Analysis (Memorandum of Understanding Between the Santa Clara River Valley Upper Basin Water Purveyors and United Water Conservation District, dated August 2001).

resources in the Santa Clara River Valley, Los Angeles County will identify those impacts and adopt feasible mitigation measures in accordance with the California Environmental Quality Act."

(*Since the MOU was signed in 2001, the United Water Conservation District and the Upper Basin Water Purveyors (CLWA, Los Angeles County Waterworks District #36, CLWA Santa Clarita Water Division, NCWD and Valencia Water Company) have worked together to accomplish the stated purpose and objectives of the MOU. The MOU has resulted in the collection and analysis of groundwater and other hydrologic data, along with construction and calibration of a sophisticated regional groundwater flow model for the Upper Basin. These efforts benefit the service areas of both the United Water Conservation District and the Upper Basin water purveyors.*)[33]

SP 4.11-20 The Specific Plan applicant, or its successors, shall assign its acquired Nickel Water rights to the Valencia Water Company or CLWA, and, in consultation with the Valencia Water Company, CLWA or their designee(s), the applicant shall ensure that the Nickel Water is delivered to the appropriate place of use necessary to serve the Newhall Ranch Specific Plan at the time of need, as determined by the County of Los Angeles through required SB221 and/or SB610 analyses for future subdivision map applications. Upon approval of the Specific Plan, the applicant, Valencia Water Company, CLWA or a designee, will take delivery of the Nickel Water, so that such water will be used, or stored for use, for the Specific Plan in future years.

To ensure that an adequate supply of water is available for the Specific Plan over the long-term, the decision of whether or not the Nickel Water agreement should be extended or otherwise canceled cannot occur without first obtaining CLWA's concurrence. If the applicant, or its designee, seeks to not extend the Nickel Water agreement beyond its initial 35-year term, or seeks to cancel said agreement prior to the expiration of its initial 35-year period, or the expiration of the 35-year option period, if exercised, then the applicant, or its designee, must obtain CLWA's written concurrence and that concurrence must include findings to the effect that other equivalent water supplies are available at a comparable cost and that non-extension or cancellation of the agreement will not impact the water supplies of Newhall Ranch and the rest of the Santa Clarita Valley. (*This measure is not applicable to the Landmark Village project, because Newhall's Nickel Water rights are not needed at this time to satisfy the water demand of the project or cumulative development in the Santa Clarita Valley. However, as stated above, the applicant has stored Nickel Water in the Semitropic Groundwater Bank, and will continue to do so in future years.*)

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33 See, letter from the United Water Conservation District to CLWA, dated August 31, 2005.

SP 4.11-21 The applicant, in coordination with RWQCB staff, shall select a representative location upstream and downstream of the Newhall Ranch Specific Plan and sample surface and groundwater quality. Sampling from these two locations would begin upon approval of the first subdivision map and be provided annually to the RWQCB and County for the purpose of monitoring water quality impacts of the Specific Plan over time. If the sampling data results in the identification of significant new or additional water quality impacts resulting from the Specific Plan, which were not previously known or identified, additional mitigation shall be required at the subdivision map level. (*This measure is not applicable until subdivision map approval for the Landmark Village project.*)

SP 4.11-22 Beginning with the filing of the first subdivision map allowing construction on the Specific Plan site and with the filing of each subsequent subdivision map allowing construction, the Specific Plan applicant, or its designee, shall provide documentation to the County of Los Angeles identifying the specific portion(s) of irrigated farmland in the County of Los Angeles proposed to be retired from irrigated production to make agricultural water available to serve the subdivision. As a condition of subdivision approval, the applicant or its designee, shall provide proof to the County that the agricultural land has been retired prior to issuance of building permits for the subdivision. (*Consistent with this measure, the applicant of the Landmark Village project has provided the County with the required documentation. As a condition of approval of the Landmark Village tract map, the applicant will provide proof to the County that the agricultural land in the County proposed to be retired from irrigated production, in fact, has been retired prior to issuance of building permits for the Landmark Village subdivision.*)

b. Additional Conditions of Approval Associated With the Specific Plan

In addition to the adopted Newhall Ranch Specific Plan mitigation measures, the County's Board of Supervisors adopted additional conditions of approval applicable to the entire Newhall Ranch Specific Plan. These additional conditions of approval are found in the adopted Mitigation Monitoring Plan for the Specific Plan (May 2003). The following condition of approval relates to water resources, and is applicable to the Landmark Village project:

> *"(e) Prior to approval of the first subdivision map which permits construction, a report will be provided by the applicant which evaluates methods to recharge the Saugus Aquifer within the Specific Plan, including the identification of appropriate candidate land areas for recharge. The report shall be subject to approval by the Department of Public Works (DPW) and other applicable regulatory agencies, as determined by DPW." (The referenced report has been completed and included in Appendix 4.10 of this EIR.)*

c. Additional Mitigation Measures Proposed by this EIR

Implementation of the above Specific Plan mitigation measures as part of the Landmark Village project would mitigate impacts to water resources to less than significant levels. As a result, no additional mitigation measures beyond those identified in the Newhall Ranch Specific Plan Program EIR are required or necessary, because the Landmark Village project does not result in any significant water-related impacts after implementation of the above mitigation measures.

10. SIGNIFICANT UNAVOIDABLE IMPACTS

a. Project Impacts

With the implementation of the Specific Plan mitigation measures, the project would not result in or contribute to any significant unavoidable impacts on Santa Clarita Valley water resources.

b. Cumulative Impacts

Because the proposed project has its own independent water supplies, and because cumulative water supplies exceed demand, cumulative development (including the proposed Landmark Village project) does not result in or contribute to any significant unavoidable impacts on Santa Clarita Valley water resources. Therefore, as stated above, cumulative mitigation measures are not required.

4.11 WASTEWATER DISPOSAL

1. SUMMARY

Construction impacts would be less than significant, as portable, on-site sanitation facilities would be utilized during construction activities. The proposed Landmark Village project would generate a worst-case average total of 0.41 million gallons per day (mgd) of wastewater that would be treated by the Newhall Ranch Water Reclamation Plant (WRP). The treatment capacity of the Newhall Ranch WRP would be 6.8 mgd, with a maximum flow of 13.8 mgd. Until the development of the Newhall Ranch WRP is complete, there are two options for the temporary conveyance and treatment of wastewater generated by the proposed project. The first option is to construct an initial phase of the Newhall Ranch WRP to serve the project site, with buildout of the WRP occurring over time as demand for treatment increases. As the WRP is intended to serve the Newhall Ranch Specific Plan area, of which Landmark Village is a part, the initial phase of the WRP would be designed and constructed to accommodate the project's predicted wastewater generation of 0.41 mgd. The second option would temporarily direct wastewater flows to the Valencia WRP until the first phase of the Newhall Ranch WRP is complete. Based on the County Sanitation Districts of Los Angeles County (CSDLAC) future wastewater generation estimates and the planned expansion of the Saugus and Valencia WRPs, the Valencia WRP would have sufficient capacity to temporarily accommodate the project's predicted wastewater generation of 0.41 mgd. For these reasons, wastewater disposal impacts would be less than significant.

2. INTRODUCTION

a. Relationship of Project to Newhall Ranch Specific Plan Program EIR

Section 4.12 of the Newhall Ranch Specific Plan Program EIR identified and analyzed the existing conditions, potential impacts, and mitigation measures associated with wastewater disposal for the entire Newhall Ranch Specific Plan. The Newhall Ranch Specific Plan Program EIR concluded that Specific Plan implementation without mitigation would result in significant impacts, but that construction of the Newhall Ranch WRP and associated waste transmission infrastructure as well as implementation of the identified mitigation measures would reduce the impacts to below a level of significance. All subsequent project-specific development plans and tentative subdivision maps must be consistent with the Newhall Ranch Specific Plan and the County of Los Angeles General Plan and Santa Clarita Valley Areawide Plan.

This project-level EIR is tiering from the previously certified Newhall Ranch Specific Plan Program EIR. **Section 4.11** assesses the Landmark Village project's existing conditions relative to wastewater disposal, the project's impacts on wastewater disposal, and the applicable mitigation measures from the Newhall

Ranch Specific Plan Program EIR, and any additional mitigation measures recommended by this EIR for the Landmark Village project.

3. SUMMARY OF THE NEWHALL RANCH SPECIFIC PLAN PROGRAM EIR FINDINGS

The approved Newhall Ranch WRP will be located within the Specific Plan area to treat Specific Plan-generated wastewater. The WRP site is located on the south side of State Route 126 (SR-126) adjoining the Santa Clara River, near the Los Angeles County/Ventura County line. Without construction of the Newhall Ranch WRP and associated waste transmission infrastructure, the increased demand for wastewater treatment associated with buildout of the Specific Plan is considered a significant impact.

Based on the Newhall Ranch Specific Plan Program EIR and record, the County's Board of Supervisors found that the significant wastewater disposal impacts caused by buildout of the Specific Plan were mitigated to below levels of significance with construction of the Newhall Ranch WRP, the associated waste transmission infrastructure and adoption of specified mitigation measures.[1]

The project-level wastewater/sewer plan is intended to be consistent with, and implement, the Specific Plan's approved Conceptual Backbone Sewer Plan (Exhibit 2.5-3 of the Specific Plan). This plan set forth a program-level system for wastewater/sewage collection for Newhall Ranch. The Specific Plan also committed that all sewer system facilities would be designed and constructed for maintenance by the County, CSDLAC, or a new County sanitation district in accordance with their manuals, criteria and requirements. **Figure 1.0-28, Landmark Village Portion of Specific Plan – Conceptual Backbone Water Plan**, depicts the Specific Plan's Conceptual Backbone Sewer Plan, as it relates to Landmark Village. The long-range plan is for the new WRP to be constructed exclusively to serve uses within Newhall Ranch, and a new County sanitation district would be formed. The new WRP's capacity would be 6.8 mgd, with a maximum flow of 13.8 mgd.

The environmental effects of constructing and operating the WRP were evaluated at the project-level in the certified Newhall Ranch Specific Plan Program EIR. The following areas were determined to have significant unavoidable impacts: agricultural resources, air quality, visual quality and solid waste. Agricultural impacts would result from the conversion of 15 acres of prime agricultural land to an urban use. Air quality impacts were associated with site grading that would generate quantities of dust exceeding the South Coast Air Quality Management District (SCAQMD) daily threshold of significance, even after application of all available dust controls to reduce the amount of dust by roughly 61 percent.

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1 See, Mitigation Measures 4.12-1 through 4.12-7 in both the certified Newhall Ranch Specific Plan Program EIR and the adopted Mitigation Monitoring Plan for the Specific Plan (May 2003). All of these mitigation measures are reiterated in the mitigation measures portion of this EIR.

Visual quality impacts were due to the contrast of the WRP site with the vacant land within the river corridor, both during and following construction. Solid waste impacts were a result of project landfill disposal of biosolids produced as a by-product of the wastewater treatment process because such facilities are limited in number and have finite capacity, and because new facilities are expensive and difficult to develop. Based on the Newhall Ranch Specific Plan Final EIR for the WRP and record, the County's Board of Supervisors found that the significant unavoidable impacts caused by the WRP were offset by overriding economic, legal, social, and public benefits. Consistent with Section 15093 of the Guidelines, these benefits were found to outweigh the significant unavoidable impacts and make them acceptable.

4. EXISTING CONDITIONS

This information and the technical studies from the certified Newhall Ranch Specific Plan Program EIR (see Draft EIR, Appendix 4.12) were assessed at the project-level for the Landmark Village project to determine if there were wastewater disposal issues that were not examined in the certified EIR. It was determined that all significant wastewater disposal effects were identified, adequately addressed, and mitigated or avoided in the certified EIR and related environmental findings (*California Environmental Quality Act (CEQA) Guidelines* Section 15152). Therefore, at the project level, this EIR will incorporate by reference the existing conditions analysis and background information relating to wastewater disposal from the certified Newhall Ranch Specific Plan Program EIR (Section 4.12). This information has been updated as appropriate.

This section is divided into two distinct topics:

- Wastewater treatment facilities
- Wastewater collection system

a. Wastewater Treatment Facilities

Most wastewater generated within the Santa Clarita Valley is treated at two existing WRPs, which are operated by the Santa Clarita Valley Sanitation District (SCVSD). The existing Saugus WRP is located at 26200 Springbrook Avenue in Saugus. The existing Valencia WRP is located at 28185 The Old Road in Valencia. These two facilities, illustrated in **Figure 4.11-1**, **Existing Wastewater Treatment Facilities and Sanitation Districts**, provide primary, secondary, and tertiary treatment. The SCVSD has a permitted treatment capacity of 28.1 mgd and a treated average of 21.5 mgd.[2] While a small portion of the Newhall Ranch Specific Plan site is within the Sphere of Influence of the SCVSD, virtually the entire Specific Plan

2 Electronic correspondence from Basil Hewitt at the Los Angeles County Sanitation District, August 15, 2005.

site is outside the service area of the SCVSD. Currently, wastewater generated by the few existing buildings located on the Newhall Ranch Specific Plan site is accommodated by on-site septic systems. The four small buildings located in the eastern portion of the Landmark Village project site are used for storage and other activities associated with on-site agriculture. Therefore, no wastewater is generated from the proposed Landmark Village tract map site.

The mechanism used to fund expansion projects is the Districts' Connection Fee Program. Prior to the connection of the local sewer network to the CSDLAC system, all new users are required to pay for their fair share[3] of the District sewerage system expansion through a "connection fee." The fees fund treatment capacity expansion and trunk lines, while on-site sewer mains are the responsibility of the developer.

The rate at which connections are made—and revenues accumulate—drives the rate at which periodic expansions of the system will be designed and built. However, it should be noted that connection permits are not issued if there is not sufficient capacity. Therefore, the expansion of district facilities may be immediate if adequate capacity does not exist to serve new users, or the expansion may occur in the future if it is determined that there is adequate capacity to serve new users, but inadequate capacity to serve future development within the tributary area(s) of the affected collection/treatment facilities, thereby necessitating future system expansions. In the latter case, the connection fees paid by new users are deposited into a restricted Capital Improvement Fund (CIF) used solely to capitalize the future expansion of affected system facilities. The cyclical process of building phased expansions and collecting connection fees can continue indefinitely. The only restriction would be when the districts run out of land. Existing facilities can be expanded to handle a daily capacity of 34.1 mgd, which is sufficient to meet demand up until 2015.[4] The district does not expect to exceed a daily capacity of 34.1 mgd because connection permits will not be issued that would exceed this amount.

The CSDLAC has prepared a Facilities Plan, with a horizon year of 2015, for the SCVSD and a Draft EIR. The Facilities Plan, approved in January 1998, estimates future wastewater generation for the probable future service area of the SCVSD in order to anticipate future treatment capacity and wastewater conveyance needs. According to CSDLAC estimates, total flows projected from the Santa Clarita Valley in 2015, exclusive of Newhall Ranch, would be 34.1 mgd. This projection is based on Southern California Association of Governments (SCAG) 96 population projections. As a result of this finding, CSDLAC

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3 The fair share is equivalent to the cost of expanding the system to accommodate the anticipated sewage flows from the new users.

4 Telephone conversation with Basil Hewitt at the County Sanitation Districts of Los Angeles County, August 15, 2005.

Angeles National Forest

Angeles National Forest

VALENCIA WRP

NEWHALL RANCH WRP

SAUGUS WRP

Angeles National Forest

Los Angeles County
Ventura County

LAKE HUGHES ROAD
HASLEY CANYON ROAD
Castaic Creek
MAGIC MTN. PARKWAY
McBEAN PARKWAY
SR-126
PICO CANYON ROAD
BOUQUET CANYON ROAD
SIERRA HIGHWAY
Santa Clara River
SOLEDAD CANYON ROAD
SAND CANYON ROAD
5
14
126

LEGEND

- Landmark Village Project Area
- County Sanitation District No. 32 Sphere of Influence Boundary as Adopted by the Local Agency Formation Commission on April 24, 2002
- Projected Service Area for the 2015 Plan
- County Sanitation District No. 26
- County Sanitation District No. 26 Current Sphere of Influence
- County Sanitation District No. 32 *Previous Sphere of Influence*

NOT TO SCALE

SOURCE: Impact Sciences, Inc., 2003

FIGURE **4.11-1**

Existing Water Reclamation Plants and Sanitation Districts

32-92•05/06

proposed a two-phase plan to incrementally expand the treatment facilities to meet future needs to a total of 34.1 mgd.[5] This two-phase expansion plan, which would increase treatment capacity by approximately 15 mgd, has been approved. The first phase was completed in July 2004 and expanded treatment capacity by approximately 9 mgd, or approximately 47 percent. This expansion will meet the expected wastewater treatment demand through 2010. The second-phase, scheduled to be completed by 2010, would increase treatment capacity by an additional 6 mgd.

b. Wastewater Collection System

The CSDLAC wastewater collection system is composed of service connections that tie-in to the local collection network. This local network, composed of secondary and primary collectors, flows into the districts' trunk wastewater mains and the water reclamation plants. The CSDLAC maintains the wastewater trunk mains that lead to the Saugus and Valencia WRPs, and the local collection network is maintained by the Los Angeles County Department of Public Works Sewer Maintenance for the City of Santa Clarita.

The project site is presently undeveloped and there is no wastewater collection and conveyance system on the property. Existing gravity sewer mains run parallel to The Old Road within the right-of-way and flow to a sewer lift station located near the intersection of The Old Road and Henry Mayo Drive at the east side of the Old Road right-of-way. The existing lift station pumps wastewater through a 16-inch force main to the Valencia WRP.

Operation and maintenance of local sewer lines within areas of unincorporated Los Angeles County, including the City of Santa Clarita, are the responsibility of the Consolidated Sewer Maintenance District of the Los Angeles County Department of Public Works. The Consolidated Sewer Maintenance District requires that new subdivision wastewater systems connect to the district's existing sanitary wastewater system, and any developer constructing a new wastewater line would have to coordinate the construction and dedication of any such wastewater line with the District for future operation and maintenance. Operation and maintenance of the regional trunk sewer lines is the responsibility of the CSDLAC. It would then be the responsibility of the CSDLAC to upgrade the wastewater collection and treatment systems by providing relief for existing trunk lines nearing capacity and expanding treatment plants to provide sanitation service to outlying areas.[6]

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5 Ibid.

6 Telephone conversation with Basil Hewitt at the County Sanitation Districts of Los Angeles County, September 1, 2005.

5. PROPOSED PROJECT IMPROVEMENTS

The applicant proposes to develop 1,444 residential dwelling units with a total residential population of 3,680,[7] approximately 1,033,000 square feet of commercial/mixed use space, a 9-acre elementary school, a 16-acre Community Park, four private recreational facilities, open space and river trail uses, and supporting roadway, drainage and infrastructure improvements. In addition, the applicant proposes to construct the Long Canyon Road Bridge over the Santa Clara River, and install exposed and buried bank stabilization on portions of the south and north side of the river corridor.

The proposed project would require up to 5.8 million cubic yards of imported fill. The needed fill would come from the Adobe Canyon borrow site, located south of the river, but within the boundary of the approved Newhall Ranch Specific Plan. **Figure 1.0-30, On-Site Reclaimed Water Improvements**, in **Section 1.0**, **Project Description,** depicts the location of the borrow site and other planned off-site improvements, including a utility corridor, and water tank sites. Please refer to **Section 1.0**, **Project Description**, of this EIR, for further information regarding the proposed project improvements.

6. PROJECT IMPACTS

The analysis of potential impacts to wastewater disposal associated with construction and operation of the proposed Landmark Village project, including the significance criteria applicable to assessing such impacts, is presented below.

a. Significance Threshold Criteria

Based on applicable thresholds of significance identified in Appendix G of the 2005 *CEQA Guidelines*, the proposed project would result in a significant wastewater disposal impact if the project would:

(a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board;

(b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects; and

(c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's commitments.

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7 Based upon County provided estimates of 3.17 persons per single-family dwelling, 2.38 persons per multi-family dwelling and per apartment.

b. Construction-Related Impact Analysis

Construction contractors for the project would provide portable, on-site sanitation facilities that would be serviced at approved disposal facilities and/or treatment plants. The amount of construction-related wastewater that would be generated is not expected to have a significant impact on these disposal/treatment facilities due to expected low volume and temporary nature of the waste generated during construction.

c. Operational Impacts

(1) Demand

As shown in **Table 4.11-1**, the proposed project would generate a worst-case average total of 408,900 gallons per day of wastewater that would be treated by the Newhall Ranch WRP (see **Appendix 4.11, Wastewater Data**, for detailed calculations).

Table 4.11-1
Landmark Village Wastewater Generation

Land Use	Units	Quantity	Generation Factor (gpd)	Wastewater Generation (gpd)
Residential				
Single Family	dwelling unit	308	260	80,080
Multi-Family	dwelling unit	1,136	195	221,520
Non-Residential				
Commercial Retail	thousand square feet	1,033	100	103,300
Elementary School	thousand square feet	20	200	4,000
			Total	**408,900.00**

Source: County Sanitation Districts of Los Angeles Loadings and Unit Rates.

(2) Wastewater Treatment

The long-range plan is for the Newhall Ranch WRP to be constructed exclusively to serve uses within Newhall Ranch. The new WRP's capacity would be 6.8 mgd, with a maximum flow of 13.8 mgd. A new County sanitation district would be formed.

In the interim, two options are available to treat wastewater generated by the proposed project. One option as shown in **Figure 1.0-32, Sewer Key Map – Off-Site Connection**, is to construct an initial phase

of the Newhall Ranch WRP to serve the project site, with WRP buildout occurring over time as demand for treatment increases.

(a) Treatment Option A

Project generated wastewater treatment has been calculated at 0.41 mgd. At buildout, the treatment capacity of the Newhall Ranch WRP would be 6.8 mgd, with a maximum flow of 13.8 mgd. The WRP has been designed to serve the buildout of the Newhall Ranch Specific Plan area, of which Landmark Village is a part. The first phase of the WRP would be sited to accommodate project generated waste. The WRP was conditioned by the Board of Supervisors to be designed and constructed to the standards of the County of Los Angeles Department of Public Works and CSDLAC; as a result, no significant operational impacts are expected.

(b) Treatment Option B

As a result of CSDLAC's future wastewater generation estimates, CSDLAC has proposed a two-phase plan to incrementally expand the treatment facilities to meet future needs to a total of 34.1 mgd.[8] The first phase of the expansion was completed in July 2004 and expanded treatment capacity by approximately 9 mgd, or approximately 47 percent. This first phase of the expansion will meet the expected wastewater treatment demand through 2010. Therefore, the Valencia WRP would have sufficient capacity to temporarily accommodate the project's predicted wastewater generation of 0.41 mgd. As a result, no significant operational impacts are expected.

(3) Collection Facilities

If the first phase of the Newhall Ranch WRP is used to treat effluent generated by the proposed project, then the collection and conveyance of wastewater would occur exclusively by gravity flow. Under this scenario, the first phase of the sanitary sewer trunk line would be placed in a 7.5-foot-wide by 15-foot-deep (average depth) trench extending along the southerly portion of the SR-126 right-of-way from the eastern boundary of the project site west approximately 16,100 linear feet (LF), where it would connect to the headworks of the new WRP. The new lines would be designed and constructed to meet Los Angeles County Department of Public Works, CSDLAC, and state standards and requirements. Therefore, wastewater collection system impacts under this option are considered less than significant.

The second option, as shown in **Figure 1.0-32, Sewer Key Map**, would temporarily direct wastewater flows to the Valencia WRP until the first phase of the Newhall Ranch WRP is complete. This alternative would extend a sanitary sewer force main line in a 3-foot-wide by 4.5-foot-deep trench an estimated

8 Ibid.

12,500 LF from the project site easterly to the existing lift station at The Old Road and Henry Mayo Drive. Dependent upon the existing lift station's capacity, it may be possible for the force main to tie-in to the existing lines at the Henry Mayo Drive and The Old Road intersection. The tie-in to the lift station would allow this additional sewage to be conveyed to the existing Valencia WRP. However, if the existing lift station or force main cannot accept the additional sewage from the proposed project, the alignment would be extended approximately 18,100 LF where it would tie-in directly to the Valencia WRP. The alignment for this option is within the south side of the SR-126 and Henry Mayo Drive rights-of-way before turning south and traveling within the easterly right-of-way for The Old Road.

7. MITIGATION MEASURES

Although the proposed Landmark Village project may result in potential impacts to wastewater disposal services absent mitigation, the County already has imposed mitigation measures required to be implemented as part of the Newhall Ranch Specific Plan. These mitigation measures, as they relate to wastewater disposal, are found in the certified Newhall Ranch Specific Plan Program EIR and the adopted Mitigation Monitoring Plan for the Specific Plan (May 2003). The project applicant has committed to implementing the applicable mitigation measures from the Newhall Ranch Specific Plan to ensure that future development of the project site would not result in wastewater disposal impacts and would not adversely affect adjacent properties.

a. Mitigation Measures Required by the Adopted Newhall Ranch Specific Plan, as they Relate to the Landmark Village Project

The following mitigation measures (**Mitigation Measure Nos. 4.12-1** through **4.12-7**, below) were adopted by the County in connection with its approval of the Newhall Ranch Specific Plan (May 2003). The applicable mitigation measures will be implemented, or have been implemented already, to mitigate the potentially significant wastewater disposal impacts associated with the proposed Landmark Village project. These measures are preceded by "SP," which stands for Specific Plan.

SP 4.12-1 The Specific Plan shall reserve a site of sufficient size to accommodate a water reclamation plant to serve the Newhall Ranch Specific Plan. (*This measure has been implemented by the Board of Supervisors' approval in May 2003, of the Newhall Ranch WRP within the boundary of the Specific Plan.*)

SP 4.12-2 A 5.8 to 6.9 mgd water reclamation plant shall be constructed on the Specific Plan site, pursuant to County, state and federal design standards, to serve the Newhall Ranch Specific Plan. (*This measure will be implemented pursuant to the project-level analysis already completed for the Newhall Ranch WRP in the certified Newhall Ranch Specific Plan EIR.*)

SP 4.12-3 The Conceptual Backbone Sewer Plan shall be implemented pursuant to County, state and federal design standards.

SP 4.12-4 Prior to recordation of each subdivision permitting construction, the applicant of each subdivision shall obtain a letter from the new County sanitation district stating that treatment capacity will be adequate for that subdivision.

SP 4.12-5 All facilities of the sanitary sewer system will be designed and constructed for maintenance by the County of Los Angeles Department of Public Works and the County Sanitation Districts of Los Angeles County, and/or the new County sanitation district or similar entity in accordance with their manuals, criteria, and requirements.

SP 4.12-6 Pursuant to Los Angeles County Code, Title 20, Division 2, all industrial waste pretreatment facilities shall, prior to the issuance of building permits, be reviewed by the County of Los Angeles Department of Public Works, Industrial Waste Planning and Control Section and/or the new County sanitation district, to determine if they would be subject to an Industrial Wastewater Disposal Permit.

SP 4.12-7 Each subdivision permitting construction shall be required to be annexed into the Los Angeles County Consolidated Sewer Maintenance District.

b. Additional Mitigation Measures Proposed by this EIR

No additional mitigation measures beyond those identified in the Newhall Ranch Specific Plan Program EIR are required or necessary, because the Landmark Village project does not result in any significant wastewater disposal impacts after implementation of the above mitigation measures.

8. CUMULATIVE IMPACTS

The focus of the cumulative analysis is on determining whether the cumulative increase in the residential population from Santa Clarita Valley buildout, in combination with the proposed project, would adversely impact the wastewater disposal service providers that serve the residents of the Santa Clarita Valley. In order to analyze the cumulative impacts of the Landmark Village project in combination with other expected future growth, the amount and location of growth expected to occur in the SCVSD sphere of influence was predicted. For this EIR, three separate cumulative development scenarios are analyzed to meet Los Angeles County and CEQA requirements (see, **Section 3.0**, **Cumulative Impact Analysis Methodology**, for a discussion on these requirements):

Scenario 1 Existing development within the service area for the SCVSD plus Development Monitoring System (DMS) projections plus the proposed project (termed "DMS Build-Out Scenario");

Scenario 2 Buildout within the CLWA service area based on build-out projections for CLWA service area, plus active pending General Plan and Areawide Plan amendment requests, plus the proposed project (termed "Santa Clarita Valley Cumulative Build-Out Scenario"); and

Scenario 3 Buildout of the CSDLAC Facilities Plan for the Santa Clarita Valley Sanitation District.

a. DMS Build-Out Scenario

The County General Plan DMS methodology uses sanitation districts as the area of analysis for wastewater treatment. The Newhall Ranch Specific Plan proposes to form a new sanitation district (including the new Newhall Ranch WRP), which is generally outside the sphere of influence of any existing district, and which would have boundaries contiguous with the boundary of the Specific Plan. Because the proposed new sanitation district is not yet formed, it is not yet included in the County's DMS. It is expected that the County would establish a new DMS analysis for the new district upon the district's formation, and that the analysis would reflect a district capacity of 6.8 mgd for the Newhall Ranch Specific Plan. Should future development occur within the expected tributary area[9] of the Newhall Ranch WRP and request to be annexed to the new sanitation district, the new development projects also would be included in the County's DMS. The formation of a service district does not create any environmental impacts that were not previously analyzed in the certified Newhall Ranch Specific Plan Program EIR. As a result, impacts under this scenario would be less than significant.

b. Santa Clarita Valley Cumulative Build-Out Scenario

The Santa Clarita Valley Cumulative Build-Out Scenario entails buildout of all lands under the current land use designations indicated in the Los Angeles County Santa Clarita Valley Areawide Plan and the Los Angeles County General Plan, plus the proposed project, plus all known active pending General Plan Amendment requests in the unincorporated area of the Santa Clarita Valley and in the City of Santa Clarita. **Table 4.11-2, Cumulative Development Activity – Santa Clarita Valley Cumulative Build-Out Scenario**, depicts the projected future development activity in the Santa Clarita Valley with and without the proposed project. Utilizing loading factors provided by the CSDLAC, under this build-out scenario, there would be an additional wastewater generation of 59.3 mgd. See **Table 4.11-3, Wastewater Generation Impact Analysis – Santa Clarita Valley Cumulative Build-Out Scenario**, for the detailed breakdown of Santa Clarita Valley Cumulative Build-Out Scenario wastewater calculations.

As previously discussed, the two existing Saugus and Valencia WRPs would have a combined total projected 2015 capacity of approximately 34.1 mgd of wastewater. Using CSDLAC loading factors, buildout of the service areas of these two WRPs would increase the amount of wastewater generated in the SCVSD to 59.29 mgd, which is 25.19 mgd more than the proposed 2015 SCVSD expansion of 34.1 mgd.

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9 Areas that flow by gravity to the proposed WRP and which are outside the spheres of influence of the SCVSD.

Table 4.11-2
Cumulative Development Activity – Santa Clarita Valley Cumulative Build-Out Scenario

Land Use Types	Cumulative Buildout w/o Project[1]	Project	Cumulative Buildout w/ Landmark Village[1]
Single-Family	93,412 du	308 du	93,720 du
Multi-Family	47,621 du	1,136 du	48,757 du
Mobile Home	2,699 du		2,699 du
Commercial Retail	18,866,030 sq. ft.	1,033,000 sq. ft.	19,899,030 sq. ft.
Hotel	2,071 room		2,071 room
Sit-Down Restaurant	283,790 sq. ft.		283,790 sq. ft.
Fast Food Restaurant	23,600 sq. ft.		23,600 sq. ft.
Movie Theater	3,300 seats		3,300 seats
Health Club	54,000 sq. ft.		54,000 sq. ft.
Car Dealership	411,000 sq. ft.		411,000 sq. ft.
Elem./Middle School	278,590 students	750 students	279,340 students
High School	12,843 students		12,958 students
College	29,948 students		29,948 students
Hospital	247,460 sq. ft.		247,460 sq. ft.
Library	171,790 sq. ft.		171,790 sq. ft.
Church	501,190 sq. ft.		501,190 sq. ft.
Day Care	785,000 sq. ft.		785,000 sq. ft.
Industrial Park	41,743,950 sq. ft.		41,743,950 sq. ft.
Business Park	8,424,330 sq. ft.		8,424,330 sq. ft.
Manufact./Warehouse	3,932,470 sq. ft.		3,932,470 sq. ft.
Utilities	1,150,240 sq. ft.		1,150,240 sq. ft.
Commercial Office	6,380,520 sq. ft.		6,380,520 sq. ft.
Medical Office	133,730 sq. ft.		133,730 sq. ft.
Golf Course	1,209.0 ac		1,238.0 ac
Developed Parkland	477.3 ac	16 ac	493.3 ac
Undeveloped Parkland	1,000.0 ac		1,000.0 ac
Special Generator[2]	413.0 sg		413.0 sg

du = dwelling unit; sq. ft. = square feet; sta = staff; ac = acres; sg = special generator

[1] *Santa Clarita Valley Consolidated Traffic Model, (November 2002). Includes existing development, buildout under the existing City of Santa Clarita General Plan and Santa Clarita Valley Areawide Plan, and active pending General Plan Amendment requests.*

[2] *Includes Wayside Honor Ranch, Six Flags Magic Mountain, Travel Village, CHP Office, and Aqua Dulce Airport.*

Table 4.11-3
Wastewater Generation Impact Analysis –
Santa Clarita Valley Cumulative Build-Out Scenario

Land Use	Generation (mgd)
Single Family	24.367
Multi-Family	9.508
Mobile Home	0.421
Commercial Retail	1.990
Hotel	0.259
Sit-Down Restaurant	0.284
Fast Food Restaurant	0.024
Movie Theater	3.713
Health Club	0.007
Car Dealership	0.041
Elem./Middle School	5.587
High School	0.259
College	0.599
Hospital	0.000
Library	0.009
Church	0.025
Day Care	0.039
Industrial Park	8.349
Business Park	1.685
Manufact./Warehouse	0.786
Utilities	0.029
Commercial Office	1.276
Medical Office	0.027
Golf Course	0.000
Developed Parkland	0.000
Undeveloped Parkland	0.000
Special Generator	0.000
Total	**59.292**

Source: Impact Sciences, Inc. (February 2004)

As stated earlier, numerous safeguards exist within the County's project approval process to ensure available treatment capacity for new development within the service areas of CSDLAC, such as connection fees to pay for the full cost of facility expansions (including increasing water reclamation plant capacity). Although some amount of development in the Santa Clarita Valley would utilize on-site septic or package treatment facilities, it is expected that most of the build-out wastewater would be

treated at CSDLAC plants. If buildout of the Santa Clarita Valley was permitted to occur without provision of additional treatment capacity at either the Saugus and Valencia WRPs or another site, significant wastewater disposal impacts would occur. However, with the safeguards in place that ensure no connections permits are issued if capacity is not available, no significant cumulative wastewater treatment impacts would occur.

c. County Sanitation Districts of Los Angeles County Facilities Plan for the Santa Clarita Valley Sanitation District

The CSDLAC has prepared a Facilities Plan, with a horizon year of 2015, for the SCVSD that was approved in January 1998. The Facilities Plan will estimate future wastewater generation for the probable future service area of the SCVSD in order to anticipate future treatment capacity and wastewater conveyance needs. Unlike this EIR, which estimates future wastewater generation based on the buildout of land uses (under no certain horizon year) within the Santa Clarita Valley Areawide Plan and City of Santa Clarita General Plan, plus known active pending General Plan Amendments, the CSDLAC Facilities Plan bases its projections for wastewater generation on the SCAG 2004 Regional Transportation Plan. The Facilities Plan uses a residential and commercial wastewater generation rate of 101 gallons per capita per day, plus projected industrial wastewater and contracted entitlement flow. The Facilities Plan also assumes that if the Specific Plan is approved, its wastewater would be treated at the new WRP, rather than by the SCVSD. According to CSDLAC estimates (as opposed to the estimates of this EIR), total flows projected from the Santa Clarita Valley in 2015, exclusive of the Specific Plan, would be 35.8 mgd (or approximately 36 mgd).[10] The projected site capacity of the Saugus and Valencia WRPs is 37.1 mgd, which would include the combined permitted capacity of 19.1 mgd plus 18.0 mgd of projected future capacity available at the existing plant sites.[11] In addition, SCVSD does not expect to exceed a daily capacity of 37.1 mgd because connection permits will not be issued that would exceed this amount. Because safeguards are in place that ensure no connection permits are issued if capacity is not available, no significant cumulative impacts on the SCVSD would occur under this scenario.

9. CUMULATIVE MITIGATION MEASURES

Cumulative development would be required to implement similar mitigation, if necessary, determined on a project-by-project basis. Therefore, no additional mitigation is recommended or required for this project.

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10 CSDLAC comments (July 16, 1996).

11 Preliminary WRP Site Capacity Evaluations for the SCVSD, County Sanitation Districts of Los Angeles County, 1996.

10. SIGNIFICANT UNAVOIDABLE IMPACTS

a. Project-Specific Impacts

Provided that proposed mitigation measures are implemented, no significant unavoidable wastewater disposal impacts are expected to result from implementation of the proposed project.

b. Cumulative Impacts

Provided that mitigation measures are implemented, no significant unavoidable cumulative wastewater disposal impacts are expected to result from implementation of the proposed project.

4.12 SOLID WASTE SERVICES

1. SUMMARY

Site preparation (vegetation removal and grading activities) and construction activities would generate a total of approximately 20,556 tons, or an average of approximately 4,111 tons per year of construction wastes over the 5-year buildout of the project assuming no recycling, or approximately 10,278 total tons assuming a 50 percent diversion rate. The Landmark Village project would generate approximately 20,858 pounds per day, or approximately 3,807 tons per year, of solid waste upon buildout assuming no solid wastes from the project would be recycled (a worst-case scenario). The project may also generate household type hazardous wastes. Cumulative development within the Santa Clarita Valley would generate 395,452 tons per year of solid waste, as well as hazardous waste, assuming no recycling. The project's share of 3,807 tons per year would represent 0.96 percent of this total. Mitigation has been identified to reduce construction and operation wastes to the extent feasible. Los Angeles County's (County) landfills have approved adequate capacity to service the existing population and planned growth until the year 2017. Capacity is projected to extend beyond the year 2017, when combined with other events that have expanded landfill capacity within the County. However, land suitable for landfill development or expansion is quantitatively finite and limited due to numerous environmental, regulatory, and political constraints. This is not to say, though, that alternative solid waste disposal technologies that could substantially reduce landfill disposal will not be developed and legislatively approved in the future; given the market forces that drive the solid waste industry, it seems reasonable to assume they will. Nevertheless, until other disposal alternatives that will be adequate to serve existing and future uses for the foreseeable future are found and because landfill space is a finite resource, the potential project and cumulative solid and hazardous waste impacts are considered significant unavoidable impacts.

2. BACKGROUND

a. Relationship of Project to Newhall Ranch Specific Plan Program EIR

Section 4.15 of the Newhall Ranch Specific Plan Program EIR identified and analyzed the existing conditions, potential impacts, and mitigation measures associated with solid waste for the entire Newhall Ranch Specific Plan. The Newhall Ranch Specific Plan Program EIR concluded that Specific Plan implementation would result in significant impacts that could not be reduced to below a level of significance. All subsequent project-specific development plans and tentative subdivision maps must be consistent with both the Newhall Ranch Specific Plan, and the County's General Plan and the Santa Clarita Valley Areawide Plan.

This project-level EIR is tiering from the previously certified Newhall Ranch Specific Plan Program EIR. **Section 4.12** assesses the Landmark Village project's existing conditions, the project's potential environmental impacts, and the applicable mitigation measures from the Newhall Ranch Specific Plan Program EIR, and any additional mitigation measures recommended by this EIR for the Landmark Village project.

3. SUMMARY OF THE NEWHALL RANCH SPECIFIC PLAN PROGRAM EIR FINDINGS

The Newhall Ranch Specific Plan Program EIR identified certain potentially significant impacts related to solid waste disposal services with implementation of the Specific Plan. Specifically, the Newhall Ranch Specific Plan Program EIR, and related findings, determined that implementation of the adopted Specific Plan would cause significant impacts solid waste disposal services that could not be mitigated to below a level of significance by adoption of mitigation measures.[1] This was because an adequate supply of landfill space had not been approved for beyond 1997, and because existing hazardous waste management facilities in the County were inadequate; therefore, this increase in solid and hazardous waste generation was considered to cause a significant impact unless additional landfill space or other disposal alternatives were approved. For this reason, impacts were considered significant even with adoption of the identified feasible mitigation measures.[2]

In summary, site preparation and construction activities would generate a approximately 20,970 tons per year of construction wastes for a total of 524,250 tons over the 25-year buildout of the Specific Plan assuming no recycling, or approximately 262,125 total tons using recycling practices in effect in 1999. These waste materials were expected to be typical construction debris, including wood, paper, glass, plastic, and green wastes. Construction activities could also generate household-type hazardous waste products. The wastes generated would result in an incremental and intermittent increase in solid waste disposal at landfills and other waste disposal facilities within Los Angeles County. At project buildout, the Newhall Ranch Specific Plan would generate approximately 261,593 pounds of solid waste per day, or 47,741 tons per year, assuming no recycling, and may generate household type hazardous wastes.

Mitigation measures were adopted, which require the Newhall Ranch Specific Plan to meet the requirements of all applicable solid waste diversion, storage, and disposal of solid and hazardous wastes within the Specific Plan in order to reduce impacts to the extent feasible.[3] Despite the reduction of solid

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1 See, Mitigation Measures 4.15-1 through 4.15-4 in both the certified Newhall Ranch Specific Plan Program EIR (March 9, 1999) and the adopted Mitigation Monitoring Plan for the Specific Plan (May 2003).

2 Ibid.

3 Ibid.

waste generation during both project construction and operation, land suitable for landfill development or expansion is quantitatively finite and limited due to numerous environmental, regulatory, and political constraints. Based on the Newhall Ranch Specific Plan Program EIR and record, the County's Board of Supervisors found that the until the County can demonstrate that approved landfill space or other disposal alternative will be adequate to serve existing and future uses for the foreseeable future, Specific Plan and cumulative solid and hazardous waste impacts remain unavoidably significant.

4. EXISTING CONDITIONS

a. Introduction

The Los Angeles County Department of Public Works (LACDPW) is responsible for developing plans and strategies to manage the solid waste, including hazardous waste, generated in the County unincorporated areas, and for addressing the disposal needs of Los Angeles County as a whole. In the past, solid waste was simply collected and disposed of at landfills in the local vicinity. More recently, many jurisdictions, including the County, are stating that existing local landfill space may reach capacity in the very near future. Even with waste reduction and recycling efforts, many jurisdictions are having tremendous difficulty approving new local landfill space or alternative means of disposal to address the anticipated shortage. While solid waste (including hazardous waste) continues to be generated and the public expects it to be collected and disposed, the public has strongly opposed both new and expanded facilities during the permitting process.

Currently, most solid waste is disposed of in landfills. The amount of waste diverted from landfills has increased as jurisdictions throughout the state comply with the provisions of the California Integrated Waste Management Act (discussed later in this EIR section). This diversion will increase the life expectancy of landfills, but not eliminate the need for new landfills. As growth occurs throughout southern California, new landfills will need to be developed and/or other waste disposal alternatives will need to be implemented.

It is expected that new and expanded landfills would be approved as part of a comprehensive solid waste program. It is unrealistic to assume that all existing landfill space will reach capacity and no new landfill space will be made available. The existing population continues to generate solid waste and expects it to be collected and disposed. If no space in landfills existed locally or regionally and waste accumulated, serious health problems (e.g., disease) would result and state and local agencies would be forced to address the crisis. Since it would not be possible to halt the generation of solid waste, it is likely that the state would intervene and implement new landfilling and/or other disposal options.

In response to this dilemma, alternative methods of collection, transfer, disposal, and even the reduction, recycling and reuse of solid waste have been considered. It is speculative to identify specific options for waste disposal that will exist 20 or 50 years from now. Disposal options that have been discussed at the state and County levels, as well as by the private waste disposal industry include expanding existing landfills, transferring solid waste out of the County or state by truck or rail car, and incineration within co-generation plants locally and regionally. However, it should be noted that some landfills may not accept refuse from outside of their city limits or limit incoming disposal of waste to municipalities. Options to reduce the amount of waste disposed of in landfills have included curbside recyclable materials collection and materials separation. The technology and economics for these options are changing on an almost daily basis. As an example, 20 years ago few people would have envisioned the amount of recycling that occurs today. The management of future solid waste disposal is concerned with where and how solid waste will be handled, and how much it will cost to do so. It is largely an open market, regulated by various government controls.

Currently, most solid waste collected within Los Angeles County by private haulers is disposed of within the County. However, this is not to say with absolute certainty that independent solid waste haulers do not or would not take solid wastes over the County line. In fact, LACDPW has maintained a steadfast opinion that prudent public policy includes a balance of in-County and out-of-County disposal capacity to provide for the long-term disposal needs of the County. Greater inter-county transfer of solid waste may occur in the near future if landfills outside of Los Angeles County provide greater economic advantages to haulers or if landfills within the County reach capacity. The U.S. Supreme Court has ruled that jurisdictional solid waste disposal restrictions infringe on a landfill operator's ability to actively participate in interstate commerce.[4] In that case, the court ruled that the City of Philadelphia could not prevent the State of New Jersey from bringing solid waste to Philadelphia for disposal. LACDPW maintains that long-term waste disposal needs can only be met with in-County and out-of-County disposal capacity. Demonstration of the potential for in-County waste disposal capacity and expansion is important to the County in the effective negotiation of out-of-County disposal contracts. If the County becomes totally reliant on out-of-County disposal capacity, it would have little negotiating leverage against unfavorable pricing structures.

The recycling issue points to the privatization that is occurring within the solid waste industry today. In the past, many municipalities provided the service of collecting solid waste and disposing of it in their own landfills. Today, solid waste has become a commodity and has supported the growth of the private solid waste-handling industry. In this free-enterprise system, private industries now compete to collect and dispose of solid waste largely because of the difficulty that municipalities have in approving new

4 *Philadelphia vs. New Jersey*, 98 Supreme Court 2531, 1978.

disposal sites. Private solid waste haulers dispose of their loads at landfills that provide the greatest economic advantage (considering location, transportation cost, and disposal tipping fees). As local landfills reach capacity, economic forces will even more actively drive the collection and disposal of solid waste. In fact, LACDPW has maintained a steadfast opinion that prudent public policy includes a balance of in-County and out-of-County disposal capacity to provide for the long-term disposal needs of the County. Without multiple options, the County would have little negotiating leverage against unfavorable pricing structures.

Two landfills outside Los Angeles County that would receive Los Angeles area waste by rail car are currently proposed to provide long-term solid waste disposal capacity for Los Angeles capacity. The Mesquite Regional Landfill in southern Imperial County and the Eagle Mountain Landfill in Riverside County are both owned by the Sanitation Districts of Los Angeles County (Sanitation Districts) and can provide more than 100 years of disposal capacity for Los Angeles County.[5] The Mesquite Regional Landfill is proposed to be operational in 2008, and permitted to accept up to 20,000 tons of waste each day for the next 100 years. The Sanitation Districts are currently performing the due diligence examination of the Eagle Mountain Landfill. Federal litigation is pending, and could overturn the current permit.[6]

It is unrealistic to assume, however, that all existing landfill space will reach capacity and that no new landfill space or disposal options will be made available. If solid waste could not be disposed of regionally or locally and the waste accumulated, serious health problems (e.g., disease) would result, and state and local health agencies would be forced to address the crisis. Since it would not be possible to halt the generation of solid waste, it is likely that the state would intervene and implement new landfilling and/or other disposal options. Discussion of such intervention is currently taking place at the state level.

Incineration facilities may provide a dual function of disposing of solid waste and generating regional power supplies. If local landfills are not expanded or developed and solid waste is hauled to distant locations, incineration facilities may also become an economically attractive means of disposing of solid waste.

Because of this difficulty in prediction and the constantly changing dynamic value of the solid waste generation and disposal situation, it became necessary in this EIR to formulate a method to evaluate impacts on the landfills that are most likely to serve the project site. Specifically, this EIR section compares the solid waste generation of the proposed project with the capacity of the existing landfills operating within Los Angeles County that accept waste from unincorporated areas. This is considered a

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5 Sanitation Districts of Los Angeles County, *Fiscal Year 2002-2003 in Review*.

6 Ibid.

worst-case scenario, as it does not assume the development of any new landfills, the use of out-of-County landfills, or the implementation of any other disposal options. The reader should also be aware that it is unrealistic to assume that no changes would occur.

Information in this section was derived from LACDPW, *Los Angeles County Integrated Waste Management Plan, 2002 Annual Report on the Countywide Summary Plan and Countywide Siting Element*, February 2004, *Los Angeles County Department of Public Works, 2002 Annual Report on the Source Reduction and Recycling Element, Household Hazardous Waste Element, and Nondisposal Facility Element for the County of Los Angeles Unincorporated Areas*, February, 2004, and interviews with County Sanitation Districts of Los Angeles County (CSDLAC) and LACDPW Environmental Programs Division staff.

b. Plans and Policies for Solid Waste Disposal

In 1989, legislation in the State of California required cities and counties to reduce the amount of solid wastes entering existing landfills by recycling, reuse and waste prevention efforts, pursuant to the California Integrated Waste Management Act (CIWMAC). This legislation established reduction mandates of at least 50 percent reduction by year 2000.

(1) California Integrated Waste Management Act

The California Integrated Waste Management Act of 1989 (Assembly Bill [AB] 939) requires every city and county in the state to prepare a Source Reduction and Recycling Element (SRRE) to its Solid Waste Management Plan that identifies how each jurisdiction will meet the mandatory state waste diversion goals of 25 percent by the year 1995 and 50 percent by the year 2000. The purpose of AB 939 is to "reduce, recycle, and re-use solid waste generated in the state to the maximum extent feasible." Noncompliance with the goals and timelines set forth within the Act can be severe, as the bill imposes fines up to $10,000 per day on jurisdictions (cities and counties) not meeting these recycling and planning goals.

The term "integrated waste management" refers to the use of a variety of waste management practices to safely and effectively handle the municipal solid waste stream with the least adverse impact on human health and the environment. The Act has established waste management hierarchy as follows:

- Source Reduction
- Recycling
- Composting
- Transformation
- Disposal

(2) California Integrated Waste Management Board Model Ordinance

Subsequent to the Integrated Waste Management Act, additional legislation was passed to assist local jurisdictions in accomplishing the goals of AB 939. The California Solid Waste Re-use and Recycling Access Act of 1991 (Public Resources Code Sections 42900-42911) directs the CIWMB to draft a "model ordinance" relating to adequate areas for collecting and loading recyclable materials in development projects. If by September 1, 1994, a local agency did not adopt its own ordinance based on the CIWMB model, the CIWMB model ordinance took effect for that local agency. The County chose to use the CIWMB model ordinance as the County's model ordinance.

(3) County of Los Angeles Solid Waste Management Action Plan

The County's Board of Supervisors in 1988 approved the Los Angeles County *Solid Waste Management Action Plan* to provide long-range management of the solid waste generated within the County. This plan includes such approaches as source reduction, recycling and composting programs, household hazardous waste management programs, and public education awareness programs. The plan concludes that landfilling will remain an integral part of the waste management system and calls for the establishment of 50 years of in-County permitted landfill capacity, as well as the County's support for the development of disposal facilities out of the County.

(4) County of Los Angeles Source Reduction and Recycling Element

The *Source Reduction and Recycling Element* (SRRE) was prepared in response to AB 939. It describes policies and programs that will be implemented by the County for the County unincorporated areas to achieve the state's mandates of 25 and 50 percent waste disposal reductions by the years 1995 and 2000, respectively. Per the Integrated Waste Management Act of 1989, the Source Reduction and Recycling Element projects disposal capacity needs for a 15-year period. The current SRRE 15-year period commenced in 1992.

(5) County of Los Angeles Household Hazardous Waste Element

AB 939 requires every city and county within the state to prepare a Household Hazardous Waste Element (HHWE) and to provide for management of household hazardous waste generated by the residents within its jurisdiction. The Countywide household hazardous waste management program, consisting of collection and public education/information services, has been formulated to serve residents throughout the County in a convenient and cost-effective manner. In addition to reducing the amount of waste that might otherwise be sent to a landfill as required by AB 939, these programs are important facets in the County's effort to clean up the solid waste stream.

(6) County of Los Angeles Non-Disposal Facility Element

AB 939 requires every city and county within the state to prepare and adopt a Non-Disposal Facility Element (NDFE) identifying all existing, expansions of existing, and proposed new non-disposal facilities which will be needed to implement the local jurisdiction's SRRE. The County's NDFE identifies 20 existing materials recovery facilities/transfer stations, and nine proposed material recovery facilities as non-disposal facilities that the County intends to utilize to implement its SRRE and meet the diversion requirements of AB 939. In addition, the County's NDFE also identifies the utilization of four landfill facilities, operated by CSDLAC, for diversion of yard/green waste which is intended to be used as alternative daily cover at the landfills.

c. Existing Solid Waste Generation

(1) Statewide Solid Waste Generation

In the State of California, 66.1 million tons of solid waste was generated in 2000.[7] Some of the solid waste stream was diverted from landfills through various source reduction, recycling, and re-use efforts. The diversion rate in the state was 42 percent in 2000.[8]

(2) Regional Solid Waste Generation

A total of 1.1 million tons of solid waste was collected within unincorporated Los Angeles County for the year 2000.[9] Some of the solid waste stream was diverted from landfills through various source reduction, recycling, and re-use efforts. The preliminary report prepared by the California Integrated Waste Management Board (CIWMB) indicates that the 2000 diversion rate was 31 percent.[10] The CIWMB made the determination that the County's 2000 diversion rate is acceptable for now and granted the County an extension to December 2004 to comply with the required 50 percent diversion rate.[11] The diversion rate in unincorporated Los Angeles County has increased since 1995. The diversion rate was 27 percent in 1995, 29 percent in 1996, 40 percent in 1998, and 40 percent in 1999.[12]

(3) Site-Specific Solid Waste Generation

The tract map site is cultivated with row crops. Miscellaneous ancillary sheds used to store agricultural equipment are found on this site. Several dirt roads provide access to the cultivated fields. Several

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7 California Integrated Waste Management Board website, May 2004. www.ciwmb.ca.gov.

8 Ibid.

9 California Integrated Waste Management Board, Jurisdiction Diversion and Disposal Profile: Los Angeles County at http://www.ciwmb.ca.gov/Profiles. October 4, 2004.

10 California Integrated Waste Management Board website, October 4, 2004. www.ciwmb.ca.gov.

11 Ibid.

12 Ibid.

abandoned oil wells along with active agricultural water wells are also dispersed within the property boundary. Land within the two off-site grading sites is undeveloped or disturbed by agricultural cultivation and oil production. The water tank sites are located on undeveloped land. The utility corridor runs parallel to existing road rights-of-way (see **Figure 2.0-1**, **Existing Land Use**). These off-site project areas do not significantly contribute to the amount of solid waste to the area's waste stream.

d. Existing Solid Waste Collection and Disposal

(1) Solid Waste Collection

Residential, commercial, and industrial trash collection in the unincorporated areas of Los Angeles County is handled by private haulers. These haulers operate in a free-enterprise system and make their profits by collecting disposal fees. When collected, the waste may be taken to any landfill that is willing to accept it. The private haulers are free to operate in any of the unincorporated areas of the County, as well as outside the County. In 2003, about 120 haulers were permitted by the County's Department of Health Services to collect residential, commercial, and industrial waste in unincorporated Los Angeles County.[13]

(2) Solid Waste Disposal

In June, 1996, Los Angeles County prepared the *Los Angeles County Countywide Siting Element* to project waste generation and waste disposal capacity within the County. Projections are made for 15-year planning periods. LACDPW updates the *Siting Element* annually. The most recent report is the *Los Angeles County Integrated Waste Management Plan, 2002 Annual Report on the Countywide Summary Plan and Countywide Siting Element* (published February 2004).

Table 4.12-1, Existing Landfill Capacity and Regional Needs Analysis for Los Angeles County, identifies the anticipated remaining capacity and anticipated remaining years of operation of each landfill, while **Figure 4.12-1, Locations of Major Los Angeles County Landfill Sites**, illustrates the locations of Los Angeles County landfills in relation to the project site.[14]

Recent expansions at the Chiquita Canyon, Antelope Valley, Lancaster, and Puente Hills Landfills are reflected in **Table 4.12-1**. A number of landfills in **Table 4.12-1** have an anticipated life expectancy that extends beyond 2017, which is the end of the current 15-year planning period based on the most report, the *Los Angeles County Integrated Waste Management Plan, 2002 Annual Report on the Countywide Summary*

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13 Telecommunication with Carlos Ruiz, Supervising Civil Engineer III, Head, Planning Section, Environmental Programs Division, Los Angeles County Department of Public Works, July 15, 2003.

14 **Table 4.12-1** is based on the Los Angeles County Department of Public Works, *Los Angeles County Integrated Waste Management Plan, 2002 Annual Report on the Countywide Summary Plan and Countywide Siting Element*, February 2004.

Plan and Countywide Siting Element (published February 2004). For example, the Lancaster Landfill was approved for expansion to extend the life of this landfill to 2030,[15] and the Burbank, Chiquita Canyon, Pebbly Beach, San Clemente, Scholl and Whittier (Savage Canyon) Landfills are permitted until 2054, 2019, 2033, 2032, 2019 and 2025 respectively.[16]

The landfills in **Table 4.12-1** are classified as major landfills, which are defined as those facilities that receive more than 50,000 tons of solid waste per year. Additionally, these landfills are classified as Class III since they are permitted to accept only non-hazardous wastes. As shown in **Table 4.12-1**, with the approval of the Antelope Valley, Bradley, Chiquita, Lancaster, and Puente Hills Landfills expansions, Los Angeles County's landfills have adequate capacity to service the existing population and planned growth until the year 2017. However, capacity will extend beyond the year 2017, as noted above, particularly when combined with other events that have expanded landfill capacity within the County. This includes recent agreements between Orange County and Waste Management, Inc. (WMI), which diverts waste (168,000 tons per year), from San Diego County that was imported into Los Angeles County. This waste now goes to Orange County instead of Los Angeles County. Also, an agreement between Orange County and Taormina Industries, which mainly serves Los Angeles County, calls for 2,000 tons of solid waste per day to be diverted to Orange County landfills.[17] After that time, the daily volume of solid waste generated would exceed the volumes that these landfills are permitted to accept unless new landfills or other disposal alternatives are approved.

As with the solid waste haulers, these landfills operate in a free-enterprise system. Their operating expenses and profits are obtained by collecting disposal fees from the haulers on a per ton basis. The capacities of the landfills are regulated for the most part through the amount of solid waste that each particular facility is permitted to collect per day and in their total capacity.

Solid wastes collected from the Santa Clarita Valley area primarily go to the Chiquita Canyon Landfill (located immediately to the north and east of the project site), and/or to the Sunshine Canyon Landfill located in Sylmar, while other more distant landfills may also receive solid wastes from the area. For instance, the Antelope Valley Landfill in Palmdale, Bradley West Landfill in Sun Valley, Lancaster Landfill in Lancaster, and the Simi Valley Landfill in Simi Valley could all conceivably accept waste from the area.

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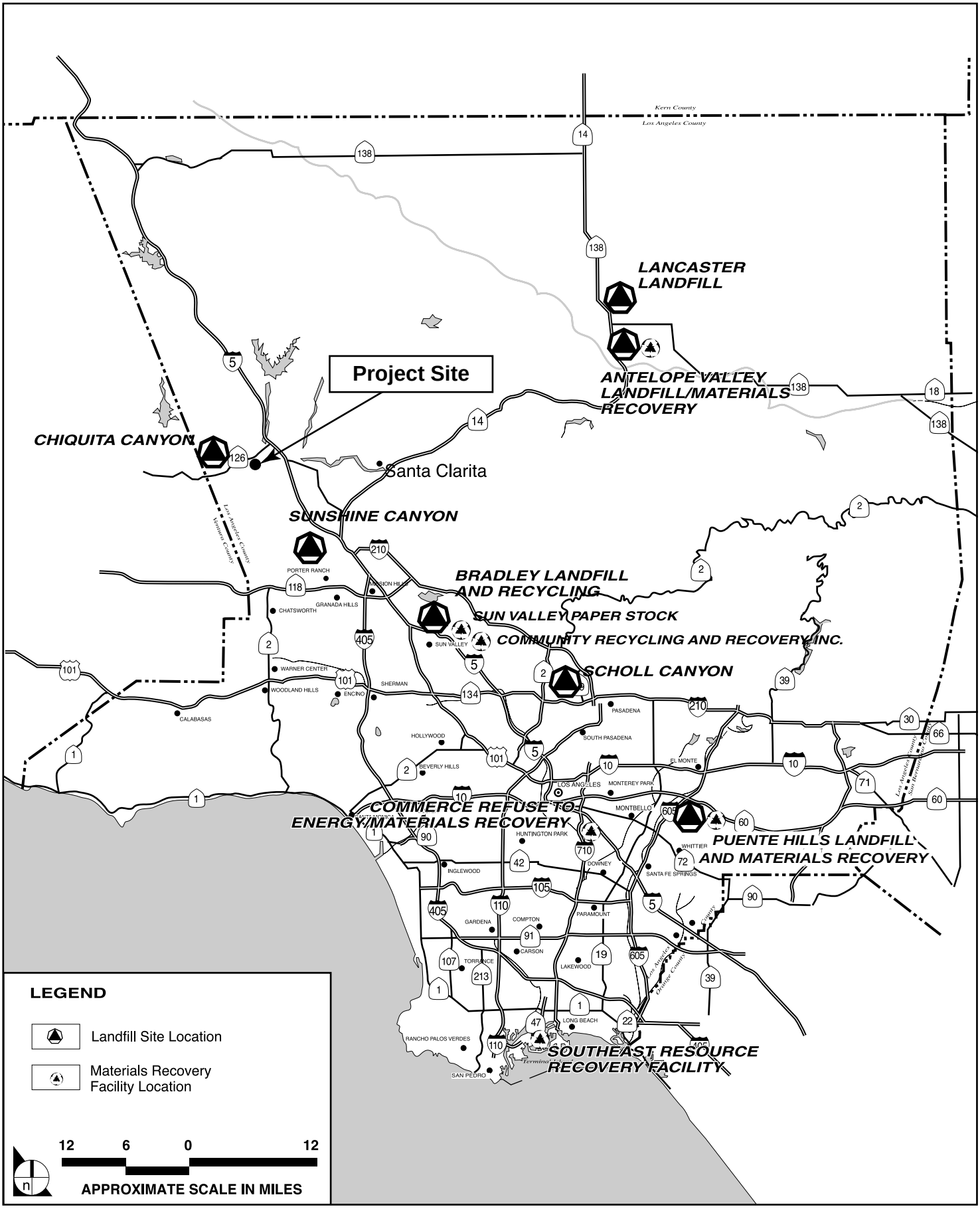
15 Telecommunication with Kay Krumwied, Lancaster Landfill, December 4, 2002. A life expectancy to 2030 assumes the acceptance of the maximum daily tonnage of 1,700 tons of solid waste.

16 California Integrated Waste Management Board website, July 30, 2004.

17 *Approaching an Integrated Solid Waste Management System for Los Angeles County, California*, May 2, 1997, GBB, Solid Waste Management Consultants.



SOURCE: Impact Sciences, Inc. – October 2004

FIGURE **4.12-1**

Locations of Major Los Angeles County Landfill Sites

Table 4.12-1
Existing Landfill Capacity and Regional Needs Analysis for Los Angeles County

Year	Waste Generation Rate	Percent Diversion	Total Disposal Need	Maximum Daily Transformation Capacity	Class III Landfill Disposal Need	1	2	3	4	5	6	7	8	9	10	11	12	Class III Landfill Daily Disposal Capacity Shortfall (Excess)
						EXISTING LANDFILLS												
						Antelope Valley	Bradley	R Burbank[6]	R Calabasas	Chiquita[6]	Lancaster[7]	Pebbly Beach[6]	L Puente Hills	R San Clemente	R Scholl[6]	Sunshine	Whittier[6 8]	
						Expected Daily Tonnage 6 Day Average (tpd-6) Remaining Permitted Landfill Capacity at Year's End (Million Tons)													
	(tpd-6)		(tpd-6)	(tpd-6)	(tpd-6)													(tpd-6)
2002	73,866	5.00%	36,933			847	2,245	128	1,041	4,681	864	14.3	11,761	2.3	1,194	5.714	269	
						9.2	1.1	3.5	11.0	17.2	13.8	0.102	3.1	0.013	8.2	8.1	4.8	
2003	74,422	50.00%	37,211	2,069	35,142	1,800	1,800	129	1,049	5,000	1,700	14.4	12,000	2.3	1,203	6,000	271	4,172
													E					
						8.6	0.6	3.5	10.7	15.7	13.3	0.098	40.6	0.012	7.8	6.2	4.8	
2004	75,217	50.00%	37,609	2,069	35,539	1,800	1,500	131	1,060	5,000	1,700	14.5	13,200	2.4	1,216	11,000	274	(1,359)
																E		
						8.0	0.1	3.4	10.3	14.1	12.8	0.093	36.5	0.011	7.4	75.8	4.7	
2005	76,798	50.00%	38,399	2,069	36,330	1,800	2,000	134	1,082	5,000	1,700	14.8	13,200	2.4	1,242	11,000	280	(1,125)
							E											
						7.5	3.2	3.4	10.0	12.6	12.3	0.088	32.3	0.011	7.1	72.4	4.6	
2006	78,944	50.00%	39,472	2,069	37,403	1,800	5,000	137	1,112	5,000	1,700	15.2	13,200	2.5	1,277	11,000	288	(3,129)
						6.9	1.7	3.3	9.7	11.0	11.7	0.084	28.2	0.010	6.7	68.9	4.5	
2007	81,099	50.00%	40,550	2,069	38,480	1,800	5,000	141	1,143	5,000	1,700	15.7	13,200	2.5	1,311	11,000	296	(2,129)
						6.4	C	3.3	9.3	9.4	11.2	0.079	24.1	0.009	6.3	65.5	4.4	
2008	83,351	50.00%	41,675	2,069	39,606	1,800		145	1,175	5,000	1,700	16.1	13,200	2.6	1,348	11,000	304	3,916
						5.8		3.2	8.9	7.9	10.7	0.074	20.0	0.0083	5.8	62.1	4.3	
2009	85,470	50.00%	42,735	2,069	40,666	1,800		149	1,204	5,000	1,700	16.5	13,200	2.7	1,382	11,000	312	4,900
						5.2		3.2	8.6	6.3	10.1	0.069	15.9	0.074	5.4	58.6	4.2	
2010	87,522	50.00%	43,761	2,069	41,692	1,800		152	1,233	5,000	1,700	16.9	13,200	2.7	1,415	11,000	319	5,852
						4.7		3.2	8.2	4.8	9.6	0.063	11.7	0.0066	5.0	55.2	4.1	
2011	89,614	50.00%	44,807	2,069	42,738	1,800		156	1,263	5,000	1,700	17.3	13,200	2.8	1,449	11,000	327	6,823
						4.1		3.1	7.8	3.2	9.1	0.058	7.6	0.0054	4.5	51.8	4.0	
2012	91,623	50.00%	45,811	2,069	43,742	1,800		159	1,291	5,000	1,700	17.7	13,200	2.9	1,482	11,000	334	7,755
						3.5		3.1	7.4	1.6	8.5	0.052	3.5	0.0048	4.0	48.3	3.9	
2013	93,589	50.00%	46,795	2,069	44,726	1,800		163	1,319	5,000	1,700	18.1	13,200	2.9	1,513	11,000	341	8,668
						3.0		3.0	7.0	0.1	8.0	0.047	C	0.0039	3.6	44.9	3.8	
2014	95,838	50.00%	47,919	2,069	45,850	1,800		167	1,350	C	1,700	18.5		3.0	1,550	11,000	350	27,912
						2.4		3.0	6.5		7.5	0.041		0.0029	3.1	41.5	3.7	
2015	98,073	50.00%	49,036	2,069	46,967	1,800		163	1,319		1,700	18.1		2.9	1,5133	11,000	341	28,949
						1.9		2.9	6.1		7.0	0.035		0.0020	2.6	38.0	3.6	
2016	100,318	50.00%	50,159	2,069	48,090	1,800		174	1,414		1,700	19.4		3.1	1,622	11,000	350	29,975
						1.3		2.8	5.7		6.4	0.029		0.0011	2.1	34.6	3.5	
2017	102,300	50.00%	51,150	2,069	49,081	1,800		178	1,442		1,700	19.7		3.2	1,654	11,000	350	30,888
						0.7		2.8	5.2		5.9	0.023		0.0001	1.6	31.2	3.4	

ASSUMPTIONS:

1. *The Waste Generation Rate (excluding the inert waste being handled at permitted unclassified landfills) was estimated using the CIWMB's Adjustment Methodology, utilizing population projection available from State Department of Transportation, and employment and taxable sales projections available from UCLA.*
2. *Diversion Rate is 50 percent for years 2002 through 2017.*
3. *Expected Daily Tonnage Rates are based on permitted daily capacity for the Antelope Valley, Chiquita, Lancaster, Puente Hills, and Sunshine Landfills. The expected daily tonnage rate for Burbank, Calabasas, Pebbly Beach, San Clemente, Scholl, and Whittier (Savage) Landfills are based on the average daily tonnages for the period of 1/1/02 to 12/31/02.*
4. *Expected Daily Tonnage Rate for Bradley Landfill Expansion is based on the historical use of this landfill.*
5. *"tpd-6": tons per day, 6 day per week average.*
6. *Anticipated closures per CIWMB website, <http://www.ciwmb.ca.gov/swis>, accessed July 30, 2004: Burbank-2054; Chiquita-2019; Pebbly Beach-2033; San Clemente-2032; Scholl-2019; Whittier-2025.*
7. *Anticipated closure 2030, per telecommunication with Kay Krumwied, Lancaster Landfill, December 4, 2002.*
8. *Whittier Landfill has a disposal limitation of 350 tons per day per email communication with Nelly Castellanos, July 6, 2006.*

LEGEND:
C Closure due to exhausted capacity
E Expansion becomes effective
L Does not accept waste from the City of Los Angeles and Orange County
R Restricted Wasteshed
CIWMB California Integrated Waste Management Board

Source: Los Angeles County Department of Public Works, Los Angeles County Countywide Integrated Waste Management Plan 2002 Annual Report – Part II: Siting Element Assessment, Appendix E-2.7, February 2004.

e. Hazardous Materials Collection and Disposal

As discussed above, Los Angeles County has prepared a HHWE to provide for management of household hazardous waste generated by the residents within its jurisdiction.

Certain uses and activities generate hazardous waste that must be disposed at locations other than Class III or unclassified landfills. A generator is a person or business whose acts or processes produce hazardous waste or who, in some other manner, causes a hazardous substance or waste to become subject to the California Hazardous Waste Control Law (HWCL), (Health and Safety Code Sections 25100 through 25249). These hazardous materials then need to be disposed of or transported to a licensed disposal or treatment facility. However, the disposal and transport of hazardous materials is a little more complicated than that of the typical Class III solid waste because there are many forms of hazardous materials. Generators that use hazardous materials and/or generate hazardous waste are responsible for the disposal of the waste. There are many licensed private contractors that transport and dispose hazardous waste.

LACDPW has indicated that existing hazardous waste management facilities within the County are inadequate to meet the waste currently generated within Los Angeles County.[18] However, there are several Class I and II landfills that exist in Southern and Central California that can currently accept hazardous waste generated within the County. Each is described briefly below:

- Laidlaw Landfill, Buttonwillow, Kern County, California: This facility accepts hazardous and non-hazardous waste and is permitted as a Class I landfill. The facility has no restrictions for the amount of waste that can be accepted on a daily basis.
- Kettleman Hills Landfill, Kettleman City, Kings County, California: This is a Class I permitted landfill that accepts hazardous and non-hazardous waste with no capacity restrictions.
- McKittrick Waste Treatment Site, McKittrick, Kern County, California: This facility is a Class II permitted landfill that accepts hazardous and non-hazardous waste. The facility has a capacity restriction of 412 cubic meters daily.

f. Current Site Conditions

The Landmark Village tract map site is cultivated with row crops. Miscellaneous ancillary sheds used to store agricultural equipment are found on the site. Several dirt roads provide access to the cultivated fields. Several abandoned oil wells along with active agricultural water wells are also dispersed within the tract map boundary. Land within the proposed Adobe Canyon borrow site, Chiquito Canyon grading

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18 Written correspondence from Rod Kubomoto, Watershed Management Division, County of Los Angeles Department of Public Works, April 21, 2004.

site, water tank sites and the utility corridor area is either undeveloped or disturbed by agricultural cultivation or oil production (**Figure 2.0-1**, **Existing Land Uses**).

5. PROPOSED PROJECT IMPROVEMENTS

The applicant proposes to develop 1,444 residential dwelling units with a total residential population of 3,680,[19] approximately 1,033,000 square feet of commercial/mixed use space, a 9-acre elementary school, a 16-acre Community Park, four private recreational facilities, open space and river trail uses, and supporting roadway, drainage, and infrastructure improvements. In addition, the applicant proposes to construct the Long Canyon Road Bridge over the Santa Clara River, and install exposed and buried bank stabilization on portions of the south and north side of the river.

6. PROJECT IMPACTS

The analysis of potential impacts to solid waste disposal associated with construction and operation of the proposed project, including the significance criteria applicable to assessing such impacts, is presented below.

a. Significance Threshold Criteria

According to Appendix G of the 2005 *California Environmental Quality Act (CEQA) Guidelines*, a project would have a significant impact on solid waste disposal services if the project would:

- Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs; or
- Not comply with federal, state, and local statutes and regulations related to solid waste.

The *CEQA Guidelines* do not identify any quantitative standards for determining the significance of a new development project's solid waste generation.

b. Impact Analysis

(1) Construction-Related Impacts

Site preparation (vegetation removal and grading activities) and construction activities would generate a total of approximately 20,556 tons, or an average of approximately 4,111 tons per year of construction wastes over the five-year buildout of the project assuming no recycling, or approximately 10,278 total

[19] Based upon County of Los Angeles provided estimates of 3.17 persons per single family dwelling, 2.38 persons per multi-family dwelling and per apartment.

tons assuming a 50 percent diversion rate.[20] These waste materials are expected to be typical construction debris, including wood, paper, glass, plastic, metals, cardboard, and green wastes. The wastes generated would result in an incremental and intermittent increase in solid waste disposal at landfills and other waste disposal facilities within Los Angeles County. Unless construction-related wastes are recycled, construction solid waste generation would have a significant impact on the capacity of the County's solid waste management system.

Los Angeles County recently proposed an amendment to Title 20, Utilities, of the Los Angeles County Code to add Chapter 20.87, Construction and Demolition Debris Recycling, to provide for the recycling and reuse of construction and demolition debris in the unincorporated areas of the County. The project would comply with this amendment. Mitigation would be adopted to require the project proponent to prepare a Waste Management Plan to recycle, at a minimum, 50 percent of the construction and demolition debris, and reports would be submitted to the Los Angeles County Environmental Programs Division. As discussed above, an adequate amount of landfill space has not been ensured to accommodate long-term solid waste generation at current disposal rates. Therefore, even with mitigation, the project's construction-related solid waste impact to Class III landfills would be considered significant.

Construction activities could also generate hazardous waste products. A licensed hazardous waste disposal expert would be required to dispose of all hazardous materials, such as contaminated soils or asbestos containing materials, inaccordance with applicable regulations (i.e., South Coast Air Quality Management District [SCAQMD] Rules and Regulations for asbestos). Hazardous waste disposal will be handled and disposed of in accordance with all appropriate state and federal laws. Because of the many laws and regulations associated with the disposal of hazardous waste, it would have to be determined at the time of disposal where any certain hazardous waste would be taken. The permitted Class I and II landfills currently in operation within Southern California can currently accommodate hazardous debris generated during project implementation. However, as noted above, land suitable for landfill development or expansion is quantitatively finite and limited due to numerous environmental, regulatory, and political constraints. Therefore, impacts to hazardous waste disposal facilities are considered significant.

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20 Assumes a generation rate of 90 tons per acre of construction waste. Project gross developable acreage is 228.4 (291-62.6). Refer to **Section 3.0**, **Project Description**.

(2) Operational Impacts

At buildout, the project would generate 20,858 pounds of solid waste per day, or 3,807 tons per year, as shown in **Table 4.12-2, Daily Project Solid Waste Generation for Project (No Recycling)**.[21] This quantity represents the project's solid waste generation under a worst-case scenario without any recycling activities in place. However, the project uses would be required to provide adequate areas for collecting and loading recyclable materials in accordance with the County Model Ordinance to reduce the volume of solid waste entering landfills. This recycling, implemented in concert with the Countywide efforts and programs, would substantially reduce the volume of solid waste generated by the project and entering landfills. Although the project would generate approximately 3,807 tons per year, it can also be assumed that the project will meet the current recycling goals of the community and, in actuality, only generate approximately 1,903 tons per year due to County diversion rates and a mandate to divert at least 50 percent of potential waste disposal.

Table 4.12-2
Daily Project Solid Waste Generation for Project (No Recycling)

Land Use	Units	Generation Factor (pounds/day)[1]	Total Waste Generation (pounds/day)	Total Waste Generation (tons/year)
Residential				
Single-Family Detached	308 du	11.18	3,443	628
Multi-Family or Attached	1,136 du	6.41	7,282	1,329
Commercial				
Commercial Retail	335,328 sq. ft.	0.01	4,410	805
Commercial Office	697,672 sq. ft.	0.01	5,352	977
School				
Elementary/Middle School	436 students	0.60	262	48
High School	151 students	0.60	91	17
Parkland	16.1 acres	1.10	18	3
Total			**20,858**	**3,807**

Source: Impact Sciences, Inc. (October 2004).
du = dwelling unit, sq. ft. = square feet

[1] *The solid waste generation rates are derived from the Ventura County Solid Waste Management Department's* Guidelines for the Preparation of Environmental Assessments for Solid Waste Impacts. *The Los Angeles County solid waste generation factor of 11 pounds/capita/day was not used in this analysis because it is very general and may not yield an accurate solid waste generation analysis for the project. These factors do not reflect any recycling activities.*

21 This solid waste generation may also include household-type hazardous wastes. Examples of household hazardous wastes include drain openers, oven cleaners, toilet bowl cleaners, ammonia-based cleaners, floor and furniture polishes, enamel or oil-based paints, anti-freeze, pesticides/herbicides/fungicides, pool acids.

Although it is likely that solid wastes from the Santa Clarita Valley area would go to the Chiquita Canyon Landfill (located immediately to the north and east of the Specific Plan site), and/or to the Sunshine Canyon Landfill located in Sylmar, other more distant landfills may also receive solid wastes from the area. For instance, the Antelope Valley Landfill in Palmdale, Bradley West Landfill in Sun Valley, Lancaster Landfill in Lancaster, and the Simi Valley Landfill in Simi Valley could all conceivably accept waste from the area.

The County identifies landfill capacity in 15-year planning periods, the most recent of which ends in 2017.[22] Recent expansion approvals and proposals for expansion at several County landfills lead one to conclude that solid waste disposal facilities and other options will be available beyond this date as new facilities and technologies are created to meet this demand and reap the financial benefits of providing this service. However, because Los Angeles County has not identified an adequate supply of landfill space beyond 2017, for purposes of this analysis project generated increase in solid waste generation is assumed to cause a significant impact.

Hazardous waste generation and disposal will be handled and disposed of in accordance with all appropriate state and federal laws. Because of the many laws and regulations associated with the disposal of hazardous waste, it would have to be determined at the time of disposal where any particular type of hazardous waste would be taken. The existing permitted Class I and II landfills in operation within Southern and Central California can accommodate hazardous debris and waste generated during construction of the proposed project. Because existing hazardous waste management facilities in the County are currently inadequate, and because landfill space is a finite resource, the increase in hazardous waste generation throughout the project's lifetime would cause a significant impact unless additional landfill space or other disposal alternatives are approved.

7. MITIGATION MEASURES

Although the proposed Landmark Village project may result in potential solid waste disposal impacts absent mitigation, the County already has imposed mitigation required to be implemented as part of the adopted Newhall Ranch Specific Plan. These mitigation measures, as they relate to solid waste disposal services, are found in the certified Newhall Ranch Specific Plan Program EIR and the adopted Mitigation Monitoring Plan for the Specific Plan (May 2003). In addition, this EIR identifies recommended mitigation measures specific to the Landmark Village project site. The project applicant has committed to implementing the applicable mitigation measures from the Newhall Ranch Specific Plan and will implement the mitigation measures recommended for the proposed Landmark Village project to ensure

22 Los Angeles County Department of Public Works, *Los Angeles County Integrated Waste Management Plan, 2002 Annual Report on the Countywide Summary Plan and Countywide Siting Element*, p. 38, February 2004.

that future development of the project site would not result in solid waste disposal impacts, and would not adversely affect adjacent properties.

a. Mitigation Measures Required by the Adopted Newhall Ranch Specific Plan, as they Relate to the Landmark Village Project

The following mitigation measures (**Mitigation Measure Nos. 4.15-1** through **4.15-4**, below) were adopted by the County in connection with its approval of the Newhall Ranch Specific Plan (May 2003). The applicable mitigation measures will be implemented to mitigate the potentially significant solid waste disposal impacts associated with the proposed Landmark Village project. These measures are preceded by "SP," which stands for Specific Plan.

SP 4.15-1 Each future subdivision which allows construction within the Newhall Ranch Specific Plan shall meet the requirements of all applicable solid waste diversion, storage, and disposal regulations that are in effect at the time of subdivision review. Current applicable regulations include recycling areas that are:

- compatible with nearby structures;
- secured and protected against adverse environmental conditions;
- clearly marked, and adequate in capacity, number and distribution;
- in conformance with local building code requirements for garbage collection access and clearance;
- designed, placed and maintained to protect adjacent developments and transportation corridors from adverse impacts, such as noise, odors, vectors, or glare;
- in compliance with federal, state, or local laws relating to fire, building, access, transportation, circulation, or safety; and
- convenient for persons who deposit, collect, and load the materials.

SP 4.15-2 Future multi-family, commercial, and industrial projects within the Specific Plan shall provide accessible and convenient areas for collecting and loading recyclable materials. These areas are to be clearly marked and adequate in capacity, number, and distribution to serve the development.

SP 4.15-3 The first purchaser of each residential unit within the Specific Plan shall be given educational or instructional materials which will describe what constitutes recyclable and hazardous materials, how to separate recyclable and hazardous materials, how to avoid the use of hazardous materials, and what procedures exist to collect such materials.

SP 4.15-4 The applicant of all subdivision maps which allow construction within the Specific Plan shall comply with all applicable future state and Los Angeles County regulations and procedures for the use, collection and disposal of solid and hazardous wastes.

b. Additional Mitigation Measures Proposed by this EIR

The following project-specific mitigation measure is recommended to mitigate the potentially significant solid waste disposal impacts that may occur with implementation of the Landmark Village project. This mitigation measure is in addition to those adopted in the previously certified Newhall Ranch Specific Plan Program EIR. To indicate that the mitigation relates specifically to the Landmark Village project, the measure is preceded by "LV," which stands for Landmark Village.

LV 4.9-1 The project shall comply with Title 20, Chapter 20.87, of the Los Angeles County Code, Construction and Demolition Debris Recycling. The project proponent shall also provide a Waste Management Plan to recycle, at a minimum, 50 percent of the construction and demolition debris. Reports shall be submitted to the Los Angeles County Environmental Programs Division.

8. CUMULATIVE IMPACTS

In order to analyze the cumulative impacts of this project in combination with other expected future growth, the amount and location of growth expected to occur was predicted. The focus of this cumulative analysis is on the cumulative impacts of this project in combination with other expected future growth in the Santa Clarita Valley at its buildout. The Santa Clarita Valley Cumulative Build-Out Scenario entails buildout of all lands under the current land use designations indicated in the Los Angeles General Plan, Santa Clarita Valley Areawide Plan, plus the project, plus all known active pending General Plan Amendment requests for additional urban development in the unincorporated area of Santa Clarita Valley and in the City of Santa Clarita. A list of the future development activity (with and without the project) expected in the valley under this scenario is presented below in **Table 4.12-3, Cumulative Development Activity – Santa Clarita Valley Cumulative Build-Out Scenario**.

Under this scenario, which includes the project, total solid waste generation would be 395,452 tons per year. This quantity represents the cumulative solid waste generation under a worst-case scenario without any recycling activities in place. The project's share of 3,807 tons per year would represent 0.96 percent of this total.

Table 4.12-3
Cumulative Development Activity – Santa Clarita Valley Cumulative Build-Out Scenario

Land Use Types	Cumulative Buildout w/o Project[1]	Project	Cumulative Buildout w/ Landmark Village[1]
Single-Family	93,412 du	308 du	93,720 du
Multi-Family	47,621 du	1,136 du	48,757 du
Mobile Home	2,699 du		2,699 du
Commercial Retail	18,866,030 sq. ft.	1,033,000 sq. ft.	19,899,030 sq. ft.
Hotel	2,071 room		2,071 room
Sit-Down Restaurant	283,790 sq. ft.		283,790 sq. ft.
Fast Food Restaurant	23,600 sq. ft.		23,600 sq. ft.
Movie Theater	3,300 seats		3,300 seats
Health Club	54,000 sq. ft.		54,000 sq. ft.
Car Dealership	411,000 sq. ft.		411,000 sq. ft.
Elem./Middle School	278,590 students	750 students	279,340 students
High School	12,843 students		12,958 students
College	29,948 students		29,948 students
Hospital	247,460 sq. ft.		247,460 sq. ft.
Library	171,790 sq. ft.		171,790 sq. ft.
Church	501,190 sq. ft.		501,190 sq. ft.
Day Care	785,000 sq. ft.		785,000 sq. ft.
Industrial Park	41,743,950 sq. ft.		41,743,950 sq. ft.
Business Park	8,424,330 sq. ft.		8,424,330 sq. ft.
Manufact./Warehouse	3,932,470 sq. ft.		3,932,470 sq. ft.
Utilities	1,150,240 sq. ft.		1,150,240 sq. ft.
Commercial Office	6,380,520 sq. ft.		6,380,520 sq. ft.
Medical Office	133,730 sq. ft.		133,730 sq. ft.
Golf Course	1,209.0 ac		1,238.0 ac
Developed Parkland	477.3 ac	16 ac	493.3 ac
Undeveloped Parkland	1,000.0 ac		1,000.0 ac
Special Generator[2]	413.0 sg		413.0 sg

du = dwelling unit; sq. ft. = square feet; sta = staff; ac = acres; sg = special generator

[1] *Santa Clarita Valley Consolidated Traffic Model, (November 2002). Includes existing development, buildout under the existing City of Santa Clarita General Plan and Santa Clarita Valley Areawide Plan, and active pending General Plan Amendment requests.*

[2] *Includes Wayside Honor Ranch, Six Flags Magic Mountain, Travel Village, CHP Office, and Aqua Dulce Airport.*

As discussed earlier in this section, new landfills will need to be developed and/or other waste disposal options implemented to accommodate future growth. It is reasonable to assume that the market forces that drive the waste disposal industry will put pressure on the industry and governmental agencies to continually identify new economically feasible means of waste disposal in the future to accommodate this

growth. Because solid waste (including hazardous waste) can be disposed of outside of Los Angeles County and because solid waste disposal is driven by a free-enterprise system, it is reasonable to assume that, to some degree, solid waste generated by cumulative development would be disposed of outside Los Angeles County, and likely, outside of the State of California. Given this assumption, the cumulative projects area could encompass a geographic area beyond the jurisdictional boundaries of the Santa Clarita Valley and Los Angeles County and could, conceivably, extend beyond state boundaries. It is beyond the scope of this EIR and too speculative to attempt to quantify the solid waste that could be generated by cumulative development that is proposed in greater Los Angeles County or the region beyond, or to assess the landfills that might be available or, more importantly, other solid waste disposal options which could be available.

However, land suitable for landfill development or expansion is quantitatively finite and limited due to numerous environmental, regulatory, and political constraints. Based on this information, until the County and other jurisdictions that could conceivably accept solid and hazardous wastes can demonstrate that approved landfill space or other disposal alternative will be adequate to serve existing and future uses for the foreseeable future, project and cumulative solid and hazardous waste impacts are considered significant and unavoidable.

9. CUMULATIVE MITIGATION MEASURES

The State of California requires cities and counties to reduce the amount of solid wastes entering existing landfills, by recycling, reuse and waste prevention efforts, pursuant to the CIWMAC. In addition, may jurisdictions have adopted Construction and Demolition Debris Recycling ordinances to reduce the amount of construction waste disposed of at landfills. New projects are required to participate in the programs in effect in their jurisdictions.

10. SIGNIFICANT UNAVOIDABLE IMPACTS

a. Project Specific Impacts

Even with mitigation, the project's solid and hazardous waste impacts would be considered significant and unavoidable.

b. Cumulative Impacts

Even with mitigation, cumulative solid and hazardous waste impacts would be considered significant and unavoidable.

4.13 SHERIFF SERVICES

1. SUMMARY

The Los Angeles County (County) Sheriff's Department provides primary police protection service for the Newhall Ranch Specific Plan site and the surrounding Santa Clarita Valley. Additionally, the Department of California Highway Patrol (CHP) provides traffic regulation enforcement; emergency incident management; and service and assistance on Interstate 5 (I-5), State Route (SR)-126, SR-14, and other major roadways in the unincorporated portions of the Santa Clarita Valley area. The Sheriff's Department current officer-to-population ratio is less than the desired level of service set by the department. The CHP protection service for the project site and other unincorporated areas within the Santa Clarita Valley at the time of this writing is considered less than adequate.

Buildout of the Landmark Village project would significantly increase the demand for police protection and traffic-related services on the project site and the local vicinity in terms of personnel and equipment needed to adequately serve the project. The project would require the services of an additional four sworn Sheriff's Department officers, based on department ideal deputy to resident ratio. However, the department has indicated that the proposed project would require 15 additional deputies. These increased service demands can be met through the provision of increased Sheriff's Department personnel paid for by new tax revenues generated by the project as it builds out. Therefore, any potential impacts to the Sheriff's Department would be less than significant. Additionally, although not made necessary by the project, the applicant has entered into negotiations with the Sheriff's Department for the provision of a Sheriff station site within the Newhall Ranch Specific Plan that would serve the buildout of all uses within the Newhall Ranch Specific Plan boundary.

The proposed project also would increase demands for CHP services in the project area. Through increased revenues generated by the project as it builds out (via motor vehicle registration and drivers license fees paid by new on-site residents and businesses), the funding for additional staffing and equipment would be made available to the CHP for allocation by the State CHP office to the Santa Clarita Valley station to meet future demands. Therefore, project-related impacts to the CHP would be less than significant.

Construction of the proposed project would increase the incidence of petty crimes on the site and also would increase construction traffic on SR-126 that may potentially delay emergency vehicles traveling through the area. However, by retaining the services of a private security company to patrol the project construction site, and by implementing a construction traffic control plan, any potentially significant construction-related impacts to law enforcement services would be reduced to a level below significant.

2. BACKGROUND

a. Relationship of Project to Newhall Ranch Specific Plan Program EIR

Section 4.17 of the Newhall Ranch Specific Plan Program EIR identified and analyzed the existing conditions, potential impacts, and mitigation measures associated with law enforcement services for the entire Newhall Ranch Specific Plan. The Newhall Ranch Specific Plan EIR mitigation program was adopted by the County in findings and in the revised Mitigation Monitoring Plan for the Specific Plan. The Newhall Ranch Specific Plan Program EIR concluded that Specific Plan implementation would result in significant impacts, but that the identified mitigation measures would reduce the impacts to below a level of significance. All subsequent project-specific development plans and tentative subdivision maps must be consistent with the Newhall Ranch Specific Plan, the County of Los Angeles General Plan, and the Santa Clarita Valley Areawide Plan.

This project-level EIR is tiering from the previously certified Newhall Ranch Specific Plan Program EIR. **Section 4.13** discusses, at the project-specific level, the Landmark Village project's existing conditions relative to police protection services, the project's potential impacts on those services, the applicable mitigation measures from the Newhall Ranch Specific Plan Program EIR, and any mitigation measures recommended by this EIR for the Landmark Village project.

3. SUMMARY OF THE NEWHALL RANCH SPECIFIC PLAN PROGRAM EIR FINDINGS

The Newhall Ranch Specific Plan Program EIR identified certain potentially significant impacts related to police protection services with implementation of the Newhall Ranch Specific Plan. Specifically, the Newhall Ranch Specific Plan Program EIR, and related findings, determined that implementation of the adopted Specific Plan would significantly increase the demand for police protection services on the Newhall Ranch Specific Plan site and the local vicinity in terms of personnel and equipment needed to adequately serve the Newhall Ranch Specific Plan site at buildout. The Program EIR estimated that the Newhall Ranch Specific Plan would require the services of an additional 20 sworn officers and 8.5 civilian support personnel at buildout.

In response to the identified potentially significant impacts, a mitigation measure was adopted in order to reduce the impacts resulting from the Specific Plan to a less than significant level.

In summary, the Newhall Ranch Specific Plan's mitigation program for police protection services requires the inclusion of County Sheriff's Department design requirements (such as those pertaining to site access, site security lighting, etc.) into subdivision maps submitted to the County for approval in order to reduce

demands for Sheriff's service to the subdivisions and help ensure adequate public safety features within the tract designs. As the site builds out subsequent to approval of the Newhall Ranch Specific Plan, subdivision maps and site plans would be designed and engineered for Newhall Ranch. At that time, the County of Los Angeles Sheriff's Department may require specific measures for crime prevention purposes and for the security and safety of future residents and employees on the site. In addition, the Specific Plan Program EIR determined that new tax revenues that would be generated by development of the Specific Plan would be deposited in the County's General Fund and the State Treasury, and that these funds could be allocated to increase staff and equipment to meet future security and safety demands of the proposed Specific Plan and cumulative development.

The Board of Supervisors found that the Specific Plan's mitigation program would reduce the identified potentially significant police protection-related effects to a less than significant level.[1]

4. EXISTING CONDITIONS

a. Los Angeles County Sheriff's Department

The Santa Clarita Valley Station of the Los Angeles County Sheriff's Department is responsible for providing general law enforcement to the Newhall Ranch Specific Plan area, while the CHP provides traffic control. As shown in **Figure 4.13-1, Santa Clarita Valley Sheriff Stations**, the Sheriff Station is located near the intersection of Magic Mountain Parkway and Valencia Boulevard, at 23740 Magic Mountain Parkway in Valencia, approximately 8 to 9 miles from the project site.[2] The service area patrolled by this station is approximately 656 square miles, and is generally bound on the north by the Kern County Line, on the east by the township of Agua Dulce, on the south by the Los Angeles City limits, and on the west by the Ventura County line.[3] The service area includes portions of the Angeles National Forest. While the Sheriff's Department does not regularly patrol the National Forest, they do respond to calls within the National Forest relating to events such as arson fires, airplane accidents, search and rescue, and murder.[4] The Santa Clarita Valley Sheriff Station maintains a staff of 171 sworn deputies and serves a population of approximately 200,000.[5] Equipment and services provided through

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1 See, Mitigation Measure 4.17-1 in both the certified Newhall Ranch Specific Plan Program EIR and the adopted Mitigation Monitoring Plan for the Specific Plan (May 2003).

2 Written correspondence from Captain Patti A. Minutello, Los Angeles County Sheriff's Department, Santa Clarita Valley Station, August 4, 2004.

3 Ibid.

4 Telephone interview with Sergeant Carrie Stuart, Los Angeles County Sheriff's Department, Santa Clarita Valley Station, August 5, 2003.

5 Written correspondence from Captain Patti A. Minutello, Los Angeles County Sheriff's Department, Santa Clarita Valley Station, August 4, 2004.

the station include 24-hour designated County cars, helicopters, search and rescue, mounted posse, and emergency operation centers.

The Los Angeles County Sheriff's Department staff indicated that an officer-to-population ratio of one officer to every 1,000 residents is a desired level of service for its service area. This ideal standard is typically applied initially in environmental impact reports for proposed development projects that are served by the Los Angeles County Sheriff's Department as a means to develop a rough assessment of the project's impacts on Sheriff's services. With current staffing of 171 sworn deputies currently assigned to the Santa Clarita Station, the existing ratio at the Santa Clarita Valley station is one deputy per every 1,169 residents.[6]

The Los Angeles County Sheriff's Department has established an optimal response time for services of 10 minutes or less for emergency response incidents (a crime that is presently occurring and is a life or death situation), 20 minutes or less for priority (immediate) incidents (a crime or incident that is currently occurring but which is not a life or death situation), and 60 minutes or less for routine (non-emergency) responses (a crime that has already occurred and is not a life or death situation).[7] These response times represent the range of time required to handle a service call, which is measured from the time a call is received until the time a patrol car arrives at the incident scene. Response time is variable, particularly because the nearest responding patrol car may be located anywhere within the station's patrol area and may not necessarily respond directly from the station itself. The Los Angeles County Sheriff's Department estimates a current response time to the Newhall Ranch Specific Plan site of approximately 6 to 10 minutes for emergency calls, approximately 10 to 15 minutes for priority calls, and approximately 30 to 45 for non-emergency calls.[8] Therefore, although current response times to the Newhall Ranch Specific Plan site are within the optimal (as defined by the Los Angeles County Sheriff's Department) response times, there are currently no calls for service to the unoccupied project site.[9]

The Los Angeles County Sheriff's Department also conducts Search and Rescue operations through its Santa Clarita Valley Station. Search and Rescue operations are generally conducted in mountainous terrain (i.e., for incidents such as downed planes or lost hikers). The Santa Clarita Valley Station Search

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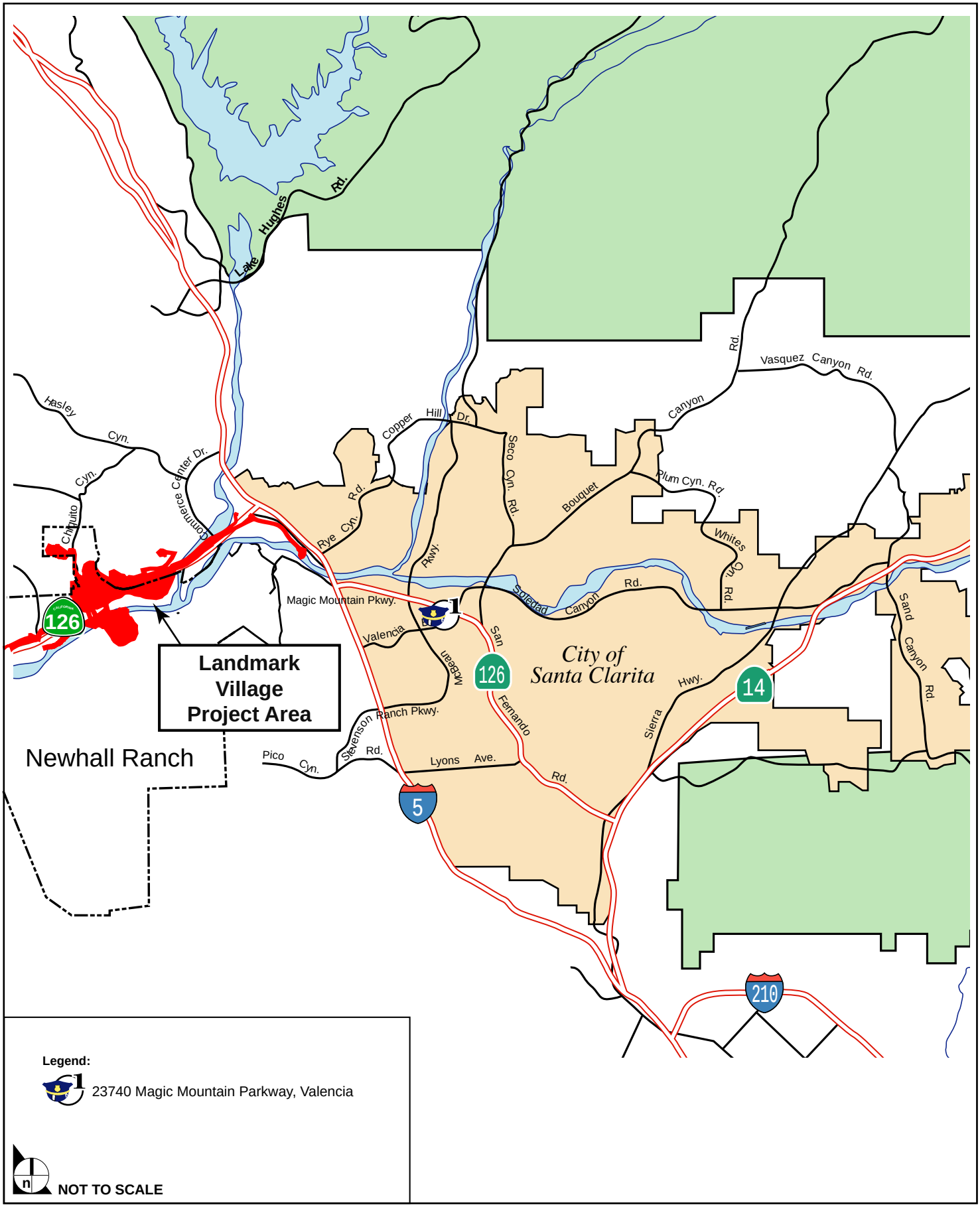
6 Ibid.

7 Telephone interview with Terri Beatty, Regional Allocation Police Services (RAPS) Coordinator, Los Angeles County Sheriff's Department, Santa Clarita Valley Station, August 5, 2003.

8 Written correspondence from Captain Patti A. Minutello, Los Angeles County Sheriff's Department, Santa Clarita Valley Station, August 4, 2004.

9 Telephone interview with Deputy Sheriff Patrick A. Rissler, Los Angeles County Sheriff's Department, Santa Clarita Valley Station, October 21, 2004.



SOURCE: Impact Sciences, Inc. – September 2005

FIGURE **4.13-1**

Santa Clarita Valley Sheriff Stations

and Rescue team uses the station's helicopter and has access to the Antelope Valley Station's helicopter. Mutual aid agreements exist with other Search and Rescue teams located within and outside of Los Angeles County. These agreements are organized through the state's Office of Emergency Services (OES). Search and Rescue operations are funded through the Reserve Forces Bureau and private sources. Urban search and rescue operations (i.e., rescues from building collapse) are performed by the County Fire Department.

b. State and County Emergency Response/Evacuations Plans

California's OES coordinates overall state agency response to major disasters in support of local government. The office is responsible for assuring the state's readiness to respond to and recover from natural, manmade, and war-caused emergencies, and for assisting local governments in their emergency preparedness, response, and recovery efforts. The OES maintains the State Emergency Plan, which outlines the organizational structure for state management of the response to natural and manmade disasters. The OES assists local governments and other state agencies in developing their own emergency preparedness and response plans, in accordance with the Standardized Emergency Management System and the State Emergency Plan (SEMS), for earthquakes, floods, fires, hazardous material incidents, nuclear power plant emergencies, and dam breaks. Each jurisdiction is required to show the OES that it is in compliance with SEMS through a number of measures, including preparation and maintenance of an up-to-date emergency management plan, which includes an emergency evacuation plan. Non-compliance with SEMS can result in the state withholding disaster relief from the non-complying jurisdiction in the event of an emergency disaster. The California OES coordinates an emergency organizational network of the California OES, local Emergency Operations Centers (EOCs) in the state's cities and regional EOCs within each county.

The regional office of the OES is located in Los Alamitos, and the Los Angeles County EOC is located in downtown Los Angeles. The County Office of Emergency Management has prepared the County's *Multi-Hazard Functional Plan*, which details the coordination of County agencies during and after a catastrophic event and establishes the framework for the mutual aid agreements with the CHP, and federal, state, and other local governments in the region. It also serves as the emergency management plan (including emergency evacuation plan) for the entire County. The Los Angeles County Board of Supervisors adopted a revised plan on February 17, 1998.

The Los Angeles County EOC is responsible for emergency operations in the unincorporated areas of Los Angeles.[10] Should an emergency occur, the Los Angeles County Sheriff and Fire Departments would

[10] Telephone interview with Bob Garrott, Assistant Manager, Los Angeles County Office of Emergency Management, June 4, 2003.

provide the first response, as well as the initial contact with other agencies that may need to be involved, such as the Red Cross.[11]

Funding for Los Angeles County's EOC is primarily from the County General Fund, with a small percentage coming from federal funds, which are funneled through California's OES to the County EOC.[12] Currently, the County EOC's budget is $5 million, with federal funding providing $400,000, or 8 percent, of the total budget.[13]

c. California Highway Patrol

The primary responsibility of the CHP is to patrol state highways and County roadways and enforce traffic regulations, respond to traffic accidents, and provide service and assistance for disabled vehicles. The secondary mission of the CHP is to provide assistance to all law enforcement agencies under emergency conditions. In the Santa Clarita Valley area, the CHP maintains a Mutual Aid Agreement with the Los Angeles County Sheriff's Department.[14]

The CHP provides traffic regulation enforcement for unincorporated Santa Clarita Valley and the surrounding areas from its station located at 28648 The Old Road, near the interchange of I-5 and SR-126. The CHP patrols a service area of approximately 700 square miles, which includes I-5, SR-126, SR-14, and all unincorporated areas and roadways. This service area extends westerly to the Ventura County line, east to Agua Dulce, north to SR-138 (and along SR-138 to Avenue 22 East), and south to SR-118.

The Newhall Area CHP Station is staffed by 1 Captain, 2 Lieutenants, 7 Sergeants, 70 officers, 7 non-uniformed personnel, and 15 senior volunteers.[15] A helicopter and a fixed-wing aircraft based at Fullerton Airport currently serve the Orange County area on a limited basis; as of August 1, 2005, these aircraft serve the Los Angeles County area on a limited basis as well.[16] There are currently no plans to centrally base a helicopter to service the Los Angeles County Basin.[17] The Newhall CHP Area issued 10,405 citations, investigated 418 traffic collisions, and affected 281 arrests within the proximity of the

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11 Ibid.

12 Ibid.

13 Ibid.

14 Written communication from D. F. Hoff, Captain, Commander, Newhall Area Station, California Highway Patrol, May 19, 2003.

15 Telephone communication Sergeant Wendy Hahn, Newhall Area Station, California Highway Patrol, February 28, 2006.

16 Ibid.

17 Telephone communication with Lieutenant Mark Odle, Newhall Area Station, California Highway Patrol, July 11, 2005.

proposed Landmark Village project between July 1, 2004 and June 30, 2005.[18] This includes the portions of SR-126, I-5, The Old Road, Hasley Canyon Road, and other unincorporated roads in the project vicinity.[19]

There are no long-range planning documents or uniform staffing requirements used by the CHP to project future need within each service area. Rather, each station determines its own staffing allocation relative to the geographical needs within the station area's boundaries based on the service area's unique requirements and budget constraints.[20] The Newhall Area Station reviews its staffing allocation quarterly.[21] The CHP does not receive or base its deployment on the revenues that may be generated within its service area. The long-range planning for the CHP and future staffing needs are based on the needs of the entire state and budget constraints.[22] The primary funding source for CHP facilities and staffing is state motor vehicle registration and drivers license fees. CHP Headquarters in Sacramento determines the allocation of these fees to each service area. In response to the increased population growth in the Santa Clarita Valley, the Newhall CHP Area has submitted a request for 20 additional officer and 2 additional sergeant positions; however, due to budgetary constraints, no additional personnel are anticipated in the near future.[23] The Newhall CHP does not anticipate any increase in its equipment in the future,[24] and no upgrades to the CHP station are planned.[25]

5. PROPOSED PROJECT IMPROVEMENTS

The applicant proposes to develop a total of 1,444 residential dwelling units with a residential population of 3,680 people,[26] approximately 1,033,000 square feet of commercial/mixed use space, a 9-acre elementary school, a 16-acre Community Park, four private recreational facilities, open space and river

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18 Written communication from E. Conley, Captain, Commander, Newhall Area Station, California Highway Patrol, July 26, 2005.

19 Telephone communication with Officer Michelle Esposito, Newhall Area Station, California Highway Patrol, August 5, 2004.

20 Telephone interview with Lieutenant Todd Hoose, California Highway Patrol, Newhall Area Station, August 7, 2003.

21 Ibid.

22 Written communication from D. F. Hoff, Captain, Commander, Newhall Area Station, California Highway Patrol, May 19, 2003.

23 Written communication from E. Conley, Captain, Commander, Newhall Area Station, California Highway Patrol, July 30, 2004 (**Appendix 4.13**).

24 Written communication from D. F. Hoff, Captain, Commander, Newhall Area Station, California Highway Patrol, May 19, 2003.

25 Written communication from E. Conley, Captain, Commander, Newhall Area Station, California Highway Patrol, July 30, 2004 (**Appendix 4.13**).

26 Household estimates are based upon estimates provided by the County of Los Angeles of 3.17 persons per single family dwelling and 2.38 persons per multi-family dwelling and per apartment.

trail uses, and supporting roadway, drainage, and infrastructure improvements, including construction of Long Canyon Bridge over the Santa Clara River and bank stabilization on both the south and north side of the river corridor.

The proposed project would require approximately 5.8 million cubic yards of imported fill. The needed fill would come from the Adobe Canyon borrow site located outside the Landmark Village tract map site, but within the approved boundary of the Newhall Ranch Specific Plan area. **Figure 1.0-30, On-Site Reclaimed Water Improvements**, in **Section 1.0**, **Project Description**, depicts the location of Adobe Canyon borrow site, the Chiquito Canyon grading site water tank sites, and the planned off-site utility corridor, which are associated with the Landmark Village project.

6. PROJECT IMPACTS

The analysis of potential impacts to sheriff services associated with construction and operation of the proposed project, including the significance criteria applicable to assessing such impacts, is presented below.

a. Significance Threshold Criteria

According to Appendix G of the 2005 *California Enviornmental Quality Act (CEQA) Guidelines*, a project would have a significant impact on police protection services if the project would result in:

- Substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities;
- The need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for police protection services; or
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

In addition to the above, the Sheriff's Department's ideal threshold of one deputy per 1,000 residents has been used to assess the project's impacts on Sheriff's Department services.

b. Impact Analysis

(1) Construction Impacts

Site development and construction would not normally require services from the Los Angeles County Sheriff's Department, except in cases of trespassing, theft, and vandalism. Such activities at a

construction site are not unusual, but are only occasional and do not typically place substantial demands on police protection services. To reduce any potentially significant impacts in this regard, private security services will be provided at construction areas within the project area, thereby reducing any potential short-term significant impacts to law enforcement services during the project construction phase to a less than significant level.

Construction of the project would also increase traffic both on and adjacent to the project site during working hours because commuting construction workers, trucks, and other large construction vehicles would be added to normal traffic during the 5-year buildout of the project. Slow-moving construction-related traffic on SR-126 and adjacent roadways may reduce optimal traffic flows on these roadways and may delay emergency vehicles traveling through the area; however, construction-related traffic would not cause a significant impact on off-site traffic flows because the construction-related traffic would only occur during short periods of time. Nevertheless, to reduce any potentially significant impacts to emergency vehicles, as discussed below, a traffic management plan would be implemented, and traffic control services would be provided, such that no significant impacts would occur. For further information regarding construction-related traffic impacts, see EIR Section 4.5, Traffic/Access.

It is not expected that construction-related traffic on the project site would result in impacts on the CHP (which regulates traffic in unincorporated areas of the Santa Clarita Valley), except in the event of an unforeseeable accident. However, the CHP has expressed concern with off-site traffic disruption, congestion, and any proposed detours or reduction in lane widths during the construction phase.[27] This is because the CHP anticipates that the construction phase will increase the volume of construction vehicle traffic in regards to the movement of soil and construction material, resulting in a significant increase of heavy construction equipment and modified traffic patterns.[28] The Chiquito Canyon grading site phase of the proposed construction, in which dirt movers would be operating in proximity to the SR-126, is a safety concern for the CHP.[29] The SR-126 is a heavily traveled state route with two traffic lanes in each direction. The posted speed limit for the SR-126 in the Newhall CHP Area is 60 miles per hour.[30] The CHP has indicated that traffic control assistance will be necessary to enhance the safety of the general public and private employees contracted to complete the project.[31] The CHP suggests that a contractual agreement be retained for traffic control services throughout the construction phase, such that CHP personnel deployed under contract would facilitate the ingress and egress of construction

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27 Written communication from E. Conley, Captain, Commander, Newhall Area Station, California Highway Patrol, July 30, 2004 (**Appendix 4.13**).

28 Ibid.

29 Ibid.

30 Ibid.

31 Ibid.

equipment and vehicles.[32] The CHP has indicated that construction signs will need to be posted with a reduced construction zone speed limit.[33]

The Los Angeles County Department of Public Works and the California Department of Transportation (Caltrans) require implementation of an approved traffic management plan for construction affecting rights of way within their jurisdictions. The plan would identify the methods to be used to control the interface between construction traffic and vehicles traveling along SR-126 through means such as temporary lane diversion, signage, use of flagmen, etc. The project applicant would be required to prepare a traffic management plan for truck traffic between the Chiquito Canyon grading site and the Landmark Village site as well as work within the utility corridor and water tank sites that would be reviewed and approved by Los Angeles County Department of Public Works and/or Caltrans prior to issuance of construction permits. With the adopted mitigation measures in place at the Newhall Ranch Specific Plan level, in combination with the project-specific mitigation measures recommended in this EIR, potentially significant construction-related impacts to police protection services that may occur as a result of the Landmark Village project would be reduced to a less than significant level.

(2) Operational Impacts

(a) Los Angeles County Sheriff's Department

The County of Los Angeles Sheriff's Department would have the responsibility to provide general law enforcement services to the project site. It is anticipated that demands for Sheriff's services in the project area would increase above current levels upon buildout of the project, and that the number of Sheriff service calls and the types of incidents at the project site would be similar in frequency and character to those experienced in other areas of the Santa Clarita Valley.

As noted above, the project proposes a total residential population of 3,680.[34] Based upon the ideal ratio of one deputy per 1,000 residents, the project would require four additional deputies. However, the Sheriff's Department has indicated its belief that the proposed project would require 15 additional deputies.[35] Therefore, for purposes of this analysis, it is assumed that the proposed project would require an additional 15 deputies. Additionally, according to the Sheriff's Department, the increase in required

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32 Ibid.

33 Ibid.

34 Based upon County of Los Angeles provided estimates of 3.17 persons per single-family dwelling, 2.38 persons per multi-family dwelling and per apartment.

35 Written correspondence from Captain Patti A. Minutello, Los Angeles County Sheriff's Department, Santa Clarita Valley Station, August 4, 2004.

deputies would necessitate an increase in support resources, such as detectives, front desk personnel, secretaries, administration, vehicles, and portable radios.[36]

Without additional Sheriff's Department staffing and facilities, the predicted population increase associated with the Landmark Village project would decrease the existing level of service of the Sheriff's Department and would result in a significant impact to Sheriff services if not mitigated. Adding 15 sworn patrol officers to the Sheriff's Department staff as the project builds out would address this increased demand because more patrol officers would be patrolling the site and the area. Funding for the Sheriff's Department in the Santa Clarita Valley area and the rest of Los Angeles County is derived from various types of tax revenue (e.g., property taxes, sales taxes, user taxes, vehicle license fees, deed transfer fees, etc.), which are deposited in the County's General Fund. The County Board of Supervisors then allocates the revenue for various public services that the County provides, including Sheriff's services. As the Landmark Village project is developed, tax revenues from property and sales taxes would be generated and deposited in the County's General Fund and the State Treasury. A portion of these revenues would then be allocated to the County's Sheriff's Department during the County's annual budget process to maintain staffing and equipment levels at the Santa Clarita Valley Sheriff's station in numbers adequate to serve project-related increases in service call demands.[37]

As presented in the Newhall Ranch Specific Plan Program EIR, Section 4.17, Police Services, the total projected cost to the Sheriff's Department for providing law enforcement services to the Specific Plan area is $3,795,763 per year, calculated in 1995 dollars. The fiscal impact study completed for the Specific Plan determined that total projected Specific Plan revenues to the County of Los Angeles over the estimated 25-year Specific Plan build-out period would be approximately $772,697,000. (Program EIR, Appendix 6.0.) After fully funding all required governmental services, including Sheriff services, it was estimated that the Specific Plan would generate surplus County revenues over the 25-year build-out period of $301,449,451.

Furthermore, in Year 25, and annually thereafter, revenues generated by the Specific Plan would total approximately $44,366,000 per year. In Year-25, the Specific Plan would generate surplus revenues to the County of $17,737,149, and a surplus of $20,299,000 annually thereafter.

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36 Ibid.

37 A fiscal impact report prepared for the Newhall Ranch Specific Plan found that implementation of Newhall Ranch would result in a favorable financial impact to the County after fully funding all necessary services. For further information, please refer to Section 6.0, Fiscal Impacts, of the Newhall Ranch Specific Plan Program EIR and the related fiscal impact study.

Therefore, revenues generated by the Specific Plan would adequately cover the Sheriff's Department's costs to provide law enforcement services to the Specific Plan site at buildout and annually thereafter. It is the responsibility of the County Board of Supervisors to see that adequate funding is directed to the County Sheriff's Department, and the Santa Clarita Valley Sheriff's Station, so that the Sheriff's Department can provide adequate law enforcement services to the Landmark Village site.

The applicant is currently working with the Sheriff's Department on a Memorandum of Understanding (MOU) for a Sheriff's substation, which would be completed prior to the issuance of any certificate of occupancy. The following requirements are being discussed as part of the MOU:[38]

- Provision of a 5-acre site for the substation at the northwest corner of Wolcott Way and SR-126, within the Valencia Commerce Center; and
- Construction of the substation to the Sheriff Department's specifications.

Therefore, although the project would increase demands for Sheriff's Department services, and result in a potentially significant impact, the increased service demands can be met through the provision of increased Sheriff's Department personnel and equipment funded by revenues generated by the project. Moreover, the location of a substation within the Landmark Village project site would provide for a more rapid response time to the general area. For these reasons, project impacts are considered less than significant.

Potential significant impacts to Sheriff's Department services also could arise as a result of project design, lighting, landscape materials, and building orientation, which could limit visibility or offer concealment. However, with the incorporation of safety design techniques, i.e., "defensible space" measures, into the project design, as required by the Specific Plan mitigation, any potentially significant security impacts to persons and property would be reduced to a less than significant level.

(b) County Emergency Response/Evacuation Plans

Upon buildout, the resident and daytime populations on the project site would significantly increase above current levels. These populations would be subject to potential emergencies (e.g., earthquake, fire, flood, etc.). Existing County Emergency Evacuation Plans do not include guidelines for evacuation of the Newhall Ranch Specific Plan site in the event of a natural disaster because it is currently largely undeveloped. The County's Emergency Operations Center is required to demonstrate compliance with the state's Standard Emergency Management System through a variety of means, including a regular update of the County's Emergency Evacuation Plans. The project site will be included in the evacuation

38 Written correspondence, Glenn Adamick, Newhall Land and Farming Company, November 2005.

plans as it builds out.[39] The Los Angeles County Sheriff's Department will formulate and coordinate evacuation routes directly with the community, including the Los Angeles County Fire Department and community (e.g., town council).[40]

The project circulation system seeks to implement the mobility objectives of the Master Circulation Plan for the Newhall Ranch Specific Plan. The circulation plan proposes to construct the extensions of Wolcott Road and Long Canyon Road, which will provide regional access from SR-126. The Landmark Village project creates two permanent intersections with SR-126. The project will also construct a network of collector roads to provide local access to land uses associated with the proposed project (see **Figure 1.0-4, Existing Secondary Highway Designation – General Plan**). These roadways will connect with Wolcott and Long Canyon Road Roadways. All roadways will be constructed in substantial conformance with the requirements outlined in the Newhall Ranch Specific Plan and in certain cases (internal residential streets and collectors) will require only minor modification to the street sections set forth in the Los Angeles County Subdivision Code. The proposed circulation plan for the project includes two major access points along SR-126, which would provide alternative evacuation routes for each of the previously-described potential emergencies (earthquake, fire, flood, etc.). Given these alternative evacuation routes, the design of the proposed project would not preclude and, instead, would facilitate implementation of an evacuation plan that would provide for the safe movement of future residents and employees. Consequently, no significant impacts are expected to occur with regard to emergency evacuation of the site or its surroundings.

(c) California Highway Patrol

As buildout of the Landmark Village project proceeds and the development population increases, demands for CHP services on the area's highways would increase due to the increased vehicular traffic generated by the project. The CHP has indicated that the addition of 1,444 dwelling units coupled with the proposed mixed-use commercial uses would increase demands on existing resources.[41] The CHP anticipates that the proposed project would require CHP patrols for new roadways within the project site.[42] The purpose of these patrols would be to provide traffic enforcement, emergency incident management, public service, assistance, and accident investigation.[43] However, it should be noted that

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39 Telephone communication from Deputy Sheriff Patrick A. Rissler, Los Angeles County Sheriff's Department, Santa Clarita Valley Station, July 13, 2005.

40 Ibid.

41 Written communication from E. Conley, Captain, Commander, Newhall Area Station, California Highway Patrol, July 30, 2004 (**Appendix 4.13**).

42 Ibid.

43 Ibid.

the project site is adjacent to SR-126 and, therefore, would not introduce the need to patrol areas distant from current patrol routes. The CHP has indicated that the proposed project would directly affect the CHP's ability to serve the existing community.[44] The CHP anticipates that the increased traffic volume on SR-126, I-5, The Old Road and other bordering surface streets will ultimately cause delays in emergency response times.[45]

Because the CHP station is centrally-located within the CHP's service area, a new CHP station likely would not be needed as a result of the proposed project. Also, the current facility was designed to allow for increased demands for personnel and equipment.[46] Given the current staff of 71 uniformed personnel, the facility can accommodate an additional 29 uniformed personnel before the facility would reach capacity.[47] If it is determined that another CHP station is needed in the future, one could be accommodated on the Newhall Ranch Specific Plan site within the Mixed-Use, Commercial, and Business Park land use designations.

Through increased revenues generated by the proposed Newhall Ranch Specific Plan (via motor vehicle registration and drivers license fees paid by new on-site residents and businesses), the funding for additional staffing and equipment would be available to the CHP and could be allocated by the State CHP office to the Newhall Area Station to meet future demands. As discussed above, after fully funding all required governmental services, including Sheriff services, it was estimated that the Specific Plan would generate surplus County revenues over the 25-year build-out period of $301,449,451. In light of this information, no significant impacts on CHP services are anticipated.

7. MITIGATION MEASURES

As discussed above, the County previously imposed a mitigation measure required to be implemented as part of the Newhall Ranch Specific Plan that would reduce potentially significant program-level impacts to law enforcement services to a level below significant. The mitigation measure, as it relates to police protection services, is found in the certified Newhall Ranch Specific Plan Program EIR and the adopted Mitigation Monitoring Plan for the Newhall Ranch Specific Plan (May 2003). In addition, this EIR identifies recommended mitigation measures specific to the Landmark Village project site. The project applicant has committed to implementing both the applicable mitigation measure from the Newhall Ranch Specific Plan and the mitigation measures recommended for the Landmark Village project site to

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44 Ibid.

45 Ibid.

46 Written communication from E. Conley, Captain, Commander, Newhall Area Station, California Highway Patrol, November 14, 2004.

47 Ibid.

ensure that future development of the project site would not result in police protection service impacts and would not adversely affect adjacent properties.

a. Mitigation Measures Required by the Adopted Newhall Ranch Specific Plan, as they Relate to the Landmark Village Project

The following mitigation measure was adopted by the County in connection with its approval of the Newhall Ranch Specific Plan (May 2003). This mitigation measure is applicable to the Landmark Village project and will be implemented to mitigate the potentially significant impacts on police protection services associated with the proposed Landmark Village project. These measures are preceded by "SP," which stands for Specific Plan.

SP 4.17-1 As subdivision maps are submitted to the County for approval in the future, the applicant shall incorporate County Sheriff's Department design requirements (such as those pertaining to site access, site security lighting, etc.) which will reduce demands for Sheriff's service to the subdivisions and which will help ensure adequate public safety features within the tract designs.

b. Additional Mitigation Measures Proposed by this EIR

The following project-specific mitigation measures are recommended to mitigate the potentially significant police protection services impacts that may occur with implementation of the Landmark Village project. These mitigation measures are in addition to that adopted in the previously certified Newhall Ranch Specific Plan Program EIR. To indicate that the mitigation relates specifically to the Landmark Village project, each measure is preceded by "LV," which stands for Landmark Village.

The CHP has indicated that construction signs will need to be posted with a reduced construction zone speed limit.[48] The CHP also suggests that CHP officers be hired on a reimbursable services contract to provide traffic control and additional traffic enforcement for the area.[49]

LV 4.13-1 Construction signs shall be posted with a reduced construction zone speed limit. These signs shall be posted to the satisfaction of the California Highway Patrol.

LV 4.13-2 Prior to the commencement of construction activities, the project applicant, or its designee, shal retain the services of a private security company to patrol the construction site, as

48 Ibid.

49 Ibid.

necessary, to minimize, the potential for trespass, theft, and other unlawful activity associated with construction-related activities.

LV 4.13-3 Prior to the commencement of construction activites, the project applicant, or its designee shall prepare an approved traffic management plan for construction activities affecting rights-of-way within the jurisdiction of Caltrans and the Los Angeles County Department of Public Works.

LV 4.13-4 A long-term funding agreement with the California Highway Patrol shall be explored to supplement the personnel assigned to the Newhall California Highway Patrol Area commensurate with the increased growth generated by the Landmark Village project.

8. CUMULATIVE IMPACTS

In order to analyze the cumulative impacts to law enforcement services of this project in combination with other expected future growth, the amount and location of growth expected to occur with buildout of the Santa Clarita Valley, in addition to that of the Landmark Village project, was forecast.

The Santa Clarita Valley Cumulative Build-Out Scenario entails buildout of all lands under the current land use designations indicated in the Santa Clarita Valley Areawide Plan and the County General Plan, plus the proposed project, plus all known pending General Plan Amendment requests for additional urban development in the unincorporated area of the Santa Clarita Valley and the City of Santa Clarita. A list of the future development activity (with and without the project) expected in the valley under the Santa Clarita Valley Cumulative Build-Out Scenario is presented in **Table 4.13-1, Cumulative Development Activity – Santa Clarita Valley Cumulative Build-Out Scenario**.

Excluding the proposed project, total residential population within the valley under this build-out scenario would be 416,395 persons.[50] With the Landmark Village project, this total resident population would be 420,075 persons.[51]

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50 Household estimates are based upon estimates provided by the County of Los Angeles of 3.17 persons per single-family dwelling and 2.38 persons per multi-family dwelling, per apartment, and per mobile home.

51 Ibid.

Table 4.13-1
Cumulative Development Activity – Santa Clarita Valley Cumulative Build-Out Scenario

Land Use Types	Cumulative Buildout w/o Project[1]	Project	Cumulative Buildout w/ Landmark Village[1]
Single-Family	93,412 du	308 du	93,720 du
Multi-Family	47,621 du	1,136 du	48,757 du
Mobile Home	2,699 du		2,699 du
Commercial Retail	18,866,030 sq. ft.	1,033,000 sq. ft.	19,899,030 sq. ft.
Hotel	2,071 room		2,071 room
Sit-Down Restaurant	283,790 sq. ft.		283,790 sq. ft.
Fast Food Restaurant	23,600 sq. ft.		23,600 sq. ft.
Movie Theater	3,300 seats		3,300 seats
Health Club	54,000 sq. ft.		54,000 sq. ft.
Car Dealership	411,000 sq. ft.		411,000 sq. ft.
Elem./Middle School	278,590 students	750 students	279,340 students
High School	12,843 students		12,958 students
College	29,948 students		29,948 students
Hospital	247,460 sq. ft.		247,460 sq. ft.
Library	171,790 sq. ft.		171,790 sq. ft.
Church	501,190 sq. ft.		501,190 sq. ft.
Day Care	785,000 sq. ft.		785,000 sq. ft.
Industrial Park	41,743,950 sq. ft.		41,743,950 sq. ft.
Business Park	8,424,330 sq. ft.		8,424,330 sq. ft.
Manufact./Warehouse	3,932,470 sq. ft.		3,932,470 sq. ft.
Utilities	1,150,240 sq. ft.		1,150,240 sq. ft.
Commercial Office	6,380,520 sq. ft.		6,380,520 sq. ft.
Medical Office	133,730 sq. ft.		133,730 sq. ft.
Golf Course	1,209.0 ac		1,238.0 ac
Developed Parkland	477.3 ac	16 ac	493.3 ac
Undeveloped Parkland	1,000.0 ac		1,000.0 ac
Special Generator[2]	413.0 sg		413.0 sg

du = dwelling unit; sq. ft. = square feet; sta = staff; ac = acres; sg = special generator

[1] *Santa Clarita Valley Consolidated Traffic Model (November 2002). Includes existing development, buildout under the existing City of Santa Clarita General Plan, Santa Clarita Valley Areawide Plan, and active pending General Plan Amendment requests.*

[2] *Includes Wayside Honor Ranch, Six Flags Magic Mountain, Travel Village, CHP Office, and Aqua Dulce Airport.*

a. Los Angeles County Sheriff's Department

Using the desired officer-to-population ratio of one officer per 1,000 population, Santa Clarita Valley buildout (exclusive of the project) would require a total of 416 sworn officers, or 255 more sworn officers than currently work in the valley. The proposed project would increase this total by an additional 4–15 sworn patrol officers. Individual development projects may not need to meet the desired officer-to-

population ratio, depending upon project location, project design, and review by the Office of the Sheriff. The Sheriff's Department will determine actual level of service needs for each development project as the valley builds out. Meanwhile, for purposes of this analysis, it is assumed that the officer-to-population ratio would be at the desired ratio of one officer per 1,000 population, and that each development project would be responsible to ensure that adequate police service is available. Therefore, if no officers are hired to accommodate the needs of the valley as it builds out, a significant cumulative impact would occur.

The Sheriff's Department has indicated that the cumulative development of the Newhall Ranch Specific Plan would introduce a population of approximately 67,213 persons, necessitating an increase of 67 deputies and the need for a new station facility in the area.[52] The project applicant has entered into negotiations with the Sheriff's Department to consider the provision of a Sheriff station site within the Newhall Ranch Specific Plan. However, development of the Landmark Village project independent of the remainder of the Specific Plan would not trigger a need for a new Sheriff station facility.

All new development projects in the Santa Clarita Valley would be responsible for funding increases in demand for Sheriff services attributable to each respective project through the same funding mechanism as the Landmark Village project. Therefore, with the continued allocation of General Fund revenues by the Board of Supervisors to maintain existing levels of service to the Santa Clarita Valley, no significant cumulative impacts to Sheriff services within the Santa Clarita Valley would occur as it builds out.

b. County Emergency Response/Evacuation Plans

New resident and daytime populations in the valley would be subject to the same potential hazards as existing valley residents. As noted in **Section 1.0**, **Project Description**, the Landmark Village project would provide two major arterial access roadways that would connect the project site to SR-126. The proposed circulation plan, therefore, would provide adequate access to/from the project site to facilitate evacuation in the event of an emergency, and to provide site access to emergency personnel. Furthermore, the additional access provided by the project would facilitate regionwide evacuation plans, and would be included when the County's Emergency Evacuation Plans are amended periodically to provide for the safe evacuation of all Santa Clarita Valley residents and employees. Therefore, the proposed project would not contribute to potentially significant cumulative emergency access impacts.

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52 Written correspondence from Captain Patti A. Minutello, Los Angeles County Sheriff's Department, Santa Clarita Valley Station, August 4, 2004.

c. California Highway Patrol

Demands for CHP services on the area's highways and in the unincorporated Santa Clarita Valley would increase under the Santa Clarita Valley Cumulative Build-Out Scenario due to related increases in vehicular traffic generated by such development. An increase in the current number of CHP patrol officers would be required in the area to enforce traffic regulations in new developments and to respond to traffic accidents and disabled vehicles. The CHP has indicated that approximately six additional officers would be required to accommodate cumulative development; however, it is not likely that a new CHP station would be needed because the existing CHP site and facilities in the Santa Clarita Valley contain room for expansion if and when it is determined that such expansion is necessary.[53] Nonetheless, cumulative development would increase traffic on existing roadways, would increase the numbers and lengths of roadways patrolled by the CHP, and increase demands for CHP services in the area. Through increased revenues generated by cumulative development (via motor vehicle registration fees paid by new residents and businesses), the funding for additional staffing and equipment would be allocated by the State CHP office to the Santa Clarita Valley Station to meet future demands. As the revenue base and method of funding allocation that are in place as of this writing provide for adequate CHP service in the area, it is anticipated that the current level of service could be provided in the future through these same funding sources and allocation methods. In light of this information, the project would not contribute to potentially significant cumulative impacts on CHP services.

9. CUMULATIVE MITIGATION MEASURES

Because the proposed project would fully mitigate any potentially significant project-related impacts to law enforcement services, and because cumulative development will be subject to the same or similar required mitigation measures as the proposed project, no additional cumulative mitigation measures are proposed or required.

10. SIGNIFICANT UNAVOIDABLE IMPACTS

a. Project-Specific Impacts

The Sheriff and CHP stations that serve the Newhall Ranch Specific Plan area are operating at less than acceptable levels of service and increased demand for Sheriff and CHP services that would result with development of the proposed project would be met through increases in law enforcement staffing and equipment, which would be funded by increased taxes and fees paid by Landmark Village development,

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53 Written communication from E. Conley, Captain, Commander, Newhall Area Station, California Highway Patrol, November 14, 2004.

as well as the implementation of appropriate mitigation measures. Therefore, no significant unavoidable project-specific impacts related to Sheriff's and CHP services would occur with respect to police protection services.

b. Cumulative Impacts

The Sheriff and CHP stations that serve the Santa Clarita Valley are operating at less than acceptable levels of service. The increased cumulative development demands on law enforcement services would be met through increases in staffing and equipment, which would be funded by increased taxes and fees paid by new development. Therefore, no significant unavoidable cumulative impacts would occur with respect to such services.

4.14 FIRE PROTECTION SERVICES

1. SUMMARY

Fire protection and emergency medical response services for the Landmark Village project and the surrounding area are provided by the Los Angeles County (County) Fire District. Nine fire stations and three fire camps provide fire protection services for the Santa Clarita Valley area. Fire Station 76, located at 27223 Henry Mayo Drive in Valencia is the closest existing station to the project site. The closest available district response units would provide fire protection services. Should a significant incident occur, the entire resources of the Fire Department, not just the stations closest to the site, would serve the project. The County's Fire Department and a franchise private ambulance company also provide paramedic services to the area.

The Landmark Village project site is located in an area that has been designated as a Very High Fire Hazard Severity Zone (formerly called Fire Zone 4) by the County's Fire Department, which denotes the County Forester's highest fire hazard potential.

As part of the Specific Plan approval in 2003, the Board of Supervisors required that three fire stations be constructed on the Newhall Ranch Specific Plan site. In summary, mitigation measures required that the project applicant and Fire Department enter into a Memorandum of Understanding (MOU) outlining the agreements, timing, and parameters by which fire stations would be developed on the Specific Plan site. Initially, it was assumed that the Landmark Village site would be served by a new fire station at the existing Del Valle fire training site. Since that time, Newhall Land and the Fire Department have agreed to relocate the station into the Landmark Village tract map site. The locations for the two remaining fire stations within Newhall Ranch will be finalized in the MOU between Newhall Land and the Fire Department.

The proposed project would be required to meet all County codes and requirements relative to providing adequate fire protection services to the site during both the construction and operational stages of the project. As a result, the project would not diminish the staffing or the response times of existing fire stations in the Santa Clarita Valley, nor would it create a special fire protection requirement on the site that would result in a decline in existing service levels. Therefore, by implementing the adopted Specific Plan mitigation measures in combination with the recommended project-specific mitigation, the proposed project would not have a significant project or cumulative impact on fire protection services or fire hazards in Santa Clarita Valley.

2. INTRODUCTION

a. Relationship of Project to Newhall Ranch Specific Plan Program EIR

Section 4.18 of the Newhall Ranch Specific Plan Program EIR identified and analyzed the existing conditions, potential impacts, and mitigation measures associated with the fire services and hazards for the entire Newhall Ranch Specific Plan. The Newhall Ranch Specific Plan EIR mitigation program was adopted by the County in findings and in the revised Mitigation Monitoring Plan for the Specific Plan. The Newhall Ranch Specific Plan Program EIR concluded that Specific Plan implementation would result in significant impacts, but that the identified mitigation measures would reduce the impacts to below a level of significance. The Newhall Ranch Specific Plan Program EIR also determined that site-specific Wildfire Fuel Modification Plans would be required as the Specific Plan is implemented through the application and processing of tentative subdivision maps for Newhall Ranch. All subsequent project-specific development plans and tentative subdivision maps must be consistent with the Newhall Ranch Specific Plan, the County of Los Angeles General Plan, and Santa Clarita Valley Areawide Plan.

This project-level EIR is tiering from the previously certified Newhall Ranch Specific Plan Program EIR. **Section 4.14** discusses, at the project level, the Landmark Village project's existing conditions, the project's potential environmental impacts relative to fire protection services, the applicable mitigation measures from the Newhall Ranch Specific Plan Program EIR, and the mitigation measures recommended by this EIR for the Landmark Village project.

3. SUMMARY OF THE NEWHALL RANCH SPECIFIC PLAN PROGRAM EIR FINDINGS

The Newhall Ranch Specific Plan Program EIR identified certain potentially significant impacts related to fire protection services with implementation of the Specific Plan. Specifically, the Newhall Ranch Specific Plan Program EIR, and related findings, determined that implementation of the adopted Specific Plan would significantly increase the demand for fire protection services on the Specific Plan site and the local vicinity in terms of personnel and equipment needed to adequately serve the Specific Plan site at buildout. The majority of the Specific Plan is located in an area that has been designated as Fire Zone 4 by the County of Los Angeles Fire Department, which denotes the County Forester's highest fire hazard potential. The remainder of the site, situated along the Santa Clara River, is designated as Fire Zone 3, which is considered less of a fire hazard area by the County Forester than Fire Zone 4 due to its relatively flat topography, the presence of the river, and better accessibility.

In response to identified significant impacts, the Specific Plan's mitigation program for fire protection services and fire hazards includes the following requirements: (a) approval of a Wildfire Fuel

Modification Plan for each Newhall Ranch final subdivision map that permits construction in development areas adjacent to Open Area and the High Country Special Management Area (SMA); (b) provisions in each tentative subdivision map and site plan for sufficient fire flow capacity for all proposed residential and non-residential uses; (c) subdivision map and site plan compliance with all applicable building and fire codes and hazard reduction programs for Fire Zones 3 and 4; (d) provisions for funding the three fire stations in lieu of developer fees, the dedication of two fire station sites, and providing for various equipment needs; and (e) provisions for a MOU with the Fire Department to address first-phase fire protection requirements and the criteria for timing the development for each of the three fire stations.[1] The MOU requirement specified that delivery of fire service for Newhall Ranch would be from either existing fire stations, or one of the three fire stations to be provided pursuant to the Specific Plan's mitigation program. Prior to commencement of the operation of any of the three fire stations, the MOU requirement contemplated that fire service may be delivered to Newhall Ranch from existing fire stations or from temporary fire stations to be provided by the developer at mutually agreed-upon locations. Planned permanent stations located within Newhall Ranch would replace the temporary fire stations.

In response to the identified potentially significant impacts, the Final Newhall Ranch Specific Plan Program EIR identified four feasible mitigation measures.[2] The Board of Supervisors found that adoption of the recommended mitigation measures would reduce the identified potentially significant effects to less than significant levels.

4. EXISTING CONDITIONS

a. Fire Protection Services

The County's Fire Department provides fire protection service to the project area. Nine fire stations and three fire camps support the Santa Clarita Valley. The closest existing station to the project site is Fire Station 76, located at 27223 Henry Mayo Drive in Valencia, and is about 2 miles to the middle of the Village Quad, and a little over 3 miles to the middle of the Village Center. These distances translate into response times ranging from approximately 6 to 10+ minutes for the Landmark Village as a whole. However, the closest available district response units would provide fire protection services. Should a significant incident occur, the resources of the Fire District, not just the stations closest to the site, would serve the project.

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1 See, Mitigation Measure 4.18-4 in both the certified Newhall Ranch Specific Plan Program EIR (March 9, 1999) and the adopted Mitigation Monitoring Plan for the Specific Plan (May 2003).

2 See, Mitigation Measures 4.18-1 through 4.18-4 in both the certified Final Program EIR (March 9, 1999) and the adopted Mitigation Monitoring Plan for the Specific Plan (May 2003).

A description of the operational characteristics of the stations closest to the site and, therefore, most likely to respond to fire and medical emergencies is provided below. A three-person fire company consists of a captain, a fire fighter specialist and a fire fighter.[3] A four-person fire company has one additional fire fighter. If the station houses a paramedic squad, a paramedic fills one fire fighter position on the engine. There are no plans for upgrades to these nine fire stations located in the vicinity of the Landmark Village project.[4] The location of these stations is illustrated on **Figure 4.14-1, Existing Fire Station Locations**. Also shown on **Figure 4.14-1** is the off-site Del Valle Training Facility, located to the north of the project site. A brief description of the four existing fire stations located nearest to the proposed Landmark Village project is provided below.

(1) Los Angeles County Fire Station 76

Los Angeles County Fire Station 76 is located at 27223 Henry Mayo Drive in Valencia. The station maintains one fire engine and is supported by four firefighters.[5] A five-person hazardous materials unit is located at this station.[6]

(2) Los Angeles County Fire Station 149

Los Angeles County Fire Station 149 is located at 31770 Ridge Route in Castaic. The station maintains a three-person engine company, a two-person paramedic squad, and a one-person patrol that is staffed only during severe fire weather.[7]

(3) Los Angeles County Fire Station 124

Los Angeles County Fire Station 124 is located at 25870 Hemingway Avenue in Stevenson Ranch. The station maintains a three-person engine company and a three-person paramedic squad. Four fire fighters and a two-person firefighter paramedic squad support these units.[8]

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3 Written correspondence, David R. Leininger, Chief, Forestry Division, Prevention Bureau, County of Los Angeles Fire Department, August 2, 2004 (**Appendix 4.14**).

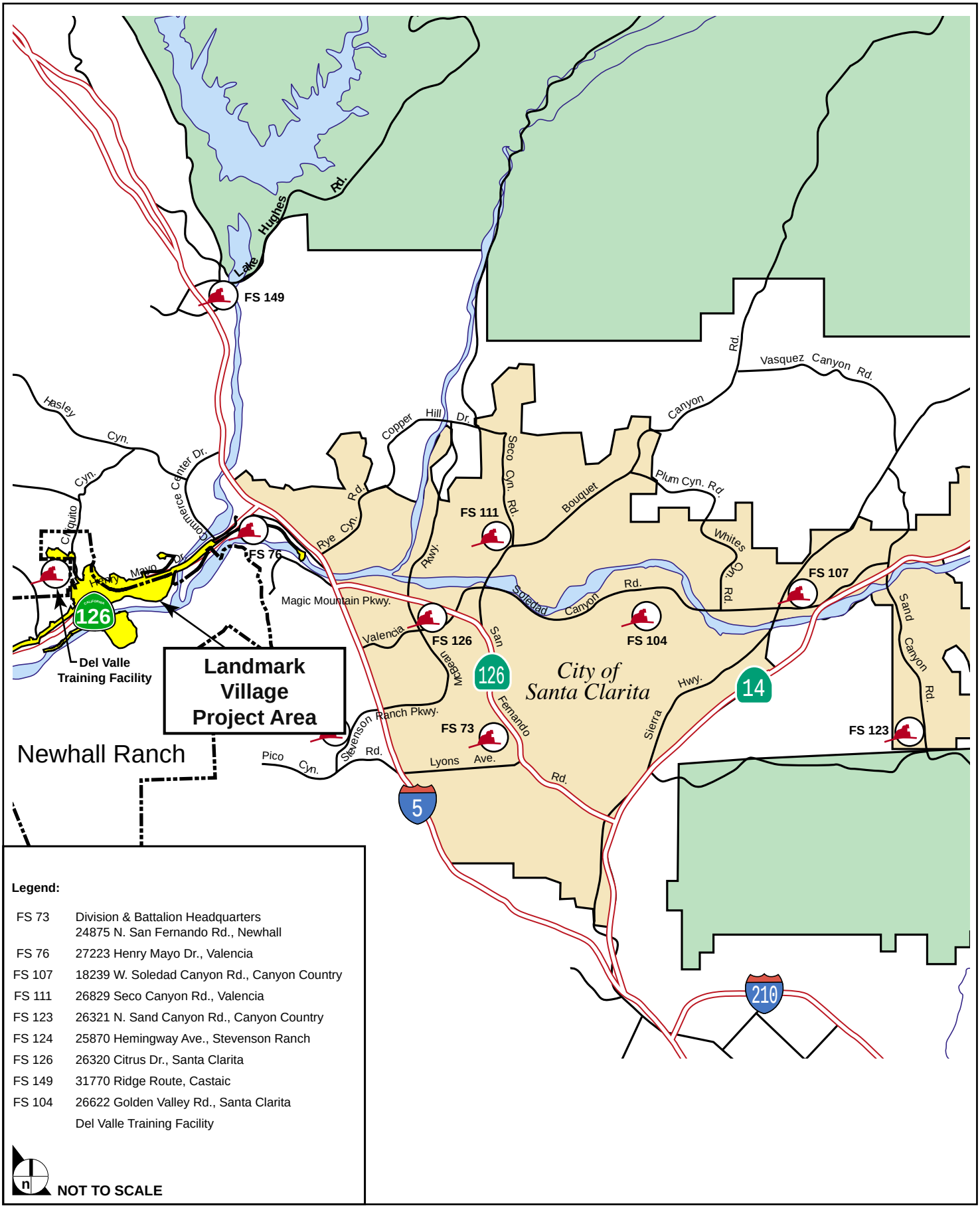
4 Ibid.

5 Written correspondence, David R. Leininger, Acting Chief, Forestry Division, County of Los Angeles Fire Department, April 18, 2003.

6 Ibid.

7 Written correspondence, David R. Leininger, Chief, Forestry Division, Prevention Bureau, County of Los Angeles Fire Department, August 2, 2004 (**Appendix 4.14**).

8 Ibid.



Legend:

FS 73	Division & Battalion Headquarters 24875 N. San Fernando Rd., Newhall
FS 76	27223 Henry Mayo Dr., Valencia
FS 107	18239 W. Soledad Canyon Rd., Canyon Country
FS 111	26829 Seco Canyon Rd., Valencia
FS 123	26321 N. Sand Canyon Rd., Canyon Country
FS 124	25870 Hemingway Ave., Stevenson Ranch
FS 126	26320 Citrus Dr., Santa Clarita
FS 149	31770 Ridge Route, Castaic
FS 104	26622 Golden Valley Rd., Santa Clarita
	Del Valle Training Facility

NOT TO SCALE

SOURCE: Impact Sciences, Inc. – September 2006

FIGURE **4.14-1**

Existing Fire Station Locations

(4) Los Angeles County Fire Station 126

Los Angeles County Fire Station 126 is located at 26320 Citrus Avenue in Santa Clarita. The station maintains a three-person engine company and a four-person quint (a combination engine/ladder truck apparatus). In addition, a division chief and a battalion chief are housed at this station.[9]

b. Service Standards

Nationally recognized response time targets for urban areas are 5 minutes for a basic life support unit (engine company) and 8 minutes for an advanced life support unit (paramedic squad).[10] The Fire Department is currently meeting these standards in the project region.[11]

In response to increased demands for new facilities, equipment, and staffing created by new development, the County has implemented a Developer Fee Program to fund the purchase of station sites, the construction of new stations and facility improvements, and the funding of capital equipment.[12] The developer fees are adjusted annually by the County to reflect changing cost. As of May 2004, the Developer Fee is $0.3716 per square foot of new development (includes all land uses) and is collected at the time building permits are issued.[13] Funding for staffing and operations comes from the Fire Department's share of local property taxes.[14] This program also allows for funding and land dedication *in lieu* of developer fees. This fee, or an in-lieu donation, typically constitutes mitigation in full for development impacts.[15] The Fire Department prepares a Five-Year Capital Plan to identify anticipated facilities that would be constructed during the five-year planning horizon.[16] This plan is updated annually.[17]

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9 Ibid.

10 Telephone communication with Danny Kolker, Planning Analyst, Planning Division, County of Los Angeles Fire Department, September 29, 2004. These nationally recognized response times are based on determinations made by the National Fire Protection Association and the insurance industry (insurance rating organizations).

11 Telephone communication with Danny Kolker, Planning Analyst, Planning Division, Los Angeles County Fire Department, February 5, 2004.

12 Telephone communication with Danny Kolker, Planning Analyst, Planning Division, County of Los Angeles Fire Department, September 29, 2004.

13 E-mail communication with Debbie Aguirre, Supervising Planning Analyst, Planning Division, County of Los Angeles Fire Department, May 17, 2004.

14 Telephone communication with Danny Kolker, Planning Analyst, Planning Division, County of Los Angeles Fire Department, September 29, 2004.

15 Ibid.

16 Ibid.

17 Ibid.

c. Wildland Fire Hazard Potential

The Fire Department designates land in the County in regard to its potential for wildland fire hazards. These designations are made by the County Forester, and are based on multiple criteria, including an area's accessibility, water availability, amount and type of vegetative cover, and topography. The two designations used by the Fire Department are Moderate Fire Hazard Zone (Formerly Fire Zone 3) and Very High Fire Hazard Severity Zone (Formerly Fire Zone 4). Areas within the County not designated as either a Moderate Fire Hazard Zone or Very High Fire Hazard Severity Zone are not considered to be subject to wildland fire hazards. The differences between Moderate Fire Hazard Zone and Very High Fire Hazard Severity Zone designations are relatively minor, in that one or more of the four criteria (access, water availability, vegetation, and topography) may pose less of a constraint in Moderate Fire Hazard Zone than in the Very High Fire Hazard Severity Zone. Additionally, the Very High Fire Hazard Severity Zone includes more restrictive building requirements than the Moderate Fire Hazard Zone, and is considered to be the most severe fire zone. Portions of a Very High Fire Hazard Severity Zone may, upon development, meet the criteria of a Moderate Fire Hazard Zone, and may be redesignated as a Moderate Fire Hazard Zone at the discretion of the County Forester.

The Fire Department has designated the tract map site along with the off-site grading sites and utility corridor, as a Very High Fire Hazard Severity Zone.[18] Characteristics of the area that contribute to this designation include: (a) access; (b) lack of adequate water supplies; (c) vegetative cover; and (d) topography.

The Very High Fire Hazard Severity Zone typically has the following vegetative types or is located adjacent to such communities: chaparral, coastal sage, annual grasslands, riparian, and oak woodlands. Wildland fires are relatively common occurrences in these plant communities, which are found in the Santa Clarita Valley and surrounding areas. These plant communities pose a threat to expanding urban development due to their high combustibility and their dense biomass.

During the spring months, wildland vegetation typically begins to lose its moisture content and, by the summer and fall when Santa Ana wind conditions begin to occur, vegetation moisture levels can become very low, which results in a very high wildfire potential. Historically, large fires tend to burn in Moderate Fire Hazard Zones and Very High Fire Hazard Severity Zones every 20 to 25 years. The County Forester has indicated that wildland fire events have occurred in the region. When chaparral and coastal sage growth is younger, it is more succulent, with little or no dead or dying branches; and the

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18 Telephone communication with Assistant Chief Frank Vidales, October 12, 2004, and written correspondence, David R. Leininger, Chief, Forestry Division, Prevention Bureau, County of Los Angeles Fire Department, August 2, 2004 (**Appendix 4.14**).

growth provides less horizontal fuel continuity; has higher average fuel moisture content; and, as a result, is usually more fire retardant. As these plant species reach 20 plus years in age, their dead-to-live fuel ratio increases, creating more available fuel to carry fire with very high intensities and energy releases.

In the areas where these plant communities border urban development, the frequency of fire events may be diminished as a result of fire prevention and fire suppression activities. Fire prevention activities include prescribed burns, vegetation thinning/removal, and creation of buffer zones; in contrast, fire suppression involves measures, which control fires once they have started (i.e., fuel breaks, use of fire fighting equipment, etc.). Fire prevention for urban development in wildland fire hazard areas generally focuses on restricting the types of building materials used, building design, and incorporating setbacks from areas with flammable vegetation. An area designated as a Moderate Fire Hazard Zone would have less severe fire hazard conditions than an area designated as Very High Fire Hazard Severity Zone, and, therefore, would have fewer restrictions involving building construction and site design. Development within Very High Fire Hazard Severity Zone is required to meet the building construction requirements specified in the County Building and Safety Code, as well as the County Hillside Guidelines. Examples of fire code provisions that development in these areas must meet are presented below.

d. Fire Codes and Guidelines

(1) Water Pressure

The availability of sufficient on-site water pressure is a basic requirement of the Fire Department. The Fire Department requires sufficient capacity for fire flow at public hydrants in residential locations to provide 1,250 gallons per minute (gpm) at 20 pounds per square inch (psi) residual pressure for a 2-hour duration for single-family residential units, and 5,000 gpm at 20 psi residual pressure for a 5-hour duration for multi-family residential units.[19] The required fire flow for commercial/public fire hydrants is 5,000 gpm at 20 psi residual pressure for a 5-hour duration.[20] These rates are determined based upon square footage of proposed structures, their relationship to other structures, property lines, and types of construction used.

The Valencia Water Company has stated its ability to provide adequate fire flows, in addition to meeting domestic demands.[21]

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19 Written correspondence, David R. Leininger, Acting Chief, Forestry Division, County of Los Angeles Fire Department, December 31, 2002 (**Appendix 4.14**).

20 Ibid.

21 See, SB 610 Water Supplement Assessment for the Landmark Village project, dated August 2005, prepared by Valencia Water Company (**Appendix 4.10**).

(2) Fuel Modification

Due to the relatively high fire hazard potential that exists in the Very High Fire Hazard Severity Zone, development within these areas is subject to various governmental codes, guidelines, and programs aimed at reducing the hazard potential to acceptable levels. The County of Los Angeles has prepared *Fuel Modification Plan Guidelines*, which set forth guidelines and landscape criteria for all new construction to implement ordinances relating to fuel modification planning and help reduce the threat of fires in high hazard areas. Per Section 1117.2.1 of the County of Los Angeles Fire Code: "A fuel modification plan, a landscape plan and an irrigation plan shall be submitted with any subdivision of land or prior to any new construction, remodeling, modification or reconstruction where such activities increase the square footage of the existing structure by at least 50 percent within a 12-month period and where the structure or subdivision is located within areas designated as a Very High Fire Hazard Severity Zone in the Los Angeles County Building Code." A fuel modification plan identifies specific zones within a property, which are subject to fuel modification. A fuel modification zone is a strip of land where combustible native or ornamental vegetation has been modified and/or partially or totally replaced with drought tolerant, fire resistant plants and other low-risk landscape materials.[22]

e. Current Site Conditions

The Landmark Village tract map site is flat and cultivated with row crops. Miscellaneous ancillary sheds used to store agricultural equipment are found on the site. Several dirt roads provide access to the cultivated fields. Several abandoned oil wells along with active agricultural water wells are dispersed within the tract map boundary. Land within the project's off-site grading locations, water tanks site, and utility corridor is either undeveloped or disturbed by agricultural cultivation or oil production (see, **Figure 2.0-1**, **Existing Land Uses**). There are no habitable structures proposed within the off-site grading locations, water tank site, or the utility corridor area of the Landmark Village project.

There were no calls for services during calendar year 2003 for the project area.[23]

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22 Telephone communication with Assistant Chief Frank Vidales, October 12, 2004 and written correspondence, David R. Leininger, Chief, Forestry Division, Prevention Bureau, County of Los Angeles Fire Department, August 2, 2004 (**Appendix 4.14**).

23 Written correspondence, David R. Leininger, Chief, Forestry Division, Prevention Bureau, County of Los Angeles Fire Department, August 2, 2004 (**Appendix 4.14**).

5. PROPOSED PROJECT IMPROVEMENTS

The applicant proposes to develop a total of 1,444 residential dwelling units with a residential population of 3,680 people,[24] approximately 1,033,000 square feet of commercial/mixed use space, a 9-acre elementary school, a 16-acre Community Park, four private recreational facilities, open space and river trail uses, and supporting roadway, drainage and infrastructure improvements. In addition, the applicant proposes to construct the Long Canyon Road Bridge over the Santa Clara River, and install exposed and buried bank stabilization on portions of the south and north side of the Santa Clara River.

Pursuant to an agreement between Newhall Land and the Fire Department, the project would provide for a fire station that would house 7 firefighters, 24-hours a day. Shift change occurs once a day. Station personnel will average 1–2 ancillary trips daily. It is expected that the number of responses from the fire station is projected to be 4–5 per day. An emergency backup generator will be installed at the station and used on an as-needed basis. In accordance with this agreement, the fully constructed, equipped, and furnished station shall be conveyed to the Fire District prior to the issuance of the 723rd certificate of occupancy issued for the Landmark Project. The fire station would be located at "Y" Street and Long Canyon Road as is depicted in **Figure 4.14-2, Landmark Village Fire Station**.

The proposed project would require up to 5.8 million cubic yards of imported fill. The needed fill would come from the Adobe Canyon borrow site, located outside the Landmark Village tract map site, but within the approved boundary of the Newhall Ranch Specific Plan. **Figure 1.0-30, On-Site Reclaimed Water Improvements**, in **Section 1.0, Project Description**, depicts the location of the Adobe Canyon borrow site, the other off-site grading location and the planned off-site utility corridor.

6. PROJECT IMPACTS

The analysis of potential impacts to fire protection services associated with construction and operation of the proposed project, including the significance criteria applicable to assessing such impacts, is presented below.

a. Significance Threshold Criteria

According to Appendix G of the 2005 *California Environmental Quality Act (CEQA) Guidelines*, a project would have a significant impact on fire protection services if the project would result in:

- Substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities;

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24 Based upon estimates provided by the County of Los Angeles of 3.17 persons per single-family dwelling, 2.38 persons per multi-family dwelling and per apartment.

- The need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection services; or

- Expose people or structures to a significant risk of loss, injury, or death involving wildfires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

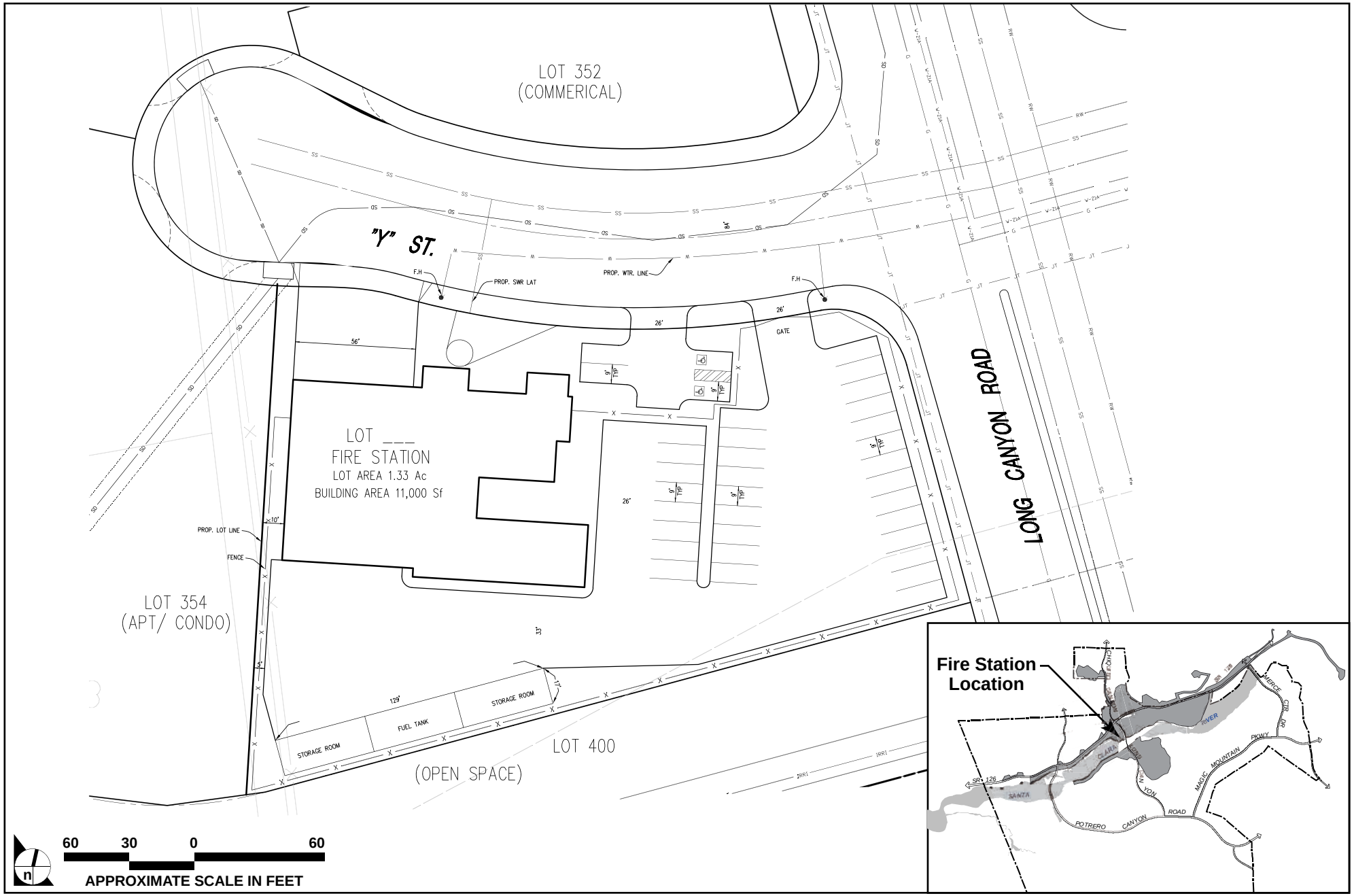
b. Impact Analysis

(1) Construction-Related Impacts

Construction projects result in a variety of operations that have the potential to increase the risk of fire, such as the use of mechanical equipment in vegetated areas, cutting and grinding metal, welding, and the storage of flammable materials such as fuel, wood and other building products. A large amount of wood framing would occur on the tract map portion of the project site during buildout. In association with the wood framing operations, electrical, plumbing, communications, and ventilation systems would be installed in each structure. Although rare, fires do occur at construction sites, and it is expected that the electrical, plumbing, and mechanical systems for the development would be properly installed during framing operations (they would be subject to County codes and inspection by County personnel prior to drywalling). In addition, construction sites would also be subject to County requirements relative to water availability and accessibility to fire-fighting equipment.

Because the Landmark Village tract map site is located adjacent to Open Area (i.e., Santa Clara River), a Wildfire Fuel Modification Plan must be prepared in accordance with the County Fuel Modification Ordinance standards and submitted for approval by the County Fire District. The Wildfire Fuel Modification Plan will include construction period requirements, such as (a) a fire watch during welding operations; (b) spark arresters on all equipment or vehicles operating in a high fire hazard area; (c) designated smoking and non-smoking areas; (d) water availability pursuant to County Fire District requirements; and (e) clearance of brush from buffer zones surrounding construction sites prior to initiation of construction. In summary, the tract map project site would be required to comply with all applicable building and fire Code requirements for such items as types of roofing materials, building construction, brush clearance, water mains, fire hydrant flows, hydrant spacing, access and design, and other hazard reduction programs, for Very High Fire Hazard Severity Zone, as set forth by the County Forester and Fire Warden.

Based on the above, and with the adopted mitigation measures in place at the Specific Plan level, no significant construction-related impacts to fire protection services would occur as a result of the Landmark Village project. Lastly, the new fire stations to be constructed to serve the entire Specific Plan,



SOURCE: PSOMAS – June 2005

FIGURE **4.14-2**

Proposed Fire Station Location

including the Landmark Village project, would be located outside of the physical boundaries of the Landmark Village tract map and, thus, are not a part of the proposed project. Therefore, the proposed project would not result in substantial adverse physical impacts associated with the construction of new or physically altered governmental facilities.

(2) Operational Impacts

(a) Calls for Service, Station Facilities and Staffing Levels

Occupancy of the uses constructed within the Landmark Village development site would result in an increase in fire hazards and a corresponding increase in the need for fire protection services, including paramedic services. The proposed residential, commercial, office, and mixed-use uses are expected to create the typical range of fire service calls that other such uses create, including kitchen/house fires, garbage bin fires, car fires, electrical fires, etc. All such fires can be adequately suppressed with the types of fire equipment typically found at County fire stations. The proposed project includes no unique or especially hazardous uses such as industrial facilities that would use or generate large quantities of hazardous and/or toxic materials that would pose an extreme risk of series accident or fire.

The project could increase calls for service because portions of the development would be located adjacent to natural areas, which have wildfire potential, particularly along eastern, southern, and western edges of the tract map site. The applicant, however, must prepare a Fuel Modification Plan pursuant to Section 1117.2.1 of the Fire Code that would retard the spread of wildfire into development areas until the Fire Department's arrival at the site. Moreover, the site is located within an existing service area and the Fire Department indicates that response times within the project region are within the Department's adopted service standards of 5 minutes for basic life support and 8 minutes for advanced life support.

As part of the adopted mitigation measures for the Specific Plan, in lieu of developer fees, provisions have been imposed on the Specific Plan to fund three fire stations through payments to the County's Fire Department, and to dedicate the land for the two fire station sites to be located in Newhall Ranch. The locations of the remaining two Newhall Ranch Specific Plan fire stations will be defined in the MOU. In addition, as part of the adopted mitigation, the MOU for Newhall Ranch will set forth the first-phase fire protection requirements (fire protection plan) and the criteria for timing the development of each of the three fire stations. The fire protection plan component of the MOU also will undergo annual review and modification, if necessary.

The applicant is currently working with the Fire Department to develop the specific items to be covered under the required MOU, which would be completed prior to the issuance of any certificate of occupancy. The following requirements are being discussed as part of the MOU:[25,26]

- Three fire stations will be located within the Newhall Ranch Specific Plan area. One will be located within the Landmark Village site in the mixed-use area west of Long Canyon Road. The remaining two stations are planned for the Mission Village and Potrero Village sites, although these locations are subject to change.

- The applicant will construct the fire station to the Fire District's specifications;

- The size of each station site, as well as the fire station building square footages, will be defined in the MOU and will be larger than the site size and building square footages contained within Newhall Ranch Specific Plan Mitigation Measure 4.18-4; and

- Interim fire service and permanent station equipment needs will be discussed in detail in the MOU.

An agreement between the Newhall Land and the Fire Department includes the construction by Newhall Land of an approximately 11,000-square-foot station within Landmark Village on a minimum 1.25-acre net building pad. In accordance with this agreement, the fully constructed, equipped, and furnished station shall be conveyed to the Fire District prior to the issuance of the 723rd certificate of occupancy issued for the Landmark Project. The station will house seven firefighters, 24-hours a day.

It should be noted, that both the station and building pad sizes exceed the requirements of the approved Newhall Ranch Specific Plan. Additionally, the approved Specific Plan required Newhall Land to provide funding for the construction of the station, rather than constructing the station, and provide funding for its pro-rata share of equipment for the station. In summary, the Specific Plan required Newhall Land to dedicate two, 1-acre, fire station sites (the third station was to be constructed on the Del Valle Fire Department Training Facility) and provide funding to construct three stations. Two of the stations would not exceed 6,000 square feet and the third was to not exceed 8,500 square feet.

As required by the Specific Plan, Newhall Land and the Fire Department will enter into an MOU to finalize the Newhall Ranch requirements associated with the Fire Department. With the MOU in place, the permanent fire station to be constructed on the Landmark Village site will ultimately provide the fire protection services for the proposed project and other areas of the Newhall Ranch Specific Plan site. Until such time as the Landmark Village Station is completed, Fire Station No. 76 would adequately serve the project site as described above.

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25 Written correspondence, David R. Leininger, Chief, Forestry Division, Prevention Bureau, County of Los Angeles Fire Department, August 2, 2004 (**Appendix 4.14**).

26 Written correspondence, Glenn Adamick, Newhall Land and Farming Company, November 2005.

(b) Wildland Fire Hazards

Development of the proposed project would result in the construction of residential uses, commercial uses, office uses, mixed-uses, institutional uses, and public facilities in areas that have been designated as Very High Fire Hazard Severity Zone. Characteristics of the project site, which contribute to these conditions include (a) limited access; (b) lack of adequate water supplies; (c) the types of vegetative cover; and (d) topography. An analysis of the site's fire hazard potential relative to these four factors is presented below.

(1) Access

The project circulation system seeks to implement the mobility objectives of the Master Circulation Plan for the Newhall Ranch Specific Plan. The circulation plan proposes to construct the extensions of Wolcott Road and Long Canyon Road, which would provide regional access from State Route (SR)-126 by creating two permanent intersections with SR-126. The project would also construct a network of collector roads to provide local access to land uses associated with the proposed project (see, **Figure 1.0-4, Existing Secondary Highway Designation – General Plan**). These roadways would connect with Wolcott and Long Canyon Road roadways. All roadways would be constructed in substantial conformance with the requirements of the Specific Plan and in certain cases (internal residential streets and collectors) would require only minor modification to the street sections set forth in the Los Angeles County Subdivision Code. The internal circulation plan would be consistent with the approved Specific Plan standards and County standards, as applicable, regarding access (i.e., roadway widths, length of single access streets, cul-de-sac dimensions, and street parking restrictions, etc.) (see, Section 4.5, Traffic/Access, for more information). Consequently, roadways adequate to provide Fire Department access to land uses located within the Landmark Village project would be provided, and no significant access-related fire protection impacts are expected to occur as a result of project implementation.

(2) Water Supply

The Conceptual Backbone Water Plan for the Specific Plan approved a dual water system that would provide water service for domestic and non-domestic uses. This system would also provide water supplies to support fire suppression activity in the event of wildland or structural fires. The project's water supply system would include water mains and fire hydrants, and the provision of fire flows to meet County standards. Given that a long-term source of water must be provided for Specific Plan-related development prior to the issuance of building permits (see **Section 4.8, Water Resources**), and that the proposed project would provide a water supply that meets County fire flow requirements, no significant water-related fire hazards would occur as a result of project implementation.

(3) Vegetative Cover

The tract map site is cultivated with row crops. As a result, on-site vegetation is generally limited to crops and non-native weeds and grasses. However, the project site is located adjacent to areas with moderate to heavy vegetative cover, particularly along the Santa Clara River and Castaic Creek. The plant communities that make up this cover are highly combustible in the summer and, without mitigation, would present a high fire hazard to development because burning embers are known to travel substantial distances. The potential for wildland fire hazards would exist at the wildland/urban interface due to (1) the presence of brush; (2) increased human activity; and (3) the potential for fires due to accidental and arson-related causes. The boundaries of this interface would change over time as the proposed project reaches buildout.

However, the potential wildfire risk would be reduced to less than significant, as the applicant would be required to prepare a Wildfire Fuel Modification Plan pursuant to Section 1117.2.1 of the County Fire Code that would minimize the potential for the spread of wildfire into development areas and off the project site into surrounding undeveloped areas. Components of the plan would include fuel modification zones, a performance schedule and identification of those parties responsible for conducting annual fuel zone maintenance, specific requirements during construction to reduce fire hazards during this time, and the development of landscape and irrigation plans that incorporate fire-resistant plants, shrubs, trees, and groundcover into the project design. With implementation of the required Wildfire Fuel Modification Plan developed for the project, the fire hazard potential in the urban/rural interface zone would be reduced to below a level considered significant.

(4) Topography

Topography is an issue relative to wildland fire hazards because steep slopes are not only inaccessible to fire fighting vehicles, but steep canyons can create updraft conditions (much like a chimney) and a fire in a steep canyon can spread rapidly into adjacent areas. Steep canyons that are densely covered with combustible vegetation are especially hazardous.

The tract map site is relatively flat with the grade sloping gently in a southwesterly direction. On-site elevations range from 950 feet above mean sea level (msl) along the eastern boundary of the project site to approximately 900 feet msl along the eastern property boundary. The utility corridor is located within existing roadway rights-of-way located along the floor of the Santa Clara River Valley where grades are relatively flat. The tract map site and utility corridor are readily accessible and do not exhibit the characteristics that could cause updraft conditions. The Adobe Canyon borrow site, Chiquito Canyon grading site, and the water tank sites do contain terrain of varying grade that would require grading for development pads, or to stabilize slopes. As a result, these locations would generally not contain steep or

inaccessible slopes that would limit access by fire personnel or result in the spread of wildfire. Further, other than the steel encased water tanks or concrete lined debris basins, no structures that would be considered combustible are planned for these locations. Based on the above, no significant impact with respect to this criterion is anticipated.

(c) Fire Codes and Guidelines

As indicated above under "Existing Conditions," all projects must adhere to applicable state and County Fire codes, standards, and guidelines. As the project builds out, the fire codes, standards, and guidelines would be continually updated by the state and County agencies as knowledge gained from past fires is increased.

(d) Conclusion

The proposed project would ultimately be served by three Newhall Ranch fire stations, including one within Landmark Village, likely to be funded and constructed by Newhall Land in lieu of developer fees. The project also would dedicate land for the three fire station sites in Newhall Ranch, and provide payment for the cost of designated equipment needs (see Specific Plan EIR Mitigation Measure 4.18-4). The project would implement a Wildfire Fuel Modification Plan, and meet County codes and requirements relative to providing adequate fire protection services to the site during both the construction and operation phases. The required MOU will also address the first-phase fire protection requirements (fire protection plan) and the criteria for developing each of the three fire stations for the Newhall Ranch Specific Plan. As a result, the project would neither diminish the staffing or the response times of existing fire stations in the Santa Clarita Valley, nor would it create a special fire protection requirement on the site that would result in a decline in existing services levels in the valley. With compliance of all proposed mitigation measures and County requirements, the project would not diminish the staffing or the response times of existing fire stations in the Santa Clarita Valley, nor would it create a special fire protection requirement on the site that would result in a decline in existing service levels in the Santa Clarita Valley.

Therefore, with implementation of the proposed mitigation measures, potential fire protection service and fire-related hazard impacts associated with both the operation and construction of the proposed project would be reduced to below a level of significance.

7. MITIGATION MEASURES

Although the proposed Landmark Village project may result in potential impacts related to fire protection services absent mitigation, the County already has imposed mitigation measures required to be implemented as part of the Newhall Ranch Specific Plan. These mitigation measures, as they relate to

fire protection services, are found in the certified Newhall Ranch Specific Plan Program EIR and the adopted Mitigation Monitoring Plan for the Specific Plan (May 2003). In addition, this EIR identifies recommended mitigation measures specific to the Landmark Village project site. The project applicant has committed to implementing both the applicable mitigation measures from the Newhall Ranch Specific Plan, and the mitigation measures recommended for the Landmark Village project to ensure that future project development is safe and would not adversely affect adjacent properties.

a. Mitigation Measures Required by the Adopted Newhall Ranch Specific Plan, as they Relate to the Landmark Village Project

The mitigation measures (Mitigation Measure Nos. 4.18-1 through 4.19-4, below) were adopted by the County in connection with its approval of the Newhall Ranch Specific Plan (May 2003). The applicable mitigation measures will be implemented to mitigate the potentially significant fire protection service impacts associated with the proposed Landmark Village project. These measures are preceded by "SP," which stands for Specific Plan.

SP 4.18-1 At the time of final subdivision maps permitting construction in development areas that are adjacent to Open Area and the High Country SMA, a Wildfire Fuel Modification Plan shall be prepared and submitted for approval by the County Fire Department. The Wildfire Fuel Modification Plan shall include the following construction period requirements: (a) a fire watch during welding operations; (b) spark arresters on all equipment or vehicles operating in a high fire hazard area; (c) designated smoking and non-smoking areas; and (d) water availability pursuant to County Fire Department requirements. The wildfire fuel modification plan shall depict a fuel modification zone in conformance with the Fuel Modification Ordinance in effect at the time of subdivision. Within the zone, tree pruning, removal of dead plant material and weed and grass cutting shall take place as required by the County Forester. Fire resistant plant species containing habitat value may be planted in the fuel modification zone.

SP 4.18-2 Each subdivision and site plan for the proposed Specific Plan shall provide sufficient capacity for fire flows of 1,250 gallons per minute (gpm) at 20 pounds per square inch (psi) residual pressure for a two-hour duration for single family residential units, and 5,000 gpm at 20 psi residual pressure for a five-hour duration for multi-family residential units and commercial/retail uses, or whatever fire flow requirement is in effect at the time of subdivision and site plan approval.

SP 4.18-3 Each subdivision map and site plan for the proposed Specific Plan shall comply with all applicable building and fire codes and hazard reduction programs for Fire Zones 3 and 4 that are in effect at the time of subdivision map and site plan approval.

SP 4.18-4 The developer will provide funding for three fire stations to the Consolidated Fire Protection District of Los Angeles County (the "Fire District") in lieu of developer fees. The developer will dedicate two fire station sites for the two fire stations located in Newhall Ranch. The Fire District will dedicate the site for the fire station to be located at the Del Valle Training Facility. Each fire station site will have a building pad consisting of a net buildable area of 1 acre. If the cost of constructing the three fire stations, providing and dedicating the two fire station sites, and providing 3 engines, 1 paramedic squad and 63 percent of a truck company exceeds the developer's developer fee obligation for the Newhall Ranch development as determined by the Fire District, the Fire District will fund the costs in excess of the fee obligation.

Two of the three fire stations to be funded by the developer will not exceed 6,000 square feet; the third fire station to be funded by the developer will not exceed 8,500 square feet. The Fire District, will fund the cost of any space/square footage of improvement in excess of these amounts as well as the cost of the necessary fire apparatus for any such excess square footage of improvements. The cost of three fire engines, a proportionate share of a truck and one squad to be provided by the developer will be determined based upon the apparatus cost at the time the apparatus is placed in service.

The Fire District and the developer will mutually agree to the requirements of first-phase protection requirements based upon projected response/travel coverage. Such mutual agreement regarding first-phase fire protection requirements ("fire protection plan") and the criteria for timing the development of each of the three fire stations will be defined in a Memorandum of Understanding between the developer and the Fire District. Delivery of fire service for Newhall Ranch will be either from existing fire stations or one of the three fire stations to be provided by the developer pursuant to this section. Prior to the commencement of the operation of any of the three fire stations, fire service may be delivered to Newhall Ranch from existing fire stations or from temporary fire stations to be provided by the developer at mutually agreed-upon locations, to be replaced by the permanent stations which will be located within the Newhall Ranch development. The developer and the Fire District will annually review the fire protection plan to evaluate development and market conditions and modify the Memorandum of Understanding

accordingly. *(This measure has been superceeded by the ongoing MOU process.* ***Mitigation Measure LV 4.14-2*** *contains the updated requirements.)*

b. Additional Mitigation Measures Proposed by this EIR

The following project-specific mitigation measures are recommended to mitigate the potentially significant fire protection impacts that may occur with implementation of the Landmark Village project. These mitigation measures are in addition to those adopted in the Final Newhall Ranch Specific Plan Program EIR. To indicate that the mitigation measure relates specifically to the Landmark Village project, the mitigation measure is preceded by "LV," which stands for Landmark Village.

LV 4.14-1 Prior to approval of a final subdivision map for the project, the applicant must prepare and submit for approval by the County Fire Department a fuel modification plan, a landscape plan and an irrigation plan for the project, as required by Section 1117.2.1 of the County of Los Angeles Fire Code.

LV 4.14-2 The applicant will construct three fully equipped and furnished fire stations (including all ancillary requirements such as landscaping, parking, fuel tanks, storage rooms, etc., required for normal fire station operations). Such stations are to be conveyed to the Consolidated Fire Protection District of Los Angeles County (the "Fire District") in lieu of developer fees. The Fire District shall approve all plans and designs for the three fire stations. The applicant will dedicate fire station sites for all three fire stations within Newhall Ranch. Two fire station sites will have a building pad consisting of a minimum net buildable area of 1.25 acres, and one fire station site will have a building pad consisting of a minimum net buidable area of 1.5 acres; the locations and configurations of each site shall be approved by the Fire District.

Two of the three fire stations to be constructed by the applicant will not exceed 11,000 square feet; the third fire station to be constructed by the applicant will not exceed 13,500 square feet. Future changes in federal, state, or local requirements may affect these station minimum sizes.

One of the three fire stations will be located within the Landmark project, at a location approved by the Fire District. Such station shall be 11,000 square feet constructed upon a minimum 1.25 net building pad. The fully constructed, equipped, and furnished station shall be conveyed to the Fire District prior to the issuance of the 723rd certificate of occupancy issued for the Landmark project. Additionally, the applicant shall provide funding for the purchase of one Fire District standard, fully equipped fire pumper engine and paramedic squad prior to the issuance of the 723rd certificate of occupancy.

For the remaining two fire stations, the Fire District will evaluate with the applicant the requirements of first-phase protection based upon projected response/travel coverage with the goal of achieving five-minute response coverage. The results of such evaluation shall include requirements for first-phase fire protection ("fire protection plan") and the criteria for timing the development of each of the fire stations, which will be defined in a Memorandum of Understanding between the applicant and the Fire Chief of the Fire District. Prior to the commencement of the operation of any of the three fire stations, fire service may be delivered to Newhall Ranch from existing fire stations or from temporary fire stations to be provided by the applicant at mutually agreed-upon locations, to be replaced by the permanent stations, which will be located within the Newhall Ranch development. The use of such temporary fire stations must be approved by the Fire District and detailed in the MOU. The applicant and the Fire District will annually review the fire protection plan to evaluate development and market conditions and modify the Memorandum of Understanding accordingly.

LV 4.14-3 If the project applicant alters the Fire District's road access, it must provide paved access acceptable to the Fire District from Chiquito Canyon Road to the Del Valle facility.

LV 4.14-4 The proposed development shall provide multiple ingress/egress access for the circulation of traffic, and emergency response issues. Said determinations shall be approved through the tentative map approval.

LV 4.14-5 The development of this project shall comply with all applicable code and ordinance requirements for construction, access, water mains, fire flows and fire hydrants. Specifics for said requirements shall be established during the review and approval process of the tentative map.

LV 4.14-6 This property is located within the area described by the Forester and Fire Warden as a Fire Zone 4, Very High Fire Hazard Severity Zone (VHFHSZ). All applicable fire code and ordinance requirements for construction, access, water mains, fire hydrants, fire flows, brush clearance and fuel modification plans, must be met.

LV 4.14-7 Specific fire and life safety requirements for the construction phase will be addressed at the building fire plan check. There may be additional fire and life safety requirements during this time.

LV 4.14-8 Every building constructed shall be accessible to Fire Department apparatus by way of access roadways, with an all-weather surface of not less than the prescribed width and

indicated on the Tentative or Exhibit "A" maps. The roadway shall be extended to within 150 feet of all portions of the exterior walls when measured by an unobstructed route around the exterior of the building.

LV 4.14-9 Access roads shall be maintained with a minimum of ten (10) feet of brush clearance on each side. Fire access roads shall have an unobstructed vertical clearance clear-to-sky with the exception of protected tree species. Protected tree species overhanging fire access roads shall be maintained to provide a vertical clearance of thirteen (13) feet, six (6) inches. Applicant to obtain all necessary permits prior to the commencement of trimming of any protected tree species.

LV 4.14-10 The maximum allowable grade shall not exceed 15% except where topography makes it impractical to keep within such grade; in such cases, an absolute maximum of 20% will be allowed for up to 150 feet in distance. The average maximum allowed grade, including topographical difficulties, shall be no more than 17%. Grade breaks shall not exceed 10% in ten (10) feet.

LV 4.14-11 When involved with a subdivision in unincorporated areas within the County of Los Angeles, Fire Department, requirements for access, fire flows and hydrants are addressed at the Los Angeles County Subdivision Committee meeting during the subdivision tentative map stage.

LV 4.14-12 Fire sprinkler systems are required in some residential and most commercial occupancies. For those occupancies not requiring fire sprinkler systems, it is encouraged that fire sprinkler systems be installed. This will reduce potential fire and life losses. Systems are now technically and economically feasible for residential use.

LV 4.14-13 Prior to construction, the following items shall be addressed:

a. Installation and inspection of the required all weather access to be provided as determined by either the tentative map review process or building penult issuance.
b. Fire hydrants shall be installed and tested prior to the clearance for the commencement of construction.

INSTITUTIONAL:

LV 4.14-14 The development may require fire flows up to 8,000 gallons per minute at 20 pounds per square inch residual pressure for up to a four-hour duration as outlined in the 2002 County of Los Angeles Fire Code Appendix III-AA. Final fire flows will be based

on the size of buildings, their relationship to other structures, property lines, and types of construction used.

LV 4.14-15 Fire hydrant spacing shall be based on fire flow requirements as outlined in the 2002 County of Los Angeles Fire Code Appendix III-BB. Additional hydrants will be required if hydrant spacing exceeds specified distances.

LV 4.14-16 All access devices and gates shall comply with California Code of Regulations, Title 19, Article 3.05 and Article 3.16. Los Angeles County Fire Department Regulation #5.

COMMERCIAL/HIGH-DENSITY RESIDENTIAL:

LV 4.14-17 The development may require fire flows up to 5,000 gallons per minute at 20 pounds per square inch residual pressure for up to a five-hour duration. Final fire flows will be based on the size of buildings, their relationship to other structures, property lines, and types of construction used. Fire flows shall be established as part of the tentative map review process with the submittal of architectural details to determine actual flow requirement. If adequate architectural detail is unavailable during the tentative map review process, maximum fire flows will be established with the ability of the fire flow to be changed during the actual architectural plan review by Fire Prevention Engineering for building permit issuance.

LV 4.14-18 Fire hydrant spacing shall be 300 feet and shall meet the following requirements:

a. No portion of lot frontage shall be more than 200 feet via vehicular access from a public fire hydrant.
b. No portion of a building shall exceed 400 feet via vehicular access from a properly spaced public fire hydrant.
c. Additional hydrants will be required if hydrant spacing exceeds specified distances.
d. When cul-de-sac depth exceeds 200 feet on a commercial street, hydrants shall be required at the corner and mid-block.
e. A cul-de-sac shall not be more than 500 feet in length, when serving land zoned for commercial use.

LV 4.14-19 Turning radii shall not be less than 32 feet. This measurement shall be determined at the centerline of the road. A Fire Department approved turning area shall be provided for all driveways exceeding 150 feet in length and at the end of all cul-de-sacs.

LV 4.14-20 All on-site driveways/roadways shall provide a minimum unobstructed width of 28 feet, clear-to-sky. The on-site driveway is to be within 150 feet of all portions of the exterior

walls of the first story of any building. The centerline of the access driveway shall be located parallel to, and within 30 feet of an exterior wall on one side of the proposed structure.

LV 4.14-21 Driveway width for non-residential developments shall be increased when any of the following conditions will exist:

a. Provide 34 feet in width, when parallel parking is allowed on one side of the access roadway/driveway. Preference is that such parking is not adjacent to the structure.
b. Provide 42 feet in width, when parallel parking is allowed on each side of the access roadway/driveway.
c. Any access way less than 34 feet in width shall be labeled "Fire Lane" on the final recording map, and final building plans.
d. For streets or driveways with parking restrictions: The entrance to the street/driveway and intermittent spacing distances of 150 feet shall be posted with Fire Department approved signs stating "NO PARKING – FIRE LANE" in three inch high letters. Driveway labeling is necessary to endure access for Fire Department use.

SINGLE-FAMILY/TWO-FAMILY DWELLING UNITS:

LV 4.14-22 Single-family detached homes shall require a minimum fire flow of 1,250 gallons per minute at 20 pounds per square inch residual pressure for a two-hour duration. Two-family dwelling units (duplexes) shall require a fire flow of 1,500 gallons per minute at 20 pounds per square inch residual pressure for a two-hour duration. When there are five or more condominium units are taking access on a single driveway, the minimum fire flow shall be increased to 1,500 gallons per minute at 20 pounds per square inch residual pressure for a two-hour duration.

LV 4.14-23 Fire hydrant spacing shall be 600 feet and shall meet the following requirements:

b. No portion of lot frontage shall be more than 450 feet via vehicular access from a public fire hydrant.
c. Lots of 1 acre or more shall place no portion of a structure where it exceeds 750 feet via vehicular access from a properly spaced public fire hydrant.
d. When cul-de-sac depth exceeds 450 feet on a residential street, fire hydrants shall be required at the corner and mid-block.
e. Additional hydrants will be required if hydrant spacing exceeds specified distances during the tentative map review process or building permit plan check.

LV-4.14-24 Streets or driveways within the development shall be provided with the following:

a. Provide 36 feet in width on all streets where parking is allowed on both sides.

b. Provide 34 feet in width on cul-de-sacs up to 700 feet in length. This allows parking on both sides of the street.

c. Provide 36 feet in width on cul-de-sacs from 701 to 1,000 feet in length. This allows parking on both sides of the street.

d. For streets or driveways with parking restrictions: The entrance to the street/driveway and intermittent spacing distances of 150 feet shall be posted with Fire Department approved signs stating "NO PARKING – FIRE LANE" in three-inch high letters. Driveway labeling is necessary to ensure access for Fire Department use.

e. Turning radii shall not be less than 32 feet. This measurement shall be determined at the centerline of the road.

LV 4.14-25 A Fire Department approved turning area shall be provided for all driveways exceeding 150 feet in length and at the end of all cul-de-sacs.

LIMITED ACCESS DEVICES (GATES, ETC.):

LV 4.14-26 All access devices and gates shall meet the following requirements:

a. Any single-gated opening used for ingress and egress shall be a minimum of 26 feet in width, clear-to-sky.

b. Any divided gate opening (when each gate is used for a single-direction of travel – i.e., ingress or egress) shall be a minimum width of 20 feet clear-to-sky.

c. Gates and/or control devices shall be positioned a minimum of 50 feet from a public right-of-way, and shall be provided with a turnaround having a minimum of 32 feet of turning radius. If an intercom system is used, the 50 feet shall be measured from the right-of-way to the intercom control device.

d. All limited access devices shall be of a type approved by the Fire Department.

e. Gate detail plans shall be submitted for review and approval to the Fire Department as part of the tentative map submittal or prior to installation. These plans shall show all locations, widths, and details of the proposed gates.

8. CUMULATIVE IMPACTS

In order to analyze the cumulative impacts of this project in combination with other expected future growth, the amount and location of growth that is expected to occur was predicted.

The "Santa Clarita Valley Cumulative Build-Out Scenario" entails buildout of all lands under the current land use designations indicated in the Santa Clarita Valley Areawide Plan and the County General Plan, plus the proposed project, plus all known pending General Plan Amendment requests for additional urban development in the unincorporated area of the Santa Clarita Valley and the City of Santa Clarita. A list of the future development activity (with and without the project) expected in the valley under this

scenario is presented below in **Table 4.14-1**, **Cumulative Development Activity – Santa Clarita Valley Cumulative Build-Out Scenario**.

Table 4.14-1
Cumulative Development Activity – Santa Clarita Valley Cumulative Build-Out Scenario

Land Use Types	Cumulative Buildout w/o Project[1]	Project	Cumulative Buildout w/ Landmark Village[1]
Single-Family	93,412 du	308 du	93,720 du
Multi-Family	47,621 du	1,136 du	48,757 du
Mobile Home	2,699 du		2,699 du
Commercial Retail	18,866,030 sq. ft.	1,033,000 sq. ft.	19,899,030 sq. ft.
Hotel	2,071 room		2,071 room
Sit-Down Restaurant	283,790 sq. ft.		283,790 sq. ft.
Fast Food Restaurant	23,600 sq. ft.		23,600 sq. ft.
Movie Theater	3,300 seats		3,300 seats
Health Club	54,000 sq. ft.		54,000 sq. ft.
Car Dealership	411,000 sq. ft.		411,000 sq. ft.
Elem./Middle School	278,590 students	750 students	279,340 students
High School	12,843 students		12,958 students
College	29,948 students		29,948 students
Hospital	247,460 sq. ft.		247,460 sq. ft.
Library	171,790 sq. ft.		171,790 sq. ft.
Church	501,190 sq. ft.		501,190 sq. ft.
Day Care	785,000 sq. ft.		785,000 sq. ft.
Industrial Park	41,743,950 sq. ft.		41,743,950 sq. ft.
Business Park	8,424,330 sq. ft.		8,424,330 sq. ft.
Manufact./Warehouse	3,932,470 sq. ft.		3,932,470 sq. ft.
Utilities	1,150,240 sq. ft.		1,150,240 sq. ft.
Commercial Office	6,380,520 sq. ft.		6,380,520 sq. ft.
Medical Office	133,730 sq. ft.		133,730 sq. ft.
Golf Course	1,209.0 ac		1,238.0 ac
Developed Parkland	477.3 ac	16 ac	493.3 ac
Undeveloped Parkland	1,000.0 ac		1,000.0 ac
Special Generator[2]	413.0 sg		413.0 sg

du = dwelling unit; sq. ft. = square feet; sta = staff; ac = acres; sg = special generator

[1] *Santa Clarita Valley Consolidated Traffic Model (November 2002). Includes existing development, buildout under the existing City of Santa Clarita General Plan, and Santa Clarita Valley Areawide Plan, and active pending General Plan Amendment requests.*

[2] *Includes Wayside Honor Ranch, Six Flags Magic Mountain, Travel Village, CHP Office, and Aqua Dulce Airport.*

If the Santa Clarita Valley Planning Area builds out consistently with the currently adopted area and general plans, a significant impact on the current level of fire protection services throughout Santa Clarita Valley would occur unless the equipment and personnel resources of the fire department were to increase proportionately. However, impacts resulting from new development would be reduced by compliance

with state and County fire codes, standards and guidelines, and incorporation of project-specific mitigation measures to reduce fire protection impacts to less than significant levels, similar to the proposed project. Moreover, new development within the Santa Clarita Valley Planning Area would be required to participate in the Developer Fee Program, which is the County funding mechanism used to mitigate impacts to fire protection services. As the Santa Clarita Valley Planning Area builds out, the level of fire protection services would be increased to keep pace with increased demands; therefore, no significant cumulative fire-related impacts are expected as a result of valley buildout.

9. CUMULATIVE MITIGATION MEASURES

Because cumulative development will be subject to the same or similar required mitigation measures as the proposed project, no additional cumulative mitigation measures are proposed or required.

10. SIGNIFICANT UNAVOIDABLE IMPACTS

a. Project-Specific Impacts

With implementation of each of the mitigation measures identified above, no significant unavoidable project impacts would occur with respect to fire protection services.

b. Cumulative Impacts

No significant unavoidable cumulative impacts have been identified or are anticipated for the proposed project, as it relates to fire protection services.

4.15 EDUCATION

1. SUMMARY

The Castaic Union School District (Castaic District) and the William S. Hart Union High School District (Hart District) currently provide public elementary, junior high/middle school, and senior high school education in the Landmark Village project area. The Castaic District provides elementary school service (Kindergarten and grades 1–6) and middle school service (grades 7 and 8) to the project site. The Hart District provides junior high school (grades 7 and 8) and senior high school (grades 9–12) service. The Landmark Village project would generate an estimated 336 new elementary students, 93 new middle school students, and 161 new senior high school students for the two Districts at buildout.

*The "School Facilities Funding Agreement Between the Castaic Union School District and Newhall Land and Farming Company" (Castaic School Funding Agreement), effective November 20, 1997, and included in this EIR (**Appendix 4.15**), would mitigate Landmark Village impacts on the Castaic District. Under the Castaic School Funding Agreement, the applicant and the Castaic District have provided a financing schedule and a financing plan, in combination with certain mitigation payments, which will provide permanent facilities, including land, buildings, furnishings and equipment to house grades K–5 and 6–8 students who will reside in the Riverwood Village Planning Area of the Newhall Ranch Specific Plan. The proposed Landmark Village project is part of the Riverwood Village Planning Area. Once implemented, the Castaic School Funding Agreement would fully mitigate Landmark Village's direct and cumulative impacts on the Castaic District's educational facilities.*

*Project-specific impacts on the Hart District would be mitigated through the separate "School Facilities Funding Agreement Between the William S. Hart Union High School District and The Newhall Land and Farming Company" (Hart School Funding Agreement), effective October 1998, and included in this EIR (**Appendix 4.15**). The Hart School Funding Agreement conditionally obligates The Newhall Land and Farming Company to provide up to three additional junior high schools and two additional senior high schools to the Hart District. Once implemented, the Hart School Funding Agreement would fully mitigate Landmark Village's direct and cumulative impacts on the Hart District's educational facilities.*

Cumulative student generation under the Development Monitoring System (DMS) Build-Out Scenario and the Santa Clarita Valley Build-Out Scenario cannot be accommodated by existing or planned facilities within the school facilities that serve the valley; therefore, cumulative impacts on the school districts would be significant. Compliance, as appropriate, with existing School Facilities Funding Agreements and other mechanisms (e.g., Senate Bill [SB] 50, the Valley-Wide Joint Fee Resolution, and/or new school facilities funding agreements) would reduce cumulative development impacts on the school districts to below a level of significance and no significant unavoidable cumulative impacts to educational services are anticipated.

No significant unavoidable impacts would result from implementation of the proposed Landmark Village project.

2. BACKGROUND

a. Relationship of Project to Newhall Ranch Specific Plan Program EIR

Section 4.16 of the Newhall Ranch Specific Plan Program EIR identified and analyzed the existing conditions, potential impacts, and mitigation measures associated with public education for the entire Newhall Ranch Specific Plan. The Newhall Ranch Specific Plan EIR mitigation program was adopted by the County in findings and in the revised Mitigation Monitoring Plan for the Specific Plan. The Newhall Ranch Specific Plan Program EIR concluded that Specific Plan implementation would result in significant impacts on educational services, but that the identified mitigation measures would reduce the impacts to below a level of significance. All subsequent project-specific development plans and tentative subdivision maps must be consistent with the Newhall Ranch Specific Plan, the County of Los Angeles General Plan, and Santa Clarita Valley Areawide Plan.

This project level EIR is tiering from the previously certified Newhall Ranch Specific Plan Program EIR. This section discusses, at the project level, the Landmark Village project's existing conditions, the project's impacts on educational services, the applicable mitigation measures from the Newhall Ranch Specific Plan Program EIR, and any mitigation measures recommended by this EIR for the Landmark Village project.

3. SUMMARY OF THE NEWHALL RANCH SPECIFIC PLAN PROGRAM EIR FINDINGS

The Newhall Ranch Specific Plan Program EIR identified certain potentially significant impacts related to educational services with implementation of the Specific Plan. Specifically, the Newhall Ranch Specific Plan Program EIR, and related findings, determined that implementation of the adopted Specific Plan would significantly increase the demand for educational services on the Specific Plan site and the local vicinity.

Buildout of uses within the Specific Plan would generate approximately 5,016 elementary students, 1,392 junior high students, and 2,372 senior high students at buildout. Under the adopted mitigation program, provisions were made to reserve land for five elementary school sites, one junior high school site, and one high school site within the Specific Plan boundaries with sufficient acreage to construct schools to accommodate the estimated number of students generated at build-out of the Specific Plan. In addition, three school facilities/funding agreements were entered into with the Newhall School District, William S. Hart Union High School District, and Castaic Union School District, which outlined a program for school mitigation fees pursuant to the Valley-Wide Joint Fee Resolution (which constitutes more than the applicant's fair share of school funding per state legislation). The County and the City of Santa Clarita are

signatories to the Valley-Wide Joint Fee Resolution. Based on the Newhall Ranch Specific Plan Program EIR and record, the County's Board of Supervisors found that the significant impacts on educational services identified in that EIR were mitigated to below a level of significance by adoption of the specified mitigation measures.[1]

4. EXISTING CONDITIONS

The Castaic District and the Hart District currently provide public elementary, junior high/middle school and high school education for the Landmark Village project area. The Castaic District provides elementary (grades K–5) and middle school (6–8) service, while the Hart District provides junior high school (7 and 8) and high school (9–12) service.

a. Castaic Union School District

The current enrollment and design capacities for the Castaic District are listed in **Table 4.15-1**, **Existing Design Capacities and Enrollments for the Castaic District**.

Table 4.15-1
Existing Design Capacities and Enrollments for the Castaic District

School	Grade Levels	Current Enrollment	Design Capacity
Castaic Elementary	K–5	769	750
Live Oak Elementary	K–5	775	750
Northlake Hills Elementary	K–5	611	750
Castaic Middle School	6–8	1,434	1,200
	Total	**3,589**	**3,450**

Source: Enrollment provided by California Department of Education, Educational Demographics Unit for they 2003–2004 school year. Design Capacity provided by Jaime Garcia, Castaic Union School District, telephone communication to Impact Sciences, Inc., June 24, 2004.

As indicated above, there are three elementary schools and one junior high/middle school within the Castaic District. Castaic and Live Oak Elementary Schools and the District's only middle school, Castaic Middle School, are all operating above their design capacity. Total student capacity within the District is

1 See, Mitigation Measures 4.16-1 through 4.16-5 in both the certified Newhall Ranch Specific Plan Program EIR (March 9, 1999) and the adopted Mitigation Monitoring Plan for the Specific Plan (May 2003).

3,450 within permanent and temporary (relocatable) classrooms. Total student enrollment in the Castaic District for the 2003–2004 school year was 3,589,[2] which is 139 more students than can be accommodated by the District.

To accommodate current and future students, the District will open Sloan Elementary School in fall 2007 with a permanent design capacity of 750 students.[3] This school will increase the District's capacity by 750 elementary students. There are no current plans for expansion of the current middle school or plans to build a second middle school.

b. William S. Hart Union High School District

The current enrollment and design capacities for the Hart District high schools are listed in **Table 4.15-2, Existing Design Capacity and Enrollments for the Hart District Schools**.

Table 4.15-2
Existing Design Capacity and Enrollments for the Hart District Schools

School	Grade Level	Current Enrollment	Design Capacity
Canyon High	9–12	2,708	2,538
William S. Hart High	9–12	2,694	2,315
Saugus High	9–12	2,738	2,273
Valencia High	9–12	2,995	2,764
Golden Valley High	9–12	1,511	2,600
West Ranch High	9–12	1,453	2,600
	High School Total	**14,099**	**15,090**
Arroyo Seco Junior High	7–8	1,221	1,589
La Mesa Junior High	7–8	1,210	1,394
Placerita Junior High	7–8	1,071	1,236
Sierra Vista Junior High	7–8	1,396	1,221
Rio Norte Junior High	7–8	1,252	1,568
Rancho Pico Junior High	7–8	801	1,200
	Junior High Total	**6,951**	**8,208**
	District Total	**21,050**	**23,298**

Source: Enrollment and Design Capacity provided by Lorna Baril, William S. Hart Union High School District, electronic correspondence to Impact Sciences, Inc., January, 2006. Enrollment numbers are current as of October 2003.

2 Enrollment provided by California Department of Education, Educational Demographics Unit for the 2003–2004 school year.

3 Jamie Garcia, Castaic Union School District, telephone communication to Impact Sciences, Inc., June 24, 2004.

As indicated above, there are a total of six high schools and six junior high schools within the Hart District. In addition, the Hart District includes a continuation school, middle college high school, independent study school, an adult school, and a Regional Occupational Program. Total student capacity within the Hart District schools is 23,298 within 520 permanent and 298 temporary (relocatable) classrooms.[4] Total student enrollment in the Hart District high schools in October 2005 was 14,090. While overall enrollment in District high schools is less than total design capacity, Golden Valley and West Ranch High Schools are the only high schools currently operating below individual design capacity. Total student enrollment in the Hart District junior high schools in October 2005 was 6,951, which is 1,257 less than District capacity. Sierra Vista Junior High is the only junior high school within the District that is operating above design capacity.

In order to accommodate existing and future students, the Hart District plans to open Castaic High School, scheduled to open in fall 2008 or 2009. The design capacity of Castaic High School will be similar to other District high schools. [5]

c. School Funding

(1) School Facilities Agreement Between the Castaic Union School District and Newhall

On November 20, 1997, the Castaic District entered into a school facilities/funding agreement with Newhall to ensure that development within the Riverwood Village of the Specific Plan, either individually or cumulatively with other projects within District's boundaries, would have no adverse impacts on the District's ability to provide adequate educational opportunities to every student in the District. In particular, the Financing Schedule and Financing Plan contained in the agreement guarantees to the Castaic District that there will be adequate school facilities available to house every student within the Specific Plan's Riverwood Village. The agreement states that the funds and land to be provided to the Castaic District by Newhall constitute the entire extent of Newhall's obligation to provide school facilities for the Specific Plan's Riverwood Village. This agreement is referred to as the "Castaic School Facilities Funding Agreement," and is provided in this EIR (**Appendix 4.15**).

(2) School Facilities Funding Agreement Between the William S. Hart Union High School District and Newhall

In October 1998, the Hart District entered into a school facilities funding agreement with Newhall, which conditionally obligates Newhall to provide up to three additional junior high schools and two additional

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4 Lorna Baril, William S. Hart Union High School District, electronic correspondence to Impact Sciences, Inc., January 24, 2006.

5 Ibid.

senior high schools to the Hart District. This agreement is referred to as the "Hart School Facilities Funding Agreement," and is provided in this EIR (**Appendix 4.15**).

Compliance with the Hart School Facilities Funding Agreement constitutes the entire extent of the project applicant's obligation to provide the means necessary for the Hart District to obtain the school facilities needed to house students generated by Newhall's projects, inclusive of the proposed Landmark Village project. As a result, compliance with the agreement would satisfy all of the proposed project's obligations to the Hart District with respect to its junior and senior high school impacts, and ensure that the proposed project would have no direct or cumulative impacts on the Hart District. The Hart School Facilities Funding Agreement is grandfathered for purposes of satisfying the provisions of SB 50, and the provisions of the agreement take precedence over any fee limitations imposed by SB 50.

5. PROPOSED PROJECT IMPROVEMENTS

The applicant proposes to develop 1,444 residential dwelling units with a total residential population of 3,684, approximately 1,033,000 square feet of commercial/mixed use space, a 9-acre elementary school, a 16-acre Community Park, three private recreational facilities, open space and river trail uses, and supporting roadway, drainage and infrastructure improvements. In addition, the applicant proposes to construct the Long Canyon Road Bridge over the Santa Clara River, and install exposed and buried bank stabilization on portions of the south and north side of the Santa Clara River. Consistent with Section 2.5 of the Specific Plan, the Landmark Village project includes one of the elementary school sites required by the Newhall Ranch Specific Plan Program EIR and related mitigation program.

The proposed Landmark Village Elementary School would be designed for a capacity of 837 students, based on a traditional, single track, nine-month schedule school program. The elementary school would be constructed in accordance with the requirements and specifications contained in the Education Code and the Applicant Handbook for State School Building Lease-Purchase Program published by the Office of Public School Construction, as those requirements and specifications exist at the time of construction. The school would be located on a 9-acre site in the central portion of the Landmark Village project site with access taken from two driveways off of "A" Street. This school site is adjacent to a 16-acre Community Park that would be improved and available for joint use with the new elementary school at the time that it opens for operation.

6. PROJECT IMPACTS

The analysis of potential impacts to education associated with construction and operation of the proposed Landmark Village project, including the significance criteria applicable to assessing such impacts, follows.

a. Significance Threshold Criteria

According to Appendix G of the 2005 *California Environmental Quality Act (CEQA) Guidelines*, a project would have a significant impact on schools if the project would result in:

- Substantial adverse physical impacts associated with the provision of new or physically altered school facilities; or
- The need for new or physically altered school facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives for school facilities.

b. Impact Analysis

The number of additional students that may be generated by any given development project is determined by the number and type of residential units to be developed. The proposed Landmark Village project includes 308 single-family and 1,136 multi-family residential units.

The number of students that would be generated by each new housing unit is referred to as the "student generation rate." Student generation rates are largely calculated by categorizing the existing number of students within the particular school district by the type of home in which they live (single family, multi-family, and apartment), and then dividing the total number of students in each category by the total number of homes of each type. Student generation rates per housing type for the Castaic District and Hart District are provided in **Table 4.15-3, Student Generation Rates**.

Table 4.15-3
Student Generation Rates

	Student Generation Rate	
School District	**Single Family**	**Multi-Family**
Castaic Union Elementary[1]	0.506	0.134
Castaic Union Middle	0.143	0.045
Hart Junior High [2]	0.1713	0.0345
Hart Senior High	0.2466	0.0745

[1] *Jaime Garcia, Castaic Union School District, telephone communication to Impact Sciences, Inc., July 15, 2004.*

[2] *Lorna Baril, William S. Hart Union High School District, electronic correspondence to Impact Sciences, Inc., January 24, 2006.*

Based on the number and type of housing units to be generated by the Landmark Village project and the student generation rate for each type of housing unit, the Landmark Village project would generate a total of 336 elementary students, 93 junior high school students, and 161 senior high school students (see **Appendix 4.15** for calculations). Impacts on the Castaic District and Hart District as a result of the Landmark Village project are discussed below.

(1) Project Impacts to Castaic School District

In accordance with the provisions of the Castaic School Facilities Funding Agreement, the Landmark Village elementary students would likely attend Live Oak or Sloan Canyon Elementary Schools until the number of elementary students generated within the Specific Plan's Riverwood Planning Area reaches 420 students. At the time 420 students are generated, the proposed Landmark Village Elementary School would open and accommodate K–5 students. Live Oak Elementary is located at 27715 Saddleridge Way in Castaic, approximately 2.1 miles north-northeast of the project site. Because this school is located over 2 miles from the Landmark Village project site, students would require busing. Live Oak Elementary School has a permanent capacity of 750 students. Student enrollment for calendar year 2003–2004 is 775; therefore, this school is currently operating over capacity by 25 students.

Sloan Canyon Elementary will be built in late 2006 or early 2007 on Sloan Canyon Road, approximately 5 miles northwest of the project site. When Sloan Canyon opens, it is assumed that attendance boundaries would be shifted and the current situation at Live Oak Elementary would be alleviated. Given the 2007 opening of Sloan Elementary and the provisions for Landmark Village Elementary to open when a total of 420 Riverwood elementary school students are generated, impacts to the Castaic District's elementary schools would be less than significant.

The proposed Landmark Village project would generate approximately 93 students in grades 6–8. The Castaic District at Castaic Middle School would also serve students generated by the proposed Landmark Village project in grades 6–8. Castaic Middle School is located at 28900 Hillcrest Parkway in Castaic, approximately 4.5 miles north of the project site. Because this school is located over 2 miles from the Landmark Village site, students would require busing.

The Castaic Middle School is currently operating in excess of design capacity by 234 students. There are currently no District plans to expand the Castaic Middle School or build a second middle school. Without mitigation, the additional 100 middle school students generated by Landmark Village would result in significant impacts to the Castaic School District. However, pursuant to the terms of the Castaic School Facilities Funding Agreement, Newhall would contribute funds, as specified in the agreement, to the Castaic District for middle school facilities outside of the Specific Plan's Riverwood Village Planning Area. These terms of the Castaic School Facilities Funding Agreement serve to mitigate impacts on the Castaic District to less than significant levels.

(2) Project Impacts to the William S. Hart Union School District

The proposed Landmark Village project would generate approximately 161 senior high school students. The Hart District would serve these students. Depending upon the year in which high school students are generated from the Landmark Village project, the high school students would attend either West Ranch High School or Castaic High School.

Currently, grades 9–12 in the Landmark Village project area are served by Valencia High School; however, in fall 2004, grade 9 began to be served by West Ranch High School (on the Rancho Pico Junior High School campus). Grades 10 and 11 entered the West Ranch campus in the fall 2006, with grade 12 following in fall 2007. West Ranch High School is located at 26255 W. Valencia Boulevard, Stevenson Ranch, approximately 4.5 miles south of the project site. Because this school is located more than 2 miles from the project site, busing may be necessary for these students. West Ranch High School has a permanent design capacity of 2,600 students.

The Hart District is in the process of locating a site for a high school in the Castaic area, and the proposed Landmark Village project would eventually (after 2008 or 2009) be served by that high school. Under the Hart School Facilities Funding Agreement, Newhall would provide up to three additional junior high schools and two high schools to the Hart District that would ensure adequate school capacity to serve the Landmark Village project and other Newhall projects. As a result, no significant project impacts on the Hart District's school facilities would occur.

7. MITIGATION MEASURES

Although the proposed Landmark Village project may result in potential education impacts absent mitigation, the County already has imposed mitigation measures required to be implemented as part of the Newhall Ranch Specific Plan. These mitigation measures, as they relate to education, are found in the certified Newhall Ranch Specific Plan Program EIR (March 8, 1999) and the adopted Mitigation Monitoring Plan for the Specific Plan (May 2003). The project applicant has committed to implementing the applicable mitigation measures from the Newhall Ranch Specific Plan to ensure that development of the project site would not result in education impacts, and not adversely affect adjacent properties.

a. Mitigation Measures Required by the Adopted Newhall Ranch Specific Plan, as they Relate to the Landmark Village Project

The following mitigation measures (Mitigation Measure Nos. 4.16-1 – 4.16-5) were adopted by the County in connection with its approval of the Newhall Ranch Specific Plan (May 2003). The applicable mitigation measures will be implemented to mitigate the potentially significant education impacts

associated with the proposed Landmark Village project. These measures are preceded by "SP," which stands for Specific Plan.

SP 4.16-1 The Specific Plan developer shall reserve five elementary schools sites, one junior high school site and one high school site, of 7 to 10, 20 to 25, and 40 to 45 acres in size, respectively, depending upon adjacency to local public parks and joint use agreements.

SP 4.16-2 The developer of future subdivisions which allow construction will comply with the terms and conditions of the School Facilities Funding Agreement between The Newhall Land and Farming Company and the Newhall School District.

SP 4.16-3 The developer of future subdivisions which allow construction will comply with the terms and conditions of the School Facilities Funding Agreement between The Newhall Land and Farming Company and the William S. Hart Union High School District.

SP 4.16-4 The developer of future subdivisions which allow construction will comply with the terms and conditions of the School Facilities Funding Agreement between The Newhall Land and Farming Company and the Castaic Union School District.

SP 4.16-5 In the event that School District boundaries on the Specific Plan site remain unchanged, prior to recordation of all subdivision maps which allow construction, the developer of future subdivisions which allow construction is to pay to the Castaic Union School District the statutory school fee for commercial/industrial square footage pursuant to Government Code Sections 65995 and 65996, unless a separate agreement to the contrary is reached with the District.

b. Additional Mitigation Measures Proposed by this EIR

No additional mitigation measures beyond those identified in the Newhall Ranch Specific Plan Program EIR are required or necessary, because the Landmark Village project does not result in any significant education impacts after implementation of the above mitigation measures.

8. CUMULATIVE IMPACTS

As required by CEQA, the cumulative impact on schools caused by the project and other related future residential development is assessed in this section. In order to improve the accuracy of estimates of future residential development, the amount of future residential development within the Districts was analyzed under two different scenarios: DMS Build-Out Scenario and Santa Clarita Valley Cumulative Build-Out Scenario. Each scenario is discussed below.

a. DMS Build-Out Scenario

The DMS Build-Out Scenario assumes complete buildout of the project and those subdivision projects listed in the County's DMS for the Castaic District and the Hart District. The County's DMS data used for this analysis includes all pending, recorded and approved residential projects involving land divisions located in these two school districts. Copies of the County DMS Inventory Information reports for the two school districts are included in this EIR (**Appendix 4.15**).

A summary of development by school district under the DMS Build-Out Scenario is presented in **Table 4.15-4, Summary of Cumulative Projects by School District – DMS Build-Out Scenario (Pending, Approved, and Recorded Projects)**. As shown, the elementary and junior high school in the Castaic District serve a smaller number of cumulative residential units than the senior high schools in the Hart District. This variation exists because four school districts in the Santa Clarita Valley serve grades K–6 students (Castaic, Newhall, Saugus, Sulphur Springs and Hart District), and two districts serve grades 7–8 students (Castaic, and Hart District), while only one District serves high school students (Hart District).

Table 4.15-4
Summary of Cumulative Projects by School District – DMS Build-Out Scenario
(Pending, Approved, and Recorded Projects)

	Residential Units		
School District	**Single-Family**	**Multi-Family[1]**	**Total Units**
Castaic Union Elementary			
Cumulative Projects	4,713	1,675	6,388
Proposed Project	308	1,136	1,444
Total	5,026	2,806	7,832
Castaic Union Jr. High			
Cumulative Projects	5,265	2,753	8,018
Proposed Project	308	1,136	1,444
Total	5,578	3,884	9,462
William S. Hart Sr. High			
Cumulative Projects	23,726	13,557[2]	37,283
Proposed Project	308	1,136	1,444
Total	24,039	14,688	38,727

Source: Los Angeles County Department of Regional Planning, Service Provider Report (April 23, 2003).

[1] *Includes apartments.*

[2] *Includes 273 mobile home units.*

Under Build-Out Scenario A with the project, there would be an additional 2,919 elementary school students, 972 junior high school students and 6,667 senior high school students that would need to be served by the Castaic District and Hart District (student generation calculations are provided in **Appendix 4.15**). Based on an elementary school classroom size of 20 and a junior and senior high school classroom size of 32, these students would require a total of 146 additional elementary school classrooms, 49 additional junior high school classrooms, and 208 additional senior high school classrooms.

As previously discussed, the Castaic District proposes construction of one new elementary school in addition to the construction of Landmark Village elementary school. The Castaic District has no current plans for a second middle school, although the Landmark Village project would contribute funding toward the financing of a new middle school. Given that the existing schools in the District are already operating over capacity and the two new elementary schools would not have enough capacity to serve those elementary students, impacts to the Castaic District under this scenario would be significant.

The Hart District will construct two new high schools with a combined capacity of 5,200 students, and a third high school with an assumed capacity of 2,600 students. These schools are being funded primarily through SB 50 and Hardship funds under SB 50. Given that existing schools in the District are already operating over capacity and that the four new schools would not have enough capacity to serve these new high school students, cumulative impacts to the Hart District under this scenario would be significant.

b. Santa Clarita Valley Cumulative Build-Out Scenario

The Santa Clarita Valley Cumulative Build-Out Scenario entails full buildout of both the project and all lands under the current land use designations indicated in the Santa Clarita Valley Areawide Plan and the Los Angeles County General Plan, plus all known active pending General Plan Amendment requests for additional urban development in the unincorporated area of Santa Clarita Valley and the City of Santa Clarita. A list of the future development activity (with and without the project) expected in the valley under the Santa Clarita Valley Cumulative Build-Out Scenario is presented below in **Table 4.15-5**, **Cumulative Development Activity – Santa Clarita Valley Cumulative Build-Out Scenario**.

The focus of this cumulative impact analysis is on determining whether the cumulative increase in the residential population from valley buildout, in combination with the project, would adversely impact the affected school districts that serve the residents of the Santa Clarita Valley (i.e., Castaic, Newhall, Saugus, Sulphur Springs, and Hart District).

Table 4.15-5
Cumulative Development Activity – Santa Clarita Valley Cumulative Build-Out Scenario

Land Use Types	Cumulative Buildout w/o Project[1]	Project	Cumulative Buildout w/ Landmark Village[1]
Single-Family	93,412 du	308 du	93,720 du
Multi-Family	47,621 du	1,136 du	48,757 du
Mobile Home	2,699 du		2,699 du
Commercial Retail	18,866,030 sq. ft.	1,033,000 sq. ft.	19,899,030 sq. ft.
Hotel	2,071 room		2,071 room
Sit-Down Restaurant	283,790 sq. ft.		283,790 sq. ft.
Fast Food Restaurant	23,600 sq. ft.		23,600 sq. ft.
Movie Theater	3,300 seats		3,300 seats
Health Club	54,000 sq. ft.		54,000 sq. ft.
Car Dealership	411,000 sq. ft.		411,000 sq. ft.
Elem./Middle School	278,590 students	750 students	279,340 students
High School	12,843 students		12,958 students
College	29,948 students		29,948 students
Hospital	247,460 sq. ft.		247,460 sq. ft.
Library	171,790 sq. ft.		171,790 sq. ft.
Church	501,190 sq. ft.		501,190 sq. ft.
Day Care	785,000 sq. ft.		785,000 sq. ft.
Industrial Park	41,743,950 sq. ft.		41,743,950 sq. ft.
Business Park	8,424,330 sq. ft.		8,424,330 sq. ft.
Manufacture/Warehouse	3,932,470 sq. ft.		3,932,470 sq. ft.
Utilities	1,150,240 sq. ft.		1,150,240 sq. ft.
Commercial Office	6,380,520 sq. ft.		6,380,520 sq. ft.
Medical Office	133,730 sq. ft.		133,730 sq. ft.
Golf Course	1,209.0 ac		1,238.0 ac
Developed Parkland	477.3 ac	16 ac	493.3 ac
Undeveloped Parkland	1,000.0 ac		1,000.0 ac
Special Generator[2]	413.0 sg		413.0 sg

du = dwelling unit; sq. ft. = square feet; sta = staff; ac = acres; sg = special generator

[1] *Santa Clarita Valley Consolidated Traffic Model, (November 2002). Includes existing development, buildout under the existing City of Santa Clarita General Plan, Santa Clarita Valley Areawide Plan, and active pending General Plan Amendment requests.*

[2] *Includes Wayside Honor Ranch, Six Flags Magic Mountain, Travel Village, California Highway Patrol (CHP) Office, and Aqua Dulce Airport.*

Cumulative development under the SCV Cumulative Build-Out would generate 39,756 elementary school students, 14,106 junior high school students, and 22,797 senior high school students that would need to be accommodated by all of the school districts in the Santa Clarita Valley (see, **Table 4.15-6**, **Student Generation as a Result of Cumulative Projects – Santa Clarita Valley Cumulative Build-Out Scenario B**). Capacity for these students has yet to be planned in the school districts that serve the Santa Clarita Valley and, unless they can be accommodated, this scenario would result in a significant impact.

Table 4.15-6
Student Generation as a Result of Cumulative Projects –
Santa Clarita Valley Cumulative Build-Out

School District	Single-Family Units	Students Per Unit	Multi-Family Units	Students Per Unit	Mobile Home Units	Students Per Unit	Number of Students	Number of Classrooms[6]
Newhall (K–6)	13,771	0.348	10,163	0.166[1]	1,497	0.07	6,584	329
Hart Jr. (7–8)	54,065	0.1671	23,697	0.0224[2]	2,123	0.0224[2]	9,613	300
Hart Sr. (9–12)	83,212	0.2426	45,163	0.0552[3]	2,123	0.0552[3]	22,797	712
Saugus (K–6)	23,241	0.4982	6,963	0.0556	50	0.0556	11,972	599
Castaic (K–5)	31,744	0.3021	22,349	0.104[4]	25	0.104[4]	11,917	596
Castaic (6–8)	22,381	0.1578	16,001	0.06[5]	25	0.06[5]	4,493	225
Sulphur Springs (K–6)	21,666	0.38	9,283	0.10	1,219	0.17	9,283	464
Totals[7]	—	—	—	—	—	—	76,659	3,225

[1] *Multi-family student generation rate is the midpoint between a multi-family rate of 0.078 and apartment rate of 0.253 students per unit for the Newhall School District.*

[2] *Multi-family and mobile home student generation rate is the midpoint between the multi-family rate of 0.0311 and apartment rate of 0.0137 for Hart Junior High School.*

[3] *Multi-family and mobile home student generation rate is the midpoint between the multi-family rate of 0.0789 and the apartment rate of 0.0315 for Hart Senior High School.*

[4] *Multi-family and mobile home student generation rate is the midpoint between the multi-family of 0.1079 and apartment rate of 0.0998 for Castaic Union Elementary Schools.*

[5] *Multi-family and mobile home student generation rate is the midpoint between the multi-family of 0.0618 and apartment rate of 0.0585 for Castaic Union Middle Schools.*

[6] *Assumes 30 students per classroom for the Newhall, Saugus Union, Castaic Union and Sulphur Springs Union School Districts and 32 students per classroom for the William S. Hart Union High School District.*

[7] *Due to overlap of district boundaries, residential unit categories cannot be totaled.*

9. CUMULATIVE MITIGATION MEASURES

There is a cumulative impact if a project does not contribute its fair share to mitigate school facility impacts. However, with the school facilities/funding agreements in place with the respective school districts, the Landmark Village project would not contribute to the identified cumulative impacts on school facilities in the Santa Clarita Valley. Because such mechanisms are to be implemented for each new residential development in the Santa Clarita Valley, cumulative impacts on schools caused by other future residential development would be mitigated to less than significant levels.

10. SIGNIFICANT UNAVOIDABLE IMPACTS

a. Project-Specific Impacts

By complying with the provisions of the School Facilities Funding Agreements between Newhall and the Castaic and Hart Districts, and the above mitigation measures, project impacts on school facilities would be reduced to below a level of significance. Therefore, no significant unavoidable project impacts would occur.

b. Cumulative Impacts

By complying with existing school facilities/funding agreements and/or other mechanisms (e.g., SB 50, the Valley-Wide Joint Fee Resolution, or new school facilities/funding agreements), cumulative development within the Santa Clarita Valley would reduce identified cumulative impacts on school facilities to below a level of significance. In addition, the Landmark Village project impacts do not contribute to the identified cumulative impacts on school facilities in the valley, because the project impacts have been fully mitigated. Therefore, there are no significant unavoidable cumulative impacts on school facilities resulting from implementation of the proposed project.

4.16 PARKS AND RECREATION

1. SUMMARY

The proposed Landmark Village project includes a 9.74-net-acre Community Park, consistent with the Specific Plan's Land Use Overlay Community Park designation for the area, 3.13 acres of the Specific Plan's Regional River Trail, and 4.10 acres of community trails. Implementation of these project components results in a parkland dedication equivalent to approximately 7.1 acres per 1,000 persons, which is greater than the Los Angeles County (County) and Quimby Act requirements of 3.0 acres per 1,000 persons. The proposed project includes a hierarchy of community, local and other trails connecting to the Specific Plan's Regional River Trail, which traverses the Santa Clara River. The basic Quimby park land obligation for the subdivision is 11.34 net acres of park land and the project will provide an improved 9.74-net-acre Community park. The remaining park obligation will be fulfilled by the subdivision providing a 6.39-acre private park; 5.23 net acres in recreational centers, and a 3.10-net-acre trail easement. Pursuant to the Newhall Ranch Specific Plan, the 13.12 aces by which the subdivision exceeds its Quimby obligation will be credited against other subdivisions within the Newhall Ranch Specific Plan area. Measured against the identified significance thresholds, the proposed Landmark Village project meets County parkland requirements, exceeds Quimby Act parkland standards, and would not result in significant impacts to local parks and recreation facilities.

Implementation of cumulative projects would incrementally increase demand for local park facilities. However, the proposed project would meet County parkland requirements and exceed the Quimby Act parkland standards. Further, future development projects would be subject to the Quimby Act and County requirements, which would mitigate the demand associated with each future project. As a result, no significant cumulative impacts on County parks and recreation facilities would occur with implementation of the proposed project.

Because the proposed Landmark Village project meets the County parkland requirements and exceeds the Quimby Act requirements, no further mitigation measures are required for the proposed project beyond those adopted as part of the Newhall Ranch Specific Plan.

2. BACKGROUND

a. Relationship of Project to Newhall Ranch Specific Plan Program EIR

Section 4.20 of the Newhall Ranch Specific Plan Program EIR identified and analyzed the existing conditions, potential impacts, and mitigation measures associated with parks, recreation, and trails for the entire Newhall Ranch Specific Plan. The Newhall Ranch Specific Plan EIR mitigation program was adopted by the County in findings and in the revised Mitigation Monitoring Plan for the Specific Plan. The Newhall Ranch Specific Plan Program EIR concluded that Specific Plan implementation would not result in significant impacts to parks, recreation, and trails, because the Specific Plan set aside sufficient

active and passive park space, trails, and open space to meet County and Quimby Act standards. All subsequent project-specific development plans and tentative subdivision maps must be consistent with the Newhall Ranch Specific Plan, the County of Los Angeles General Plan, and Santa Clarita Valley Areawide Plan.

This project-level EIR is tiering from the previously certified Newhall Ranch Specific Plan Program EIR. **Section 4.16** discusses, at the project level, the Landmark Village project's existing conditions, the project's impacts on parks, recreation and trails, the applicable mitigation measures from the Newhall Ranch Specific Plan Program EIR, and any mitigation measures recommended by this EIR for the Landmark Village project.

3. SUMMARY OF THE NEWHALL RANCH SPECIFIC PLAN PROGRAM EIR FINDINGS

The Newhall Ranch Specific Plan Program EIR identified certain potentially significant impacts related to parks, recreation, and trails if the Specific Plan were implemented absent mitigation. It was determined that buildout of uses within Newhall Ranch would result in an on-site population of 59,707 residents, and in response to the demand for population-generated parkland, the Specific Plan included land for community and neighborhood parks (186 acres and 55 acres, respectively). The Specific Plan also set aside 4,214 acres of land in the High Country Special Management Area (SMA), and 819 acres of land within the River Corridor SMA, for a total of approximately 5,033 acres in the two designated SMA areas (i.e., permanent open areas). Improvements to community and neighborhood parks were also required under the Specific Plan.[1] The County's Board of Supervisors found that these community and neighborhood park improvements represented significant overriding public benefits, which were above and beyond the mitigation required by the Newhall Ranch Specific Plan Program EIR, California Environmental Quality Act (CEQA), or the exactions required of other development.[2]

The revised Specific Plan included a hierarchy of regional, community and other trails, along with the accelerated dedication of both the High Country SMA and the pedestrian/equestrian trail within the High Country SMA.

Based on the Newhall Ranch Specific Plan Program EIR, the record, and given that the Specific Plan exceeded Quimby Act requirements, the County's Board of Supervisors found that the Specific Plan's impacts to County parks, recreation and trails would remain less than significant with the mitigation and the significant public benefits provided.

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1 See, Specific Plan, Section 2.8, Recreation and Open Area, p. 2-145, including the calculation of the neighborhood and community park improvement costs, as shown on p. 2-144 in Table 2.8-1.

2 See, Additional CEQA Findings and Statement of Overriding Considerations for Newhall Ranch, dated May 2003, specifically, pp. 81-82, para. 11, of the adopted Statement of Overriding Considerations.

In summary, the Specific Plan's mitigation program required the Newhall Ranch Specific Plan to provide the following acreages of parks and open areas:[3]

(a) Ten public Neighborhood Parks totaling 55 acres;

(b) Open Areas totaling 1,106 acres of which 186 acres are Community Parks;

(c) High Country SMA of 4,214 acres;

(d) River Corridor SMA of 819 acres;

(e) A 15-acre lake;

(f) An 18-hole golf course; and

(g) A trail system consisting of:

  (i) Regional River Trail;

  (ii) Salt Creek Corridor;

  (iii) Community Trails; and

  (iv) Unimproved Trails.

In addition, the Specific Plan mitigation required the applicant to finalize the alignment of trails with the County Department of Parks and Recreation prior to construction. Trail construction must be in accordance with the County's Department of Parks and Recreation trail system standards.

In addition to the above mitigation measures, the Specific Plan's neighborhood parks and the active areas of the Community Parks are required to be improved pursuant to the revised Specific Plan's list of specified park improvements. The park improvements are required to be provided in accordance with final park plans approved by the County's Department of Parks and Recreation.[4] These park improvements were identified as significant public benefits to be provided under the Specific Plan.[5]

Finally, the Board of Supervisors imposed a Condition of Approval on approximately 1,517 acres of land encompassing the Salt Creek watershed in Ventura County that requires the property to be dedicated in fee and/or by conservation easement, as determined by the County in its sole discretion, to the joint powers authority, which is responsible for overall recreation and conservation of the Newhall Ranch High County SMA. Said land is to be managed in conjunction with, and in the same manner as, the High Country SMA.

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3 See, Mitigation Measures 4.20-1 through 4.20-3 in both the certified Newhall Ranch Specific Plan Program EIR (March 9, 1999) and the adopted Mitigation Monitoring Plan for the Specific Plan (May 2003).

4 See, revised Specific Plan (May 2003), Section 2.8, Recreation and Open Area, page 2-145.

5 See, Additional CEQA Findings and Statement of Overriding Considerations for Newhall Ranch, dated May 2003, specifically, pp. 81–82, paragraph 11, of the adopted Statement of Overriding Considerations.

4. EXISTING CONDITIONS

a. Los Angeles County Park and Recreation Standards

The County of Los Angeles Department of Parks and Recreation provides local parks and recreation facilities for northwestern Los Angeles County residents living in unincorporated areas, and provides regional parks for all area residents. The County's Department of Parks and Recreation has identified the local parks in the vicinity as neighborhood, community, or regional facilities.[6]

Neighborhood parks are usually 5 acres or more, and are often sited in residential neighborhoods adjacent to elementary schools. They may provide amenities, such as a recreation building, a multi-purpose field, hard court area, play apparatus, picnic passive area, and a service area. Community parks are usually 16 acres or more, unless located adjacent to a secondary school when 10 acres or more may be adequate. They may provide amenities, such as a community building, swimming pool, multi-purpose fields, hard court areas, parking service areas, and play apparatus.[7] Regional facilities include community regional parks, regional parks, recreation areas, nature preserves, trails, and golf courses. Regional facilities are intended to provide recreational opportunities for a larger group of citizens than neighborhood or community parks.

In the State of California, a city or county may require, as a condition of subdivision approval, the dedication of land, or the payment of a fee in lieu of dedication, or a combination of both, for park and recreational purposes (Government Code Section 66477). Under this law, known as the "Quimby Act," the general standard established for parkland dedication is 3 acres per 1,000 persons, unless the amount of existing neighborhood and community parkland in the area exceeds this limit, in which case a local agency may set a higher standard, not to exceed 5 acres per 1,000 persons.[8]

The County has adopted a Quimby Act ordinance that requires a residential subdivider to "provide local park space to serve the subdivision, pay a fee in lieu of the provision of such parkland…provide local park space containing less than the required obligation but developed with amenities equal in value to the park fee, or do a combination of the above."[9] To meet this requirement, the County has identified several types of park and recreation facilities that may satisfy projected needs and are eligible for Quimby credit, including, but not limited to, "publicly or privately owned playgrounds, riding and hiking trails, tennis, basketball or other similar game-court areas, swimming pools, putting greens, athletic fields, picnic areas,

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6 James Barber, Los Angeles County Department of Parks and Recreation, communication to Impact Sciences, Inc., July 12, 2004.

7 Los Angeles County Department of Parks and Recreation, Park Facilities and Areas of Jurisdiction, (Los Angeles, California: September 1992), Forward.

8 Government Code Section 66477(a)(2).

9 Los Angeles County Ordinance Section 21.24.340(A).

and other types of natural or scenic areas as recommended by the director of parks and recreation for passive or active recreation."[10]

Under the County's ordinance, the amount of parkland acreage required from each subdivision is calculated prior to tentative map approval,[11] based on a specific formula that takes into account the number, type (i.e., detached single-family, attached single-family, apartment houses with five or more dwelling units and mobile homes), and average household size of residences approved for that subdivision.[12]

If the parkland requirement is not met by the provision of local park space, the County requires an in-lieu payment, based on a representative land value that is set for each park planning area in the County. For the proposed project, located in Park Planning Area 35A - Valencia/Newhall, the County has established a representative in-lieu fee of $252,395 per acre.[13]

b. Local and Regional Parks

The proposed project site is located within Los Angeles County designated Park Planning Area 35A. Park Planning Area 35A encompasses nearly the entire Santa Clarita Valley, from Sand Canyon on the east to the Los Angeles County/Ventura County line on the west, and from the Angeles National Forest on the north to the crest of the Santa Susana Mountains on the south. The communities within this area include Castaic, Hasley Canyon, Val Verde, Valencia, Newhall, Saugus, and Canyon Country. There are no existing public parks or trails within the project site boundaries; however, there are several existing and proposed parks in the vicinity of the project site. Such facilities include parks maintained by Los Angeles County, the City of Santa Clarita, Ventura County, the State of California, and the federal government.

(1) County Parks

The County maintains 15 developed parks totaling approximately 4,513 acres within the vicinity of the project site, in addition to the 8,700-acre Castaic Lake State and County Recreation Area. County parks are shown on **Figure 4.16-1, Existing and Proposed County Parks and Recreation Facilities in Portions of Park Planning Area 35A Near Landmark Village**. The majority of these facilities are developed and contain amenities, such as children's play areas, multi-purpose fields, recreation/activity buildings, sand volley ball courts, picnic tables, etc. **Table 4.16-1, Existing and Proposed County Parks and Recreation**

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10 Los Angeles County Ordinance Section 21.24.340(C).

11 James Barber, Los Angeles County Department of Parks and Recreation, interview, July 7, 1995.

12 Los Angeles County Ordinance Section 21.24.340(A); see also, Los Angeles County Ordinance Section 21.24.350.

13 Los Angeles County Ordinance Section 24.28.140(A)(1). "The residential land values included in subsection A1 of this section shall be adjusted annually, effective July 1st, by the department of parks and recreation….The adjusted representative land values shall apply to…residential subdivision maps that are first advertised by the department of regional planning for hearing before either a hearing officer to the Regional Planning Commission on or after the respective July 1st adjustment date." (Los Angeles County Ordinance section 24.28.140[A][3])

Facilities in Portions of Park Planning Area 35A near Landmark Village, provides information on County parks within the vicinity of the project site. In addition to the developed parks, the County has approximately 18 acres of parkland under construction and 72 acres of proposed parkland. Specific County parks of note include the 57.58-acre Val Verde Community Regional Park in proximity to the project site, the 8,700-acre Castaic Lake State and County Recreation Area, and the Castaic Lake Sports Complex.

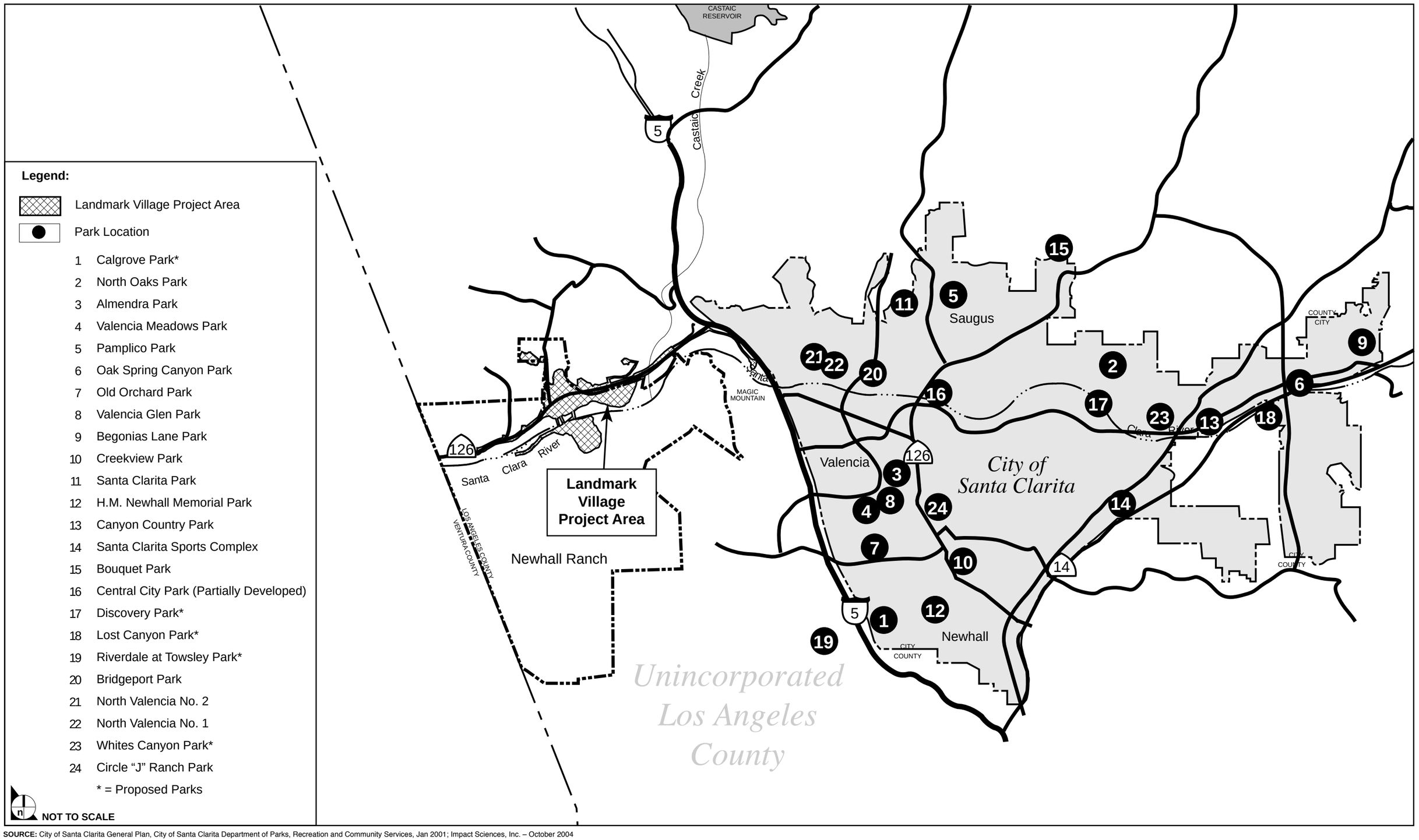
Table 4.16-1
Existing and Proposed County Parks and Recreation Facilities in Portions of Park Planning Area 35A near Landmark Village

Facilities	Acreage	Location	Condition
1 Hasley Canyon County Park	5.38	28700 W. Quincy St.	Developed
2 Del Valle Park	5.00	28201 W. Sloan Cyn. Rd.	Developed
3 William S. Hart Regional County Park	110.00	24151 San Fernando Rd.	Developed
4 Stevenson Ranch Community Park	16.00	1 mile west of I-5 and Pico Cyn. Rd.	Developed
5 Castaic Sports Complex Community Regional Park	50.00	31320 North Castaic Rd.	Developed
6 Val Verde Community Regional Park	57.58	30300 W. Arlington St.	Developed
7 Placerita Canyon Park (state)	341.12	19152 Placerita Cyn. Rd.	Developed
8 Plum Canyon Park	8.00	1/4 mile east of Bouquet Canyon Rd.	Under Construction
9 Northbridge Park	8.63	27400 N. Grandview Dr.	Developed
10 Ed Davis/Towsley Canyon Park (state)	145.00	24255 The Old Rd.	Developed
11 Santa Clarita Woodlands State Park	3,000.00+		Developed
12 Vasquez Rocks County Park	745.00	Aqua Dulce	Developed
13 Castaic Lake State and County Recreation Area[1]	8,700.00	32132 Ridge Route Rd.	Developed
14 Chesebrough Park	5.48	Sunset Hills Dr./McBean Parkway	Developed
15 Copper Hill Park	4.40	Northbridge Planning Area	Proposed
16 North Lake Park	14.0	Castaic/Val Verde	Proposed
17 North Park	4.87	Saugus	Proposed
18 Pacific Crest	4.00	Castaic/Val Verde	Proposed
19 Pico Canyon Park	10.80	Pico Canyon	Under Construction
20 Richard Rioux Memorial County Park	15.46	Stevenson Ranch	Developed
21 Landmark Village	21.30	Newhall/Valencia	Proposed
22 West Creek Park	15.63	Saugus	Proposed
23 Whites Canyon Park	8.50	Canyon Country	Proposed
24 Bouquet Canyon County Park	9.00	28127 Wellston Drive, Saugus	Developed
Total:[2]	13,296.15		

Source: Los Angeles County Department of Parks and Recreation

[1] *State-owned park maintained and operated by the County.*

[2] *This total does not include the Ed Davis/Towsley Canyon Park, which is already included in the acreage for the Santa Clarita Woodlands State Park.*



SOURCE: City of Santa Clarita General Plan, City of Santa Clarita Department of Parks, Recreation and Community Services, Jan 2001; Impact Sciences, Inc. – October 2004

FIGURE **4-16-1**

Existing and Proposed City of Santa Clarita Parks

The Val Verde Community Regional County Park covers 57.58 acres, and is located approximately 0.25 mile north of the project site, at 30300 West Arlington Street in the unincorporated community of Val Verde. Existing park improvements include an all-purpose clubhouse building, bath house, swimming pool, ball diamond, parking with security lighting, and drinking fountains. The park also includes picnic areas with tables and barbeques. There is a children's play area, basketball and tennis courts, and horseshoe pits and shuffleboard. In addition, the park offers overnight and day camping for organized groups, including youth organizations.

The 8,700-acre Castaic Lake State and County Recreation Area is a multi-use park located northwest of the project site in the unincorporated area of Castaic, and it includes 2,600 surface acres of water contained in an upper and lower reservoir system. Castaic Lake reservoir and surrounding land is owned by the state; however, the County leases the land and operates the upper lake, Castaic Lake Reservoir, and the lower lake, Castaic Lagoon.[14] However, the County's proposed budget for fiscal year 03-04 eliminates this park and shifts it back to the state. Facilities at the upper lake include major boat ramps and supporting facilities with fishing, boating, water and jet skiing, and parking for boats and trailers. Development around the 180-acre Castaic Lagoon includes major picnic areas for groups and families, swimming beaches, parking areas, non-motorized boat facilities, and general day-use recreation facilities, such as comfort stations.

The Castaic Sports Complex covers approximately 50 acres, and is located approximately 3 miles north of the project site at 31320 North Castaic Road in the unincorporated Castaic community. The complex includes a gymnasium, community room, kitchen, locker rooms/showers, restrooms, and lobby. The outdoor sports facility includes a multi-purpose court, with lighting for basketball or volleyball, and a jogging/12-station par course. Site improvements include separate play areas for toddlers and children, picnic areas with surrounding landscaping, pathways, security lighting, and parking.

(2) City of Santa Clarita Parks

There are 25 existing or approved for development parks under the jurisdiction of the City of Santa Clarita, the locations of which are listed in **Table 4.16-2**, **Existing and Proposed City of Santa Clarita Parks**, and illustrated on **Figure 4.16-1**. Of the 25 parks totaling 418.15 acres, seven are either currently undeveloped or partially developed. The developed parks contain amenities such as children's play areas, multi-purpose fields, restrooms, volleyball courts, picnic tables, etc. The City of Santa Clarita planning area also includes six golf courses, four public (Elkins Ranch, Lake Elizabeth Golf Club, Vista

14 Telecommunication with Lillie Lowery, Los Angeles County Department of Parks and Recreation, January 7, 2003.

Valencia Golf Course, and Robinson Ranch), one semi-private (TPC Valencia), and one private (Valencia Country Club).

Table 4.16-2
Existing and Proposed City of Santa Clarita Parks

Parks	Acreage	Location	Condition
1 Calgrove Park	0.25	24602 Little Oak Lane	Undeveloped
2 North Oaks Park	2.30	27824 N. Camp Plenty Rd.	Developed
3 Almendra Park	4.30	23420 Alta Madera Dr.	Developed
4 Valencia Meadows Park	4.80	25671 Fedala Rd.	Developed
5 Pamplico Drive Park	5.00	22444 Pamplico Dr.	Developed
6 Oak Spring Canyon Park	5.00	28920 Oak Spring Cyn. Rd.	Developed
7 Old Orchard Park	5.40	25023 Avenida Rotella	Developed
8 Valencia Glen Park	5.50	23750 Via Gavola	Developed
9 Begonias Lane Park	5.00	14911 Begonias Lane	Developed
10 Creekview Park	8.00	22200 Park Street	Developed
11 Santa Clarita Park	7.50	27285 Seco Canyon Rd.	Developed
12 H.M. Newhall Memorial Park	15.00	24923 Newhall Ave.	Developed
13 Canyon Country Park	17.20	17615 Soledad Canyon Rd.	Developed
14 Santa Clarita Sports Complex	20.00	26407 Golden Valley Rd.	Developed
15 Bouquet Canyon Park	9.00	28127 Wellston Dr.	Developed
16 Central City Park	108.00	27150 Bouquet Canyon Rd.	80 acres developed 28 acres for future expansion
17 Discovery Park	20.00	27150 Canyon View Dr.	Undeveloped
18 Lost Canyon Park	40.00	Lost Cyn Rd.	Undeveloped
19 Rivendale Park	60.00	24255 The Old Rd.	Undeveloped
20 Bridgeport Park	16.0	Bridgeport Development	Complete
21 Oak Park	2.0	28920 Oak Spring Canyon Rd.	Developed
22 Valencia Heritage Park	17.6	Eastcreek Planning Area 1	Developed
23 Whites Canyon	6.0	Via Princessa	Undeveloped
24 Circle J. Ranch	5.3	Whites Canyon Rd.	Developed
25 Riverpark Park	29.0	Riverpark Development	Undeveloped
Total Park Acreage	418.15		

Source: Telephone interview with Tom Reilly, Park Development Administrator, City of Santa Clarita Department of Parks, Recreation and Community Services, December 5, 2002.

c. State Facilities

State facilities in the vicinity of the project site are described below and illustrated on **Figure 4.16-2, County and State Park Facilities**.

(1) Towsley Canyon Park

This park is located just west of the Calgrove Boulevard/Interstate 5 (I-5) intersection in the Santa Susana Mountains, approximately 3 to 4 miles southeast of the project site. The State of California Mountains and Recreation Conservation Authority owns the 145-acre park. The facilities at this park include hiking trails, mountain bike trails in designated areas, picnicking and barbeque areas, a visitor/nature center, and restroom facilities with a drinking fountain.

(2) Santa Monica Mountain Conservancy and Rim of the Valley Corridor/Trail

The Santa Monica Mountains Conservancy (Conservancy) and Rim of the Valley Corridor (Corridor) includes land in the mountains that surround the San Fernando, Simi, Conejo, and La Crescenta Valleys. The Conservancy is a state agency created in 1980 under the auspices of the Resources Agency. It was initially established to preserve land and provide opportunities for recreation in the Santa Monica Mountains and the Rim of the Valley Corridor. The Conservancy is primarily responsible for funding the acquisition of land with statewide and regional significance.

The Rim of the Valley Corridor is an overlay on private property and the Corridor is a proposal envisioning a 200-mile-plus trail. At the present time, only 10 miles have been acquired in the Santa Susana Mountains in addition to the 47-mile Backbone Trail located in the Santa Monica Mountains. The mountains within the Corridor include the San Rafael and Simi Hills and the Verdugo, San Gabriel, and Santa Susana Mountains. The portion of the Newhall Ranch Specific Plan site generally south of Potrero Canyon is included in the Corridor Plan, but the proposed trail does not cross either the Landmark Village site or the remainder of the Specific Plan site.

(3) Santa Clarita Woodlands State Park

This 3,000-plus-acre state park is located west of I-5 and may be accessed via either Lyons Avenue or the Calgrove/The Old Road interchanges. The creation of this park involved a land transaction that included the City of Santa Clarita, Chevron, and the Santa Monica Mountains Conservancy as the primary participants. The transaction involved the donation of 851 acres of land historically owned by Chevron, with the Conservancy purchasing another 2,184 acres.

This state park includes the 145-acre Ed Davis/Towsley Canyon Park at 24255 The Old Road in Newhall, the 3-mile Pico Canyon Trail, the 2.4-mile Rice Canyon Trail, and the 3.8-mile East Canyon Trail. The facilities at Towsley Canyon Park include trails for hiking, mountain biking, and equestrian uses; picnic

areas; the Sonia Thompson Nature Center; the Towsley Canyon Lodge available for daily or overnight use; and restroom facilities.

(4) Placerita Canyon Park

Placerita Canyon Park is located east of the Antelope Valley Freeway and is accessible from Placerita Canyon Road. It is a state park operated by the Los Angeles County Department of Parks and Recreation, and it contains a nature center, picnic areas, overnight and day camping facilities, a children's play area, hiking trails, and an equestrian campground.

d. Federal Parks in the Project Area

Federal parks in the vicinity of the project site are described below. Please see **Figure 1.0-2**, **Project Vicinity** for the location of those federal parks in closest proximity to the proposed Landmark Village project.

(1) Santa Monica Mountains National Recreation Area

The Santa Monica Mountains National Recreation Area (SMMNRA) is located approximately 12 miles southwest of the project site, encompassing approximately 344 square miles, and is approximately 46 miles in an east-west length and 8 to 10 miles in north-south length. The SMMNRA is under the jurisdiction of the National Park Service (NPS), U.S. Department of the Interior. Within the SMMNRA, the NPS owns a total of 8,400 acres in fee and an additional 17 acres in easements.

(2) Angeles National Forest

The Angeles National Forest covers 693,000 acres of land area in the San Gabriel Mountains, which constitutes approximately one-quarter of the land located within Los Angeles County. The U.S. Forest Service administers the National Forest, which is an agency of the U.S. Department of Agriculture. The Angeles National Forest is supervised in districts. The project site is located near two districts: the Saugus District located approximately 8 miles to the north and the Tujunga District located 10 miles to the east.

The Angeles National Forest offers a wide range of camping (with fees) and picnicking facilities. In addition, there are hundreds of miles of trails in the forest, some of which are located near the project site area (see discussion on trails below). There are four reservoirs in the Angeles National Forest, including Castaic and Pyramid Lakes (5 miles northeast and 18 miles north of the site, respectively) providing water skiing, fishing, sail boarding, canoeing, jet skiing, and swimming activities. The water reservoirs charge entrance fees, as well as boat launching, boat rental, and overnight camping fees. In addition to the identified recreational opportunities, the Angeles National Forest provides a home for an array of wildlife.

Legend:

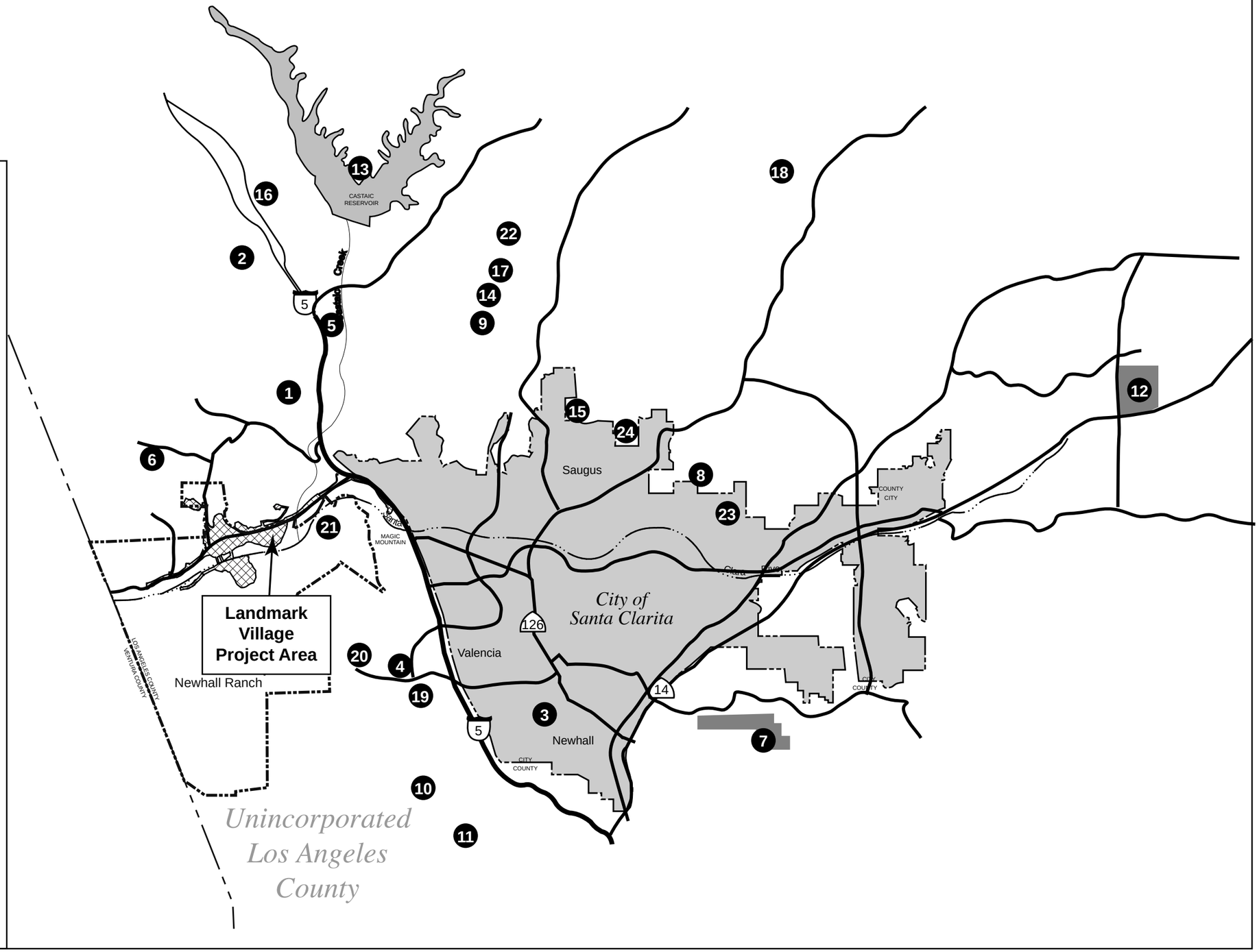
Landmark Village Project Area

Park Location

1 Hasley Canyon County Park
2 Del Valle Park
3 William S. Hart Park
4 Stevenson Ranch Community Park
5 Castaic Sports Complex
6 Val Verde Community Regional Park
7 Placerita Canyon State Park
8 Plum Canyon Park (Under Construction)
9 Northbridge Park
10 Towsley Canyon Park
11 Santa Clarita Woodlands State Park
12 Vasquez Rocks County Park
13 Castaic Lake State and County Recreation Area
14 Chesebrough Park
15 Copper Hill Park*
16 North Lake Park*
17 North Park*
18 Pacific Crest*
19 Pico Canyon Park (Under Construction)
20 Dr. Richard Rioux Memorial County Park
21 Landmark Village*
22 West Creek Park*
23 Whites Canyon Park*
24 Bouquet Canyon Park

* = Proposed Parks

NOT TO SCALE



SOURCE: Santa Clarita General Plan, Impact Sciences, Inc. – October 2004

FIGURE **4.16-2**

County and State Park Facilities

32-92•05/06

(3) Los Padres National Forest

The nearly 2 million-acre Los Padres National Forest is located primarily in the northern section of Ventura County. However, a portion of the Los Padres National Forest crosses the Los Angeles/Ventura County line, 8 miles north of State Route 126 (SR-126) and the proposed project site.

Various recreation facilities are provided in the Los Padres National Forest, including hiking, equestrian and off-road vehicle trails, and camping areas (with fees) accessible by road and trail. There are 57 dispersed trail camps, 19 developed family campgrounds, and 1 developed group campground. There are many miles of recreation roads utilized by visitors as scenic drives and by off-highway vehicles. The forest has inventoried 373.7 miles of trails, including 17.7 miles of the Gene-Marshall-Piedra Blanca National Recreation Trail, which begins at Reyes Creek Campground and ends at Lion Campground. Other areas found in the Forest include the approximately 9,500-acre Dick Smith Wilderness and the 53,000-acre Sespe Condor Sanctuary (both located in Ventura County).

e. Other Facilities

Lake Piru is located at 4708 Piru Canyon Road, which is just west of the Los Angeles/Ventura County line, approximately 5 miles north of the unincorporated Ventura County community of Piru, and approximately 5 miles northwest of the project site. The lake is owned and operated by the United Water Conservation District and measures approximately 4 miles by 1 mile. The northern portion of this lake is located within the Los Padres National Forest. Water sports offered include water-skiing, fishing, and boating supported by a marina with boat rentals, snack bar, and mini-market. There are 238 campsites and comfort stations, laundry facilities, and picnic areas. The payment of a fee is required to enter the park, as well as to launch and rent boats and to camp overnight.

f. Area Trails

The region surrounding the project site is served by an existing and proposed trail system, including both County and regional trails. There are no trails within the project site; however, the Los Angeles County Department of Parks and Recreation has proposed a regional trail that would traverse the project site—the Santa Clara River Trail (following the Santa Clara River Corridor). In addition, the Los Angeles County Department of Parks and Recreation has proposed the regional Pico Canyon Trail (crossing through Potrero Canyon) just west of the project site. There is an extensive existing and proposed trail system in the Santa Clarita Valley area, which includes three regional trails and two local trails. There is also a developed "paseo" system (walkways), which runs through the community of Valencia, east of the project site.

(1) Los Angeles County Trails

The County of Los Angeles Department of Parks and Recreation plans and maintains an extensive system of regional riding and hiking trails within the County. The following is a discussion of the elements of this system that are located in the general vicinity of the project site. Trails that are developed and in use are discussed in terms of location, trail length, and other characteristics. Trails that are planned, but not developed, are discussed in terms of general location or alignment, approximate length, anticipated difficulty, and proposed ancillary uses. Specific trails discussed in this section are summarized in **Table 4.16-3, Existing and Proposed County Trails**, and illustrated on **Figure 4.16-3**, **Los Angeles County Trails**.

Table 4.16-3
Existing and Proposed County Trails

Trail Name	Length (miles)	Condition
Los Pinetos Trail	7.0	Developed
Wilson Canyon Channel Trail	2.0	Developed
William S. Hart Park Trail	2.5	Developed
Pico Canyon Trail	9.0	Proposed
Hasley Canyon Trail	3.4	Partially Built
Castaic Creek Trail	5.0	Proposed
Mint Canyon Trail	3.7	Proposed
Gavin Canyon Trail	8.0	Proposed
Santa Clara River Trail	30.0	Partially Built

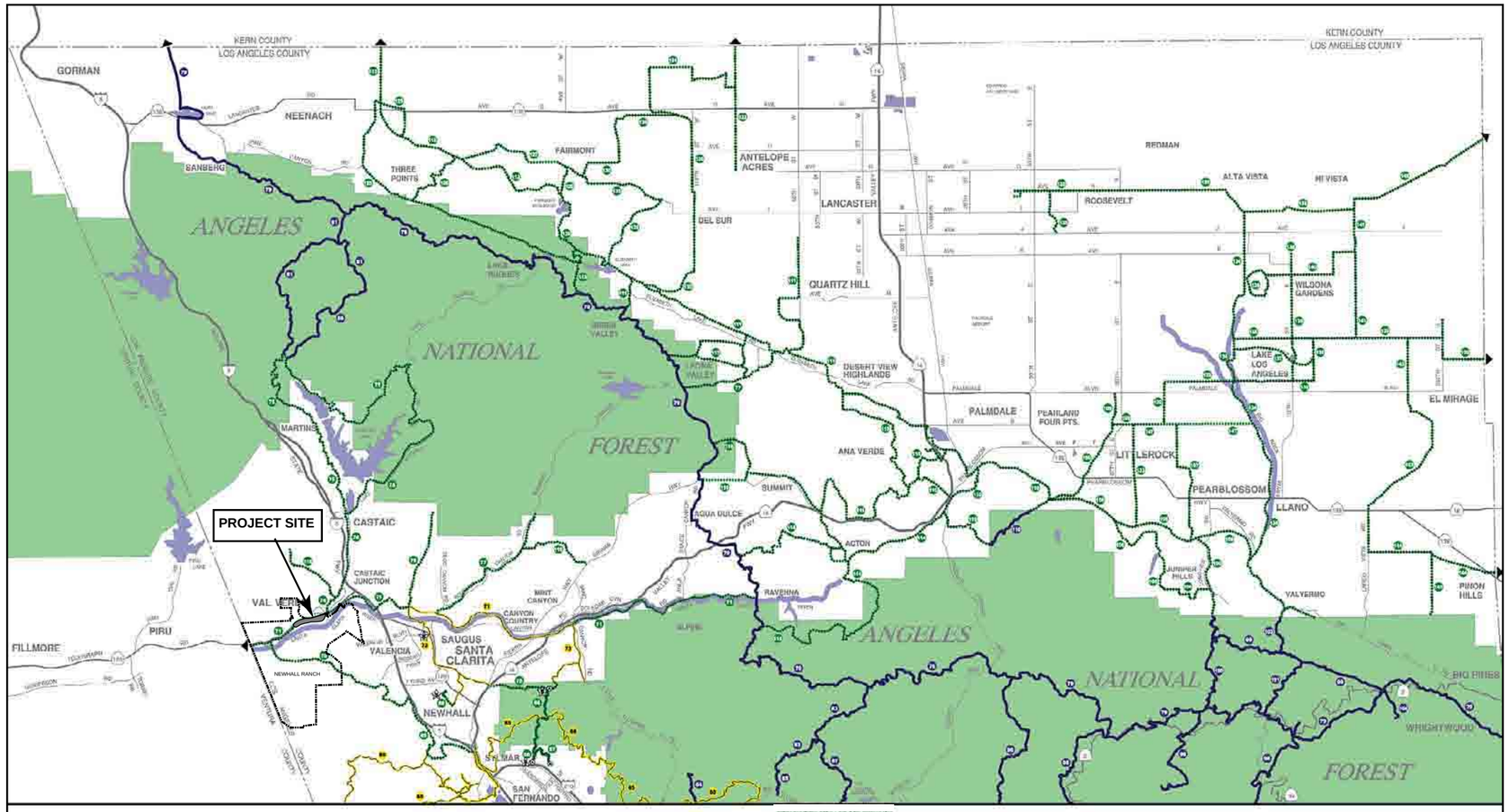
Source: Telephone interview with Tonda Lay, Trails Coordinator, Los Angeles County Department of Parks and Recreation, April 8, 2003.

(a) Los Pinetos Trail

Los Pinetos Trail is an equestrian trail with camping facilities available by reservation. The trail is intended to link the City of Santa Clarita trail system to the partially-built Rim of the Valley state trail (discussed below) via the City's partially developed Placerita Canyon Trail. The trail follows a flood control channel through 7 miles of natural area, including Placerita Canyon State Park.

(b) Wilson Canyon Channel Trail

Wilson Canyon Channel Trail provides 2 miles of moderately difficult hiking in the Angeles National Forest and provides views of the San Fernando Valley and Placerita Canyon. This trail is a link to the partially built Rim of the Valley Trail via the Los Pinetos Trail.



TRAIL NUMBER	TRAIL LENGTH	TRAIL RATING: ND - Not Difficult, MD - Moderately Difficult, D - Difficult	TRAIL NAME
1	19.0	ND	Los Angeles River Trail
2	16.0	ND	Los Angeles River Trail Extension
3	2.0	ND	Palos Verdes Trail
4	9.5	ND	Dominguez Channel Trail
5	15.0	ND	Rio Hondo River Trail
6	6.0	ND	Santa Anita Wash Trail
7	2.0	ND	Santa Anita Wash Trail Extension
8	24.0	ND	San Gabriel River Trail
9	3.5	MD	Van Tassel Trail
10	5.0	ND	San Jose Creek Trail
11	28.0	MD	Schabarum Trail
12	2.0	MD	7th Avenue Trail
13	1.0	ND	Whittier Connector Trail
14	6.0	D	Schabarum Extension Trail
15	3.0	D	Schabarum Extension Connector Trail
16	2.0	D	Schabarum Extension Connector Trail
17	7.0	MD	Rowland Heights Connector Trail
18	2.0	MD	Rowland Heights Loop Trail
19	3.0	MD	Walnut Creek Park Trail
20	10.0	MD	Frank G. Bonelli Regional Park Trail
21	8.0	ND	Marshall Canyon Trail
22	2.0	MD	Marshall Canyon Extension Trail
23	1.0	ND	Hastings Debris Basin Trail
24	7.0	D	Altadena Crest Trail
25	1.0	D	Eaton Canyon Park Trail
26	2.0	MD	Chaney/Sunset Ridge Trail
27	3.0	ND	Devil's Gate-Arroyo Seco Trail
28	8.0	ND	Flint Wash Trail
29	2.5	ND	Gould Canyon Trail
30	1.0	ND	Horse Lane
31	4.0	D	La Canada Open Space Trail
32	1.0	MD	La Canada Open Space Extension
33	6.0	MD	San Gabriel River Trail to Mount Baldy
34	7.0	D	Three Park Trail
35	3.0	D	Trenzala Canyon Trail
36	20.0	D	Zuma Ridge Trail
37	5.0	D	Zuma Ridge to Westlake Trail

TRAIL NUMBER	TRAIL LENGTH	TRAIL RATING: ND - Not Difficult, MD - Moderately Difficult, D - Difficult	TRAIL NAME
38	2.0	MD	Zuma Ridge/Reagen Connector Trail
39	2.0	MD	Peter Strauss Ranch Loop and Connector Trail
40	6.0	D	Solstice Canyon Trail
41	3.5	D	Mesa Peak Trail
42	5.0	D	Saddle Peak Trail
43	17.0	D	Calabasas Cold Creek Trail
44	4.0	D	Topanga-Henry Ridge Trail to Calabasas
45	4.5	D	Topanga-Henry Ridge Trail to Serrania Park
46	12.0	D	Topanga-Henry Ridge Trail
47	6.3	D	Tuna Canyon Trail
48	1.3	D	Topanga-Henry Ridge Trail to Santa Maria Canyon Trail
49	3.6	D	Stokes Ridge Trail to Calabasas Trail
50	.8	D	Cold Creek And Stokes Ridge Connector Trail
51	8.5	D	Santa Maria Canyon Trail
52	1.5	MD	Santa Maria Canyon Loop Trail
53	3.3	D	Camp Sisauen Connector Trail
54	4.5	MD	Valley Circle Scenic Corridor Trail
55	8.0	ND	Las Virgenes Trail
56	1.0	MD	Escondido Falls Trail
57	3.5	D	Stunt High Trail
58	1.3	D	Corral Canyon Trail
59	20.0	D	Coastal Slope Trail
60	2.5	D	Ramirez Canyon Connector Trail
61	1.0	D	Paradise Cove Trail
62	4.0	D	Malibu Creek Trail
63	6.0	ND	Point Dume Connector Trail
64	50.0	D	State Backbone Trail
65	2000.0	D	Rim of the Valley Trail
66	7.0	D	Los Pinetos Trail
67	2.0	MD	Wilson Canyon Channel Trail
68	2.5	MD	William S. Hart Park Trail
69	5.0	D	Gavin Canyon Trail
70	9.0	D	Pico Canyon Trail
71	30.0	MD	Santa Clara River Trail
72	5.0	ND	South Fork Trail
73	4.0	MD	Sand Canyon Trail
74	5.0	ND	Castaic Creek Trail

TRAIL NUMBER	TRAIL LENGTH	TRAIL RATING: ND - Not Difficult, MD - Moderately Difficult, D - Difficult	TRAIL NAME
75	2.0	D	Castaic Lake Trail
76	4.0	MD	Cliffie Stone Trail
77	7.0	D	Bouquet Canyon Trail
78	9.0	MD	Placerita Creek Trail
79	100.0	D	Pacific Crest National Trail
80	9.0	MD	Fish Canyon Trail
81	5.0	MD	Bear Canyon Trail
82	1.0	MD	Gillette Mine Trail
83	9.0	D	Indian Ben to Deer Spring Trail
84	4.0	MD	Oak Springs Trail
85	9.0	D	Trail Canyon Trail
86	5.5	MD	Stone Canyon Trail
87	5.0	D	Condor Peak Trail
88	76.0	D	Gabrielino National Recreation Trail
89	6.0	D	Santa Anita Canyon Trail to Gabrielino Trail
90	20.0	MD	Shoshone Trace Trail
91	9.0	D	Mount Wilson Toll Road
92	7.0	D	Henninger Flats to Shoshone Trace Trail
93	3.5	MD	#1 Prieto Trail to Sunset Ridge
94	7.5	D	Mount Wilson Trail
95	19.5	D	Silver Moccasin Trail
96	21.0	D	Fish Canyon to Mount Waterman Trail
97	8.0	D	West Fork North Trail
98	14.0	MD	Bear Creek Trail
99	5.0	D	Manzanita Trail
100	5.0	D	Burkhart Trail
101	5.0	MD	Islip to South Fork Trail
102	2.5	MD	Dawson Peak to Pine Mountain Ridge Trail
103	14.0	D	Mount Baldy Station to Mount San Antonio Trail
104	16.0	D	East Fork to Mine Gulch Trail
105	1.0	D	Devil's Punchbowl Nature Trail
106	0.5	ND	Juniper Hills Trail
107	2.0	ND	Pearblossom Connector Trail
108	10.3	ND	Pearblossom Loop Trail
109	3.0	ND	Little Rock Connector Trail
110	15.0	D	Palmdale Hills Trail
111	16.5	MD	North Side Trail

TRAIL NUMBER	TRAIL LENGTH	TRAIL RATING: ND - Not Difficult, MD - Moderately Difficult, D - Difficult	TRAIL NAME
112	12.5	D	Leona Valley Loop Trail
113	6.0	ND	California Riding and Hiking Trail
114	22.0	MD	Acton Community Trail
115	8.5	ND	Northside Connector Trail
116	17.5	MD	Vasquez Loop Trail
117	2.5	MD	Santa Susana Pass Trail
118	3.4	MD	Hasley Canyon Trail
119	3.7	MD	Mint Canyon Trail
120	.5	ND	Soka Trail
121	.7	MD	Malibu Connector Trail
122	.3	MD	Chumash Indian Trail
123	.7	ND	Irumi Connector Trail
124	3.0	MD	Colby Dalton Trail
125	17.0	ND	Three Points Trail
126	3.8	ND	Danielson Trail
127	6.4	MD	Ripley Trail
128	8.8	MD	Munz Trail
129	1.4	ND	Fairmont Connector Trail
130	21.6	ND	California Poppy Trail
131	11.1	ND	Little Buttes Trail
132	6.0	ND	Kern Connector Trail
133	12.5	ND	Little Rock Community Trail
134	18.0	ND	Big Rock Creek Trail
135	17.2	ND	Lancaster Connector Trail
136	3.2	ND	Pluto Butte Loop Trail
137	4.2	ND	Lovejoy Buttes Trail
138	6.2	ND	Lake Los Angeles Community Trail
139	20.7	ND	San Bernardino Connector Trail
140	5.1	ND	Saddle Rock Butte Trail
141	5.5	ND	Butte Valley Connector Trail
142	7.0	ND	Las Vegas Trail
143	12.1	ND	Three Sisters Trail
144	9.1	ND	Fort Tejon Extension Trail
145	2.6	ND	Mescal Creek Trail
146	4.0	ND	Avenue O Connector Trail
147	6.5	ND	Avenue S Connector Trail

5 2.5 0 5

APPROXIMATE SCALE IN MILES

SOURCE: County of Los Angeles Department of Parks and Recreation – 2001

FIGURE **4.16-3**

Los Angeles County Trails

(c) Santa Clara River Trail

The Santa Clara River Trail is proposed along the Santa Clara River from the Los Angeles/Ventura County line on the west, linking to the Pacific Crest Trail in the eastern Santa Clarita Valley over a distance of 30 miles. The trail will traverse the project site. The majority of this trail between I-5 and State Route 14 (SR-14) is located within the City of Santa Clarita. This trail is part of the Santa Clarita Valley Areawide Plan for integrated trails.[15] The Santa Clara River Trail would link the Pacific Crest Trail with the proposed trail network in the northwestern County area and would be open to hiking and equestrian use.

(d) Pico Canyon Trail

Pico Canyon Trail is proposed to be roughly 9 miles in length beginning at the intersection of Potrero Canyon and the Santa Clara River just east of the Los Angeles/Ventura County line. Moving in an easterly direction, the trail would generally follow Potrero Canyon, and connect to Pico Canyon ending at the mouth of the canyon just west of I-5. At this juncture, the trail will connect to another County proposed trail (Gavan Canyon Trail) that will connect to the partially built Rim of the Valley Trail.

(e) Hasley Canyon Trail

Hasley Canyon Trail is proposed to follow Hasley Canyon for 3.4 miles in a westerly direction from Castaic Creek. A portion of this trail runs through, and is adjacent to, the Valencia Commerce Center, and is partially built.

(f) Castaic Creek Trail

The Castaic Creek Trail is proposed to link with the Santa Clara River Trail at the intersection of Castaic Creek and the Santa Clara River. The trail is proposed to follow Castaic Creek north for 5 miles to the Castaic Lake State and County Recreation Area, ultimately intersecting with the other proposed County trails located further north.

(g) Mint Canyon Trail

This 3.7-mile trail links the Mint Canyon Equestrian Trail to the Bouquet Canyon Equestrian Trail. The trail runs through Vasquez Canyon.

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15 Los Angeles County Department of Regional Planning, Santa Clarita Valley Areawide Plan (Los Angeles, California: Comprehensively updated December 6, 1990), p. 62.

(h) Gavin Canyon Trail

This approximately 8 miles trail links Pico Canyon to Rim of the Valley Trail. The Rim of the Valley/Corridor Trail is discussed further below.

(i) William S. Hart Park Trail

This 2.5-mile nature trail winds through the William S. Hart Park past the William S. Hart Museum and designated points of interest, and it provides views of the Santa Clarita Valley. Separate access is provided for equestrian use.

(2) City of Santa Clarita Trails

The City of Santa Clarita has adopted a system of trails to provide pedestrian, bicycle and equestrian connections to residential communities within the City of Santa Clarita and to the regional trail system as well. City trails are listed below in **Table 4.16-4, Existing and Proposed City Trails**. The Backbone Trails within the City are illustrated in **Figure 4.16-4**, **City of Santa Clarita Backbone Trails**, and are briefly described below.

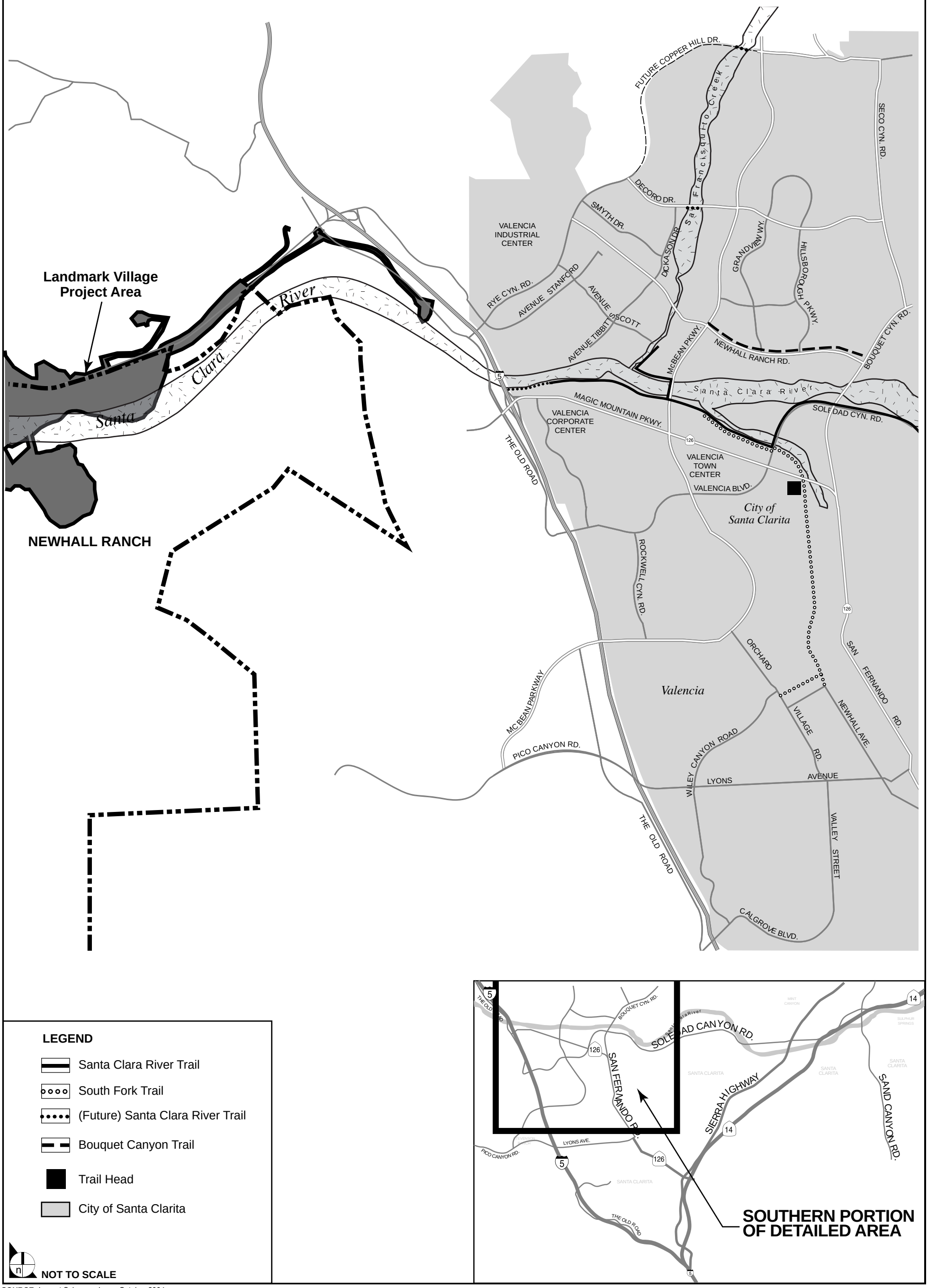
Table 4.16-4
Existing and Proposed City Trails

Trail Name	Length (miles)	Condition
Bouquet Canyon Trail	7.0	1.4 Miles Developed
Chuck Pontius Commuter Rail Trail	2.7	Developed
Placerita Canyon Trail	8.0	5.0 Miles Developed
Robinson Ranch Trail	1.8	Developed
Cliffie Stone Trail[1]	4.5	Proposed
Santa Clara River Trail	14.5	3.7 Miles Developed
South Fork Trail	3.4	Developed
Sand Canyon Rd. Trail	3.0	Proposed

Source: Telephone interview Tom Reilly, Park Development Administrator, City of Santa Clarita Department of Parks, Recreation, and Community Services, December 5, 2002.

(a) Bouquet Canyon Trail

The 7-mile Bouquet Trail is located between Bouquet Canyon Road and McBean Parkway along the northern side of Newhall Ranch Road. Upon completion, this trail will connect to the existing paseo along McBean Parkway and the bicycle trail along Newhall Ranch Road west of McBean Parkway.



SOURCE: Impact Sciences, Inc. – October 2004

FIGURE **4.16-4**

City of Santa Clarita Backbone Trails

(b) Chuck Pontius Commuter Rail Trail

This 2.7-mile trail runs east-west along the southern side of Soledad Canyon Road from Camp Plenty Road to Golden Oak Road, then along the northern side of Soledad Canyon Road to Commuter Way, then into the Santa Clarita Metrolink Station.

(c) Placerita Canyon Trail

The Placerita Canyon trail starts at Meadview Avenue and extends west along Placerita Canyon Road, turning south over the hill and terminating at Creekview Park in Newhall. Marked by wooden split-rail fencing, the trail provides users with a scenic, off-street trail that will eventually link up with the South Fork and with William S. Hart Park.

(d) Robinson Ranch Trail

The Robinson Ranch Trail is located in the vicinity of Sand and Placerita Canyon. The rail begins in the Placerita Homeowners Association vicinity, which is west of SR-14. The Robinson Ranch Trail continues south to Iron Canyon and then goes west on Iron Canyon to the Sand Canyon Trail.

(e) Cliffie Stone Trail (formerly San Francisquito Creek Trail)

The 4.5-mile Cliffie Stone Trail is proposed to link with the Santa Clara River Trail at the confluence of San Francisquito Creek with the Santa Clara River. The trail is proposed to follow the creek northward and connect to other proposed County trails located further north.

(f) Santa Clara River Trail

The City of Santa Clarita has adopted the County's plan for trails along the Santa Clara River. This trail project is a 14.5-mile-long multi-use facility along the river that includes a Class I bicycle facility and also accommodates pedestrians and equestrians. Its easternmost terminus is currently south of the project site and north of the Santa Clara River and will, when completed, provide an integral link with existing and planned regional trails within the County of Los Angeles, including the San Francisquito Creek Trail and the Pacific Crest Trail in eastern Santa Clarita Valley. The trail is part of the Santa Clarita Valley Areawide Plan for integrated trails.[16]

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16 Los Angeles County Department of Regional Planning, Santa Clarita Valley Areawide Plan (Los Angeles, California: Comprehensively Updated December 6, 1990), p. 62.

(g) South Fork Trail

This 3.4-mile trail runs along the South Fork of the Santa Clara River from Newhall at Orchard Village Road north to the Santa Clara River Trail in Saugus. An extension of this trail from Orchard Village Road to Towsley Canyon Park is proposed.

(h) Sand Canyon Trail

The Sand Canyon Trail is proposed as a multi-purpose backbone trail. The trail starts at Valley Ranch Road and goes south toward Warmuth Road, eventually reaching beyond Placerita Canyon Road. Future segments will connect north to Lost Canyon Road.

(3) Regional Trails

(a) Rim of the Valley Corridor/Trail

The Rim of the Valley Trail is proposed to be 200 miles in length and is located within the Rim of the Valley Corridor. The trail, as proposed, is located on both public and private land. Much of the trail has not been constructed and remains as a proposed trail. At the time of this writing, only 10 miles have been acquired in the Santa Susana Mountains in addition to the 47-mile Backbone Trail located in the Santa Monica Mountains. The portion of the trail nearest the project site is located approximately 2.5 miles to the southeast at the Oat Mountain lookout.

(b) Pacific Crest National Trail

A segment of the Pacific Crest National Trail extends for 160 miles through the Angeles National Forest, providing views of the Antelope Valley, varied terrain, vegetation, wilderness, and the San Gabriel Mountains. Campgrounds, picnic areas, and staging areas are available along the trail. In all, the Pacific Crest National Trail traverses 2,500 miles from Canada to Mexico.[17] The trail was established under the National Trails System Act of 1968 and is part of the National System of Recreation and Scenic Trails. Only foot and equestrian travel is permitted on the trail; motorized vehicles and mountain bicycles are prohibited. Other trails that connect to the Pacific Crest National Trail include Fish Canyon Trail, Bear Canyon Trail, and Gillette Mine Trail. All of these trails are located within the Angeles National Forest land and are north of Castaic Lake. The proposed County Castaic Creek Trail would connect to these trails.

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17 U.S. Department of Agriculture, Forest Service, Pacific Crest Trail, July 1988, p.1.

5. PROPOSED PROJECT IMPROVEMENTS

a. Parks and Recreation

Implementation of the proposed project would result in the development of 1,444 dwelling units, with a total residential population of 3,680.[18] Absent the Specific Plan, approximately 10 acres of parkland, or equivalent fees or improvements, would be required to meet the standards identified by the County's park ordinance. However, consistent with the Specific Plan, the proposed Landmark Village project incorporates the following park and recreation components:

- 16-acre public Community Park;
- 4.10-acre Los Angeles County Riding/Hiking Trail (11,162 linear feet);
- 3.13-acre Santa Clara River Trail (i.e., Regional River Trail; 11,347 linear feet);
- 0.36-acre nature/interpretive trail (1,936 linear feet);
- 5.2 acres of private recreation areas;
- 38 acres of open space; and
- 276 acres within the High Country SMA. (The proposed Landmark Village project is part of the Newhall Ranch Specific Plan, which will set aside 4,214 acres of land as open space in the High Country SMA. Based on the Landmark Village project's dwelling unit count, the proportionate share of this set aside for the Landmark Village tract map is approximately 276 acres within the High Country SMA.)

These components are described below.

(1) Public Community Park

A community park, consisting of 16 acres, is proposed for the Landmark Village project, consistent with the Specific Plan's Land Use Overlay designation for the area. Approximately 10 acres of the park would be active and approximately 6 acres would be passive. The active areas of the Community Park are situated adjacent to the elementary school site (**Figure 1.0-17, Elementary School/Community Park**). The portion of the Community Park located on the river side of "A" Street is planned as a passive recreation area. A river outlook point is situated in this area, which is accessed by both the Regional River Trail and the Community Trail. **Figure 1.0-18, Conceptual Site Plan – Community Park**, depicts both the active and passive areas of the proposed Community Park.

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[18] Based on County provided estimates of 3.17 persons per single-family dwelling, 2.38 persons per multi-family dwelling and per apartment.

(2) Private Recreation Areas

A total of four separate private neighborhood recreation centers are planned on a total of 5.2 acres within the proposed project. These centers are intended to focus primarily on the recreational uses for nearby residential units. These recreation areas would contain such amenities as a pool, spa, wading pool, shade overhead structure, and/or restroom building. The facilities would not provide off-street parking, because the areas they serve would be within convenient walking distance. The areas would be fenced and maintained by one or more homeowner associations. The first is located north of "A" Street at the eastern end of the project site and is 35,816 square feet in size. The second is located in the southeastern portion of the project site along the Santa Clara River frontage and is 149,929 square feet in size. The third private recreation area is located north of "A" Street in the northwestern portion of the site along the Santa Clara River frontage and is 42,370 square feet in size. The fourth recreation area is located in the southwestern portion of the site and is 68,538 square feet in size. Private recreation areas are shown on **Figure 4.16-5, Private Recreation Areas**.

(3) Open Space

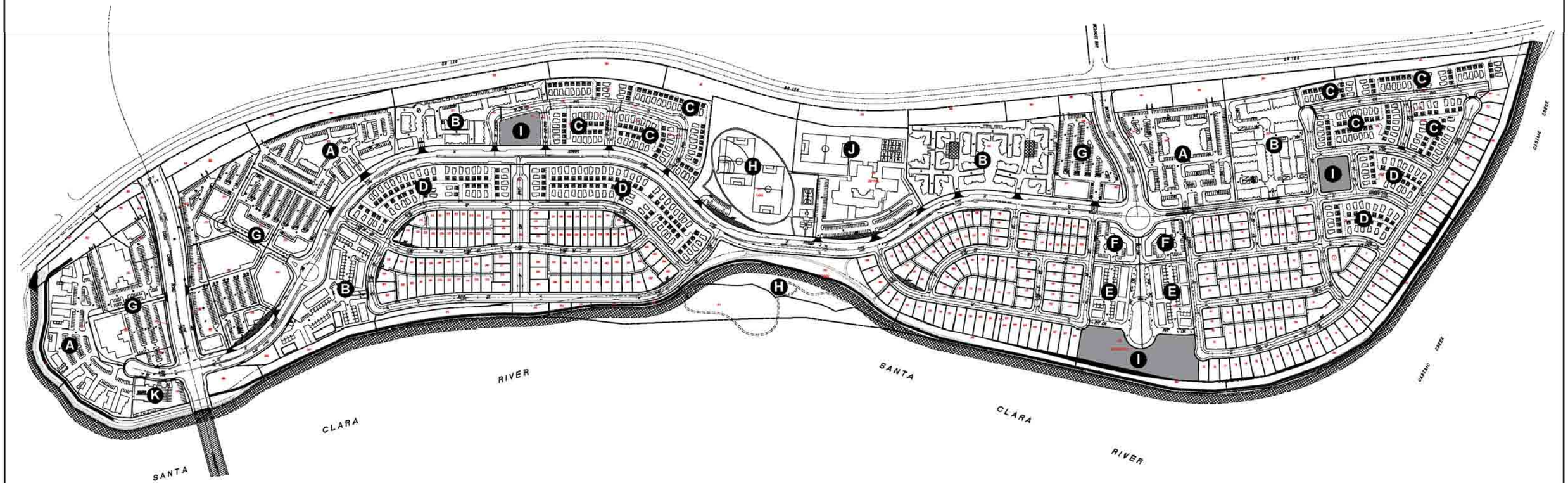
A system of open space encompassing approximately 38 acres is located throughout the project site. The open space includes major utility easements, and functions as a separation between development planning areas and SR-126 and the Santa Clara River.

The Newhall Ranch Specific Plan has designated 4,214 acres of land as open space in the High Country SMA. Based on the 1,444 dwelling units proposed by the Landmark Village project, the proportionate share of the High Country SMA land dedication attributable to the Landmark Village project is 276 acres.

(4) Trails and Paseos

The approved Specific Plan's Master Trails Plan (Specific Plan, Exhibit 2.4-5) provided broad, general trail alignments and classifications to ensure that Riverwood Village would be linked to the greater Newhall Ranch via the Regional River Trail and the Community Trail network. **Figure 1.0-19, Landmark Village Portion of Specific Plan Master Trails Plan**, depicts the Specific Plan's Master Trails Plan, as it relates to the Landmark Village portion of Riverwood Village in Newhall Ranch.

Figure 1.0-20, **Landmark Village Trails Plan**, depicts the trails and paseos that fulfill the intent of the Specific Plan's Master Trails Plan. It provides a tract map level of detail necessary to ensure that each residential neighborhood and community service area is linked to one or more pedestrian, bicycle or equestrian trails or paseos, with locations for river trail access points and observation/interpretive points.



Legend:

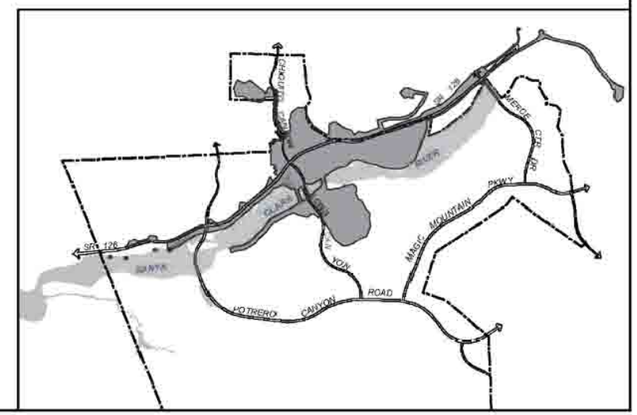
Private Recreation Areas

Land Use:

- A Apartment – 3 Story
- B Condominium – 3 Story
- C Detached Condominium – 2 Story (32' MDE-Condo 1)
- D Detached Condominium – 2 Story (38' MDE-Condo 2)
- E Mixed Use/Condominium – 2 Story
- F Mixed Use/Commercial – 2 Story
- G Commercial
- H Park
- I Recreation
- J School
- K Fire Station

600 300 0 600

APPROXIMATE SCALE IN FEET



SOURCE: PSOMAS – August 2004, Impact Sciences, Inc. – September 2006

FIGURE **4.16-5**

Private Recreation Areas

32-92•09/06

The Landmark Village Trails plan implements the Specific Plan's objective of providing a hierarchy of trails with varying sizes and functionality. For example, the Landmark Village project would implement a significant portion of the Specific Plan's Regional River Trail system. This trail would be constructed along the Santa Clara River beginning at the northeastern project boundary along Castaic Creek, and extend west along the river through the entire southern boundary of the Landmark Village project site.

This trail corridor is approximately 35 feet wide and approximately 2 miles in length. Themed fencing would define the perimeter of the trail and the alignment would be landscaped with native plant materials. As shown on **Figure 1.0-20**, the project site would also provide an extensive Community Trail system throughout the residential portions of the project, which would be linked to the Regional River Trail, local trails, and paseos.

The paseos, or walkways, are proposed to provide a means of pedestrian access from residential neighborhoods to and from the Community Park, Recreation Centers, Elementary School, and Mixed-Use/Commercial areas. The paseos would adjoin major roadways and certain residential collector streets, and be separated from vehicular traffic by a landscaped parkway (**Figure 1.0-20**).

6. PROJECT IMPACTS

The analysis of potential impacts to parks, recreation and trails associated with construction and operation of the proposed Landmark Village project, including the significance criteria applicable to assessing such impacts, is presented below.

a. Significance Threshold Criteria

Based on the thresholds of significance identified in Appendix G of the 2005 *CEQA Guidelines*, the proposed project would result in a significant impact to recreation if the project would:

- Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; or
- Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment.

The Quimby Act (Government Code Section 66477) has established a standard of 3 acres per 1,000 persons as the amount of land necessary to satisfy the park requirement for new subdivisions.[19] The County's Department of Parks and Recreation determines a project's total parkland requirements under its ordinance. Dedication of land, fees in-lieu of the dedicated parkland, construction of amenities on

[19] According to the Quimby Act, 3 acres per 1,000 population is the maximum that can be used, unless the amount of existing neighborhood and community parkland exceeds that limit.

dedicated parkland that total less than the standard, but is of equal dollar value to the park fee, or a combination of the three, are all considered to adequately satisfy the requirement and avoid a significant impact.

b. Impact Analysis

In the adopted Specific Plan, the County estimated the Quimby Act requirements for the entire Newhall Ranch area (see Specific Plan, Table 2.8-1). Based on the unit count, average household size and applicable assessment factors, the Quimby Act obligation in acres was calculated at 174 acres for the Specific Plan. The County also estimated the Quimby Act credits to be provided to the Specific Plan. When measured against the Quimby Act requirements, the credits provided under the Specific Plan, which included park improvements, resulted in a total of 2,486 excess Quimby Act credits. In addition, the Specific Plan acknowledged that private recreation centers (including improvements) within neighborhoods are eligible for credit, but were not quantified at the Specific Plan level of planning. **Table 4.16-5**, **Specific Plan Estimated Quimby Act Requirements and Credits**, below, shows the estimated parkland requirements and credits for the Landmark Village project based on the Specific Plan Quimby Act requirements and credits.

The County Ordinance identifies several types of park and recreation facilities that may satisfy projected needs and are eligible for Quimby credit. These facilities may include, but are not limited to, publicly or privately owned playgrounds, riding and hiking trails, tennis, basketball or other similar game court areas, swimming pools, putting greens, athletic fields, picnic areas, and other types of natural or scenic areas as recommended by the director of parks and recreation for passive or active recreation.[20]

Credits toward meeting County Ordinance park requirements are determined by the County's Department of Parks and Recreation, and are based upon the ordinance and several criteria (e.g., access, improvements, topography, etc.). The park requirement for the proposed project would be fulfilled through the dedication of, and in some cases, improvements to, public community parks, open space, and trails. The proposed project's expected parkland dedication credits are shown in **Table 4.16-5**.

20 Los Angeles County Ordinance 21.24.340, et seq.

Table 4.16-5
Landmark Village Estimated Quimby Requirements

Description/ Category	Units	Avg. Household Size	Assessment Factor	Obligation in Acres
Detached	308	3.23	.003	2.98
Attached	1,136	2.29	.003	7.80
Total	**1,444**			**10.78**

Estimated Quimby Credits

Land				Improvements			
Description/ Category	**Acres**	**Credit %**	**Quimby Acres**	**Improv. Cost PSF**	**Improv. Costs**	**Acre Equiv.**	**Total Acreage**
Parks:							
Community Park							
Active Area	9.74	100%	9.74	2.50	1,060,686	4.20	13.94
Passive Area	6.39	50%	3.19				3.19
Subtotal Parks			**12.93**				
Trails:							
Regional River Trail	3.13	100%	3.13				3.13
Community Trails	4.10	100%	4.10	2.50	446,490	1.77	5.87
Local Trails	0.36	10%	0.036	1.00	1,568	0.006	0.0096
Subtotal Trails			**7.26**				
						Total Credit Provided	26.23
						Quimby Requirements	10.78
						Excess	15.45

Source: Impact Sciences, Inc., October 2004.

The basic Quimby park land obligation for the subdivision is 11.34 net acres of park land and the project will provide an improved 9.74-net-acre Community park. The remaining park obligation will be fulfilled by the subdivision providing a 6.39-acre private park; 5.23 net acres in recreational centers, and a 3.10-net-acre trail easement. Pursuant to the Newhall Ranch Specific Plan, the 13.12 aces by which the subdivision exceeds its Quimby obligation will be credited against other subdivisions within the Newhall Ranch Specific Plan area.

As discussed above, the applicant is required to provide 10.78 acres of creditable parkland or their equivalent. As estimated in **Table 4.16-5**, park credit for a total of 26.23 acres could be generated, resulting in 15.45 acres over identified requirements. This parkland dedication is equivalent to

approximately 7.1 acres per 1,000 persons, which is over two times greater than the Quimby requirements.

As demonstrated above, local park requirements are exceeded by the project based on the County Ordinance and Quimby Act standards and, therefore, the proposed project would not have a significant impact on parks. Since local park needs are exceeded by the proposed project, it is not expected that project residents would, in any appreciable manner, need to use local parks that are located off site, including those located in neighboring unincorporated Los Angeles County communities, in Ventura County, and in the City of Santa Clarita. This is not to say project residents would not use off-site facilities, but that significant park facilities are being provided to fully serve project needs. In fact, because the project exceeds local parkland requirements, it would actually help alleviate the negative condition being created by the existing Countywide shortage of parkland. Consequently, impacts to local parks would be considered beneficial.

(1) Regional Parks

Neither the County's Ordinance nor the Quimby Act specifies regional parkland standards. Aside from the lack of regional standards, the Newhall Ranch Specific Plan set aside 4,214 acres of land characterized as regional parkland. The provision of regional park facilities would supplement the neighborhood and local parks that are planned as part of this project and other subdivisions developed within the Specific Plan. These facilities would provide opportunities for hiking, picnicking, and viewing of wildlife to residents of this project, the remaining Specific Plan neighborhoods, as well as to the Santa Clarita Valley as a whole.

While it is possible that project residents would use other Los Angeles County Regional Facilities, such as Castaic Lake, Lake Piru in Ventura County, or City of Santa Clarita parks, no significant regional parkland impacts are expected because the project provides a substantial amount of community park on the site for its residents and given the substantial provision of regional parkland that would be provided by the Specific Plan, off-site residents from unincorporated Los Angeles County, Ventura County and the City of Santa Clarita would likely use the parks proposed by the Specific Plan. Therefore, no significant regional or local off-site impacts would occur.

(2) State and Federal Recreation/Forests

It is anticipated that new residents of the proposed project would use the local, state, and federal parks and recreation areas and forests. As such, increased usage would be considered a potentially adverse impact. However, the state and national park facilities charge user fees for water sports and overnight camping at the reservoirs and camping areas. Additionally, state and federal taxes, which would be paid

by residents and businesses located within the proposed project site, would be available for maintenance of these facilities. Consequently, as with regional and local off-site facilities, no significant impacts would occur to state or federal parkland.

(3) Other Parks

It is anticipated that project residents would enjoy recreational opportunities provide by Lake Piru and the increased use would be considered an adverse impact. However, similar to state and federal park and recreation areas discussed above, Lake Piru charges an entrance fee in addition to fees for fishing, boating and camping, which would be available for maintenance of the facilities. Consequently, no significant parkland impacts would occur to Lake Piru.

c. Impact to Trails

As discussed above, the proposed project incorporates elements of the Newhall Ranch Specific Plan Master Trails Plan. Trails proposed as part of this project would link to the hierarchy of trail systems provided in the Specific Plan, providing access to the regional trail network, Open Areas and connections between living areas, shopping, work, entertainment, schools, and civic and recreational facilities.

New residents of the proposed project are expected to use the County's and City of Santa Clarita's existing and proposed trail systems in the Santa Clarita Valley area as they are constructed. Anticipated use of the surrounding trails would increase the density of users on such trails once they are constructed. However, most of the County trails are not currently in place. Once the Specific Plan is completed, the trails would connect to those County trails that would be in place at that time. The construction of the proposed project's trails would partially complete the proposed system of County trails on the Specific Plan site (e.g., Santa Clara River Trail, Pico Canyon Trail). Because the proposed trail alignments would fulfill the objectives of the Santa Clarita Valley Areawide Plan for parks, recreation and trails, the proposed project is considered to have a beneficial impact on the regional trail system.

7. MITIGATION MEASURES

Although the proposed Landmark Village project would not result in a significant impact on parks, recreation, and trail facilities, the County adopted mitigation measures intended to ensure that processing of applications for future subdivisions would provide parks, recreation, and trails consistent with the Newhall Ranch Specific Plan. These mitigation measures are found in the certified Newhall Ranch Specific Plan Program EIR and the adopted Mitigation Monitoring Plan for the Specific Plan (May 2003). The project applicant has committed to implementing the applicable mitigation measures from the

Newhall Ranch Specific Plan to ensure that future development of the project site would not result in impacts to parks, recreation, and trail facilities, and would not adversely affect adjacent properties.

a. Mitigation Measures Required by the Adopted Newhall Ranch Specific Plan as they Relate to the Landmark Village Project

The following mitigation measures (Mitigation Measure Nos. 4.20-1 through 4.20-3, below) were adopted by the County in connection with its approval of the Newhall Ranch Specific Plan (May 2003). The applicable mitigation measures will be implemented to ensure that adequate parks, recreation, and trail facilities are available to meet project demand. These measures are preceded by "SP," which stands for Specific Plan.

SP 4.20-1 Development of the Newhall Ranch Specific Plan will provide the following acreages of parks and open area:

- Ten public Neighborhood Parks totaling 55 acres,
- Open Areas totaling 1,106 acres of which 186 acres are Community Parks,
- High Country Special Management Area of 4,214 acres,
- River Corridor Special Management Area of 819 acres,
- A 15-acre lake,
- An 18-hole golf course, and
- A trail system consisting of:
  - Regional River Trail,
  - Salt Creek Corridor
  - Community trails, and
  - Unimproved trails.

SP 4.20-2 Prior to the construction of the proposed trail system, the Specific Plan applicant shall finalize the alignment of trails with the County Department of Parks and Recreation.

SP 4.20-3 Trail construction shall be in accordance with the County of Los Angeles Department of Parks and Recreation trail system standards.

In addition to the above mitigation measures, the Specific Plan's neighborhood parks and the active areas of the Community Parks are required to be improved pursuant to the revised Specific Plan's list of specified park improvements. The park improvements are required to be provided in accordance with the final park plan approved by the County's Department of Parks and Recreation. See, Specific Plan, May 2003, Section 2.8, p. 2-145.

As a Board of Supervisors' imposed Condition of Approval, approximately 1,517 acres of land encompassing the Salt Creek watershed in Ventura County are required to be dedicated in fee and/or by conservation easement, as determined by the County in its sole discretion, to the joint powers authority, which is responsible for overall recreation and conservation of the Newhall Ranch High County SMA. Said land shall is to be managed in conjunction with and in the same manner as the High Country SMA.

b. Additional Mitigation Measures Proposed by this EIR

No additional mitigation measures beyond those identified in the Newhall Ranch Specific Plan Program EIR are required or necessary, because the Landmark Village project does not result in any significant park, recreation, and trail facility impacts after implementation of the above mitigation measures.

8. CUMULATIVE IMPACTS

The Santa Clarita Valley Cumulative Build-Out Scenario entails buildout of all lands under the current land use designations indicated in the Santa Clarita Valley Areawide Plan and the Los Angeles County General Plan, plus the proposed project, plus all known pending General Plan Amendment requests for additional urban development in the unincorporated area of the Santa Clarita Valley and the City of Santa Clarita. A list of the future development activity (with and without the project) expected in the Valley under the Santa Clarita Valley Cumulative Build-Out Scenario is presented below in **Table 4.16-6**, **Cumulative Development Activity – Santa Clarita Valley Cumulative Build-Out Scenario**.

Upon buildout of this scenario (without the project), and using household figures required by the County, there would be a total population of 438,867 persons, which generates a demand for 1,316 acres of parkland. This figure is derived assuming 3 acres per 1,000 persons per the state requirements of the Quimby Act. Because the proposed Landmark Village project exceeds the park acreage required, the project results in no additional demand for parkland acreage. In fact, the project would benefit the cumulative demand for parkland by providing 16 acres of community parkland, along with trails and private recreation centers, when compared to only about 11 acres of park otherwise required to serve the needs of the population generated by the project. Therefore, under this scenario, the proposed project would not exacerbate the current shortage of local parks and not result in a significant cumulative impact.

Table 4.16-6
Cumulative Development Activity – Santa Clarita Valley Cumulative Build-Out Scenario

Land Use Types	Cumulative Buildout w/o Project[1]	Project	Cumulative Buildout w/ Landmark Village[1]
Single-Family	93,412 du	308 du	93,720 du
Multi-Family	47,621 du	1,136 du	48,757 du
Mobile Home	2,699 du		2,699 du
Commercial Retail	18,866,030 sq. ft.	1,033,000 sq. ft.	19,899,030 sq. ft.
Hotel	2,071 room		2,071 room
Sit-Down Restaurant	283,790 sq. ft.		283,790 sq. ft.
Fast Food Restaurant	23,600 sq. ft.		23,600 sq. ft.
Movie Theater	3,300 seats		3,300 seats
Health Club	54,000 sq. ft.		54,000 sq. ft.
Car Dealership	411,000 sq. ft.		411,000 sq. ft.
Elem./Middle School	278,590 students	750 students	279,340 students
High School	12,843 students		12,958 students
College	29,948 students		29,948 students
Hospital	247,460 sq. ft.		247,460 sq. ft.
Library	171,790 sq. ft.		171,790 sq. ft.
Church	501,190 sq. ft.		501,190 sq. ft.
Day Care	785,000 sq. ft.		785,000 sq. ft.
Industrial Park	41,743,950 sq. ft.		41,743,950 sq. ft.
Business Park	8,424,330 sq. ft.		8,424,330 sq. ft.
Manufacture/Warehouse	3,932,470 sq. ft.		3,932,470 sq. ft.
Utilities	1,150,240 sq. ft.		1,150,240 sq. ft.
Commercial Office	6,380,520 sq. ft.		6,380,520 sq. ft.
Medical Office	133,730 sq. ft.		133,730 sq. ft.
Golf Course	1,209.0 ac		1,238.0 ac
Developed Parkland	477.3 ac	16 ac	493.3 ac
Undeveloped Parkland	1,000.0 ac		1,000.0 ac
Special Generator[2]	413.0 sg		413.0 sg

du = dwelling unit; sq. ft. = square feet; sta = staff; ac = acres; sg = special generator

[1] *Santa Clarita Valley Consolidated Traffic Model, (November 2002). Includes existing development, buildout under the existing City of Santa Clarita General Plan, Santa Clarita Valley Areawide Plan, and active pending General Plan Amendment requests.*

[2] *Includes Wayside Honor Ranch, Six Flags Magic Mountain, Travel Village, CHP Office, and Aqua Dulce Airport.*

9. CUMULATIVE MITIGATION MEASURES

The proposed project exceeds both the County and the Quimby Act requirements; therefore, it does not contribute to cumulative park, recreational, or trail facility impacts in the region.

10. SIGNIFICANT UNAVOIDABLE IMPACTS

a. Project-Specific Impacts

The proposed project would include a 16-acre Community Park, private recreation areas, a trail system, and open space. In light of the identified significance thresholds, the project is in compliance with County and Quimby Act parkland standards and would not result in significant unavoidable impacts to local parks and recreation facilities. Implementation of the proposed project would include a portion of the Santa Clara River regional trail system, a County Hiking/Riding Trail, and local trails and paseos. No negative project-related trail impacts would occur; thus, no significant unavoidable impacts are expected. In fact, implementation of the project, with its proposed park, recreation, and trail network, would beneficially impact the developing County and City network.

b. Cumulative Impacts

There is a cumulative impact if a proposed project does not meet the County and Quimby Act parkland standards. The proposed project exceeds both County and Quimby Act requirements; therefore, it does not contribute to any adverse cumulative parks and recreation impacts in the region. Implementation of cumulative projects would incrementally increase demand for local park facilities in an area where such facilities are already below locally adopted standards. However, compliance with the mitigation outlined above would ensure that the proposed Landmark Village project meets the County and Quimby Act standards. No significant cumulative impacts would occur with implementation of the proposed project.

4.17 LIBRARY SERVICES

1. SUMMARY

The project site of the proposed Landmark Village project is located in the Valencia Library service area of the County of Los Angeles Public Library (County Library). In addition to the Valencia Library, the Santa Clarita Valley area is served by two other County libraries (Newhall Library and Canyon Country Jo Anne Darcy Library) and the Santa Clarita Valley Bookmobile. Existing library facility space in the Santa Clarita Valley does not meet the County Library's service level guidelines.

Based on the County Library's service level guidelines of 0.50 square foot of library facilities per capita and a collection size of 2.75 items (books, magazines, periodicals, audio, video, etc.) per capita, the development of the proposed Landmark Village project would require a total of 1,840 square feet of library facilities and 10,120 items. As part of the County's approval of the Newhall Ranch Specific Plan, the County adopted a library mitigation measure requiring that the developer provide funding for the construction and development of library facilities on the Specific Plan site. The mitigation measure provides that, prior to issuance of the first residential building permit on Newhall Ranch, the County Librarian and the developer must develop a mutually acceptable "Library Construction Plan." The plan must outline the library construction requirements and define elements such as location, size, funding, and timing of facilities. The Library Construction Plan, a completion schedule, land dedication criteria, and a funding plan must be defined and set forth in a Memorandum of Understanding (MOU) between the developer and the County Librarian. Revenues collected by the County Library over the course of buildout of the project would partially fund library services in the new library. With mitigation, any potential impacts to library services caused by project construction and occupancy would be reduced to less than significant levels.

With respect to cumulative impacts, new developments occurring within the Santa Clarita Valley would increase demand for books and library space. However, the payment of the Library Developer Fee, $737.00 per residential unit as of July 1, 2006, would mitigate potentially significant cumulative impacts on the County Library to less than significant levels.

2. BACKGROUND

a. Relationship of Project to Newhall Ranch Specific Plan Program EIR

Section 4.19 of the Newhall Ranch Specific Plan Program EIR identified and analyzed the existing conditions, potential impacts, and mitigation measures associated with libraries for the entire Newhall Ranch Specific Plan. The Newhall Ranch Specific Plan EIR Mitigation program was adopted by the County in findings and in the revised Mitigation Monitoring Plan for the Specific Plan. The Newhall

Ranch Specific Plan Program EIR concluded that Specific Plan implementation would result in significant impacts, but that the identified mitigation measures would reduce the impacts to below a level of significance. All subsequent project-specific development plans and tentative subdivision maps must be consistent with the Newhall Ranch Specific Plan, the County of Los Angeles General Plan, and Santa Clarita Valley Areawide Plan.

This project-level EIR is tiering from the previously certified Newhall Ranch Specific Plan Program EIR. **Section 4.17** discusses, at the project level, the existing conditions for the Landmark Village site, the project's potential environmental impacts on library services, the applicable mitigation measures from the Newhall Ranch Specific Plan Program EIR, and any mitigation measures recommended by this EIR for the Landmark Village project.

3. SUMMARY OF THE NEWHALL RANCH SPECIFIC PLAN PROGRAM EIR FINDINGS

The Newhall Ranch Specific Plan Program EIR identified certain potentially significant impacts related to library services with implementation of the Specific Plan. The Newhall Ranch Specific Plan Program EIR, and related findings, determined that Specific Plan implementation would significantly increase demands on library facilities and library materials (books, magazines, periodicals, etc.), absent mitigation. The County Library's adopted planning standard at the time the Newhall Ranch Specific Plan was approved required 0.35 net square ft (0.389 gross square foot) of facility space and 2.0 library items per capita. Buildout of uses within the Specific Plan would create a demand for 20,897 square feet of facility space, and a demand for 119,414 library items.

In response, the Specific Plan's mitigation program for library services includes the following requirements: (a) provision for funding a maximum of two libraries (including the site(s), construction, furniture, fixtures, equipment and materials); (b) provisions for dedication of a maximum of two library sites for a maximum of two libraries located on Newhall Ranch in lieu of the land component of the County's library facilities mitigation fee; and (c) provisions for a MOU with the County Librarian to address the library construction requirements (library construction plan) and the criteria for timing the completion of the library(s).[1]

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1 See, Mitigation Measure 4.19-1 in both the certified Newhall Ranch Specific Plan Program EIR and the adopted Mitigation Monitoring Plan for the Specific Plan (May 2003).

The Specific Plan's mitigation program for libraries also set forth the timing for construction of the new libraries, as follows:

> *"If two libraries are to be constructed, the first library will be completed and operational by the time of County's issuance of the 8,000th residential building permit of Newhall Ranch, and the second library will be completed and operational by the time of County's issuance of the 15,000th residential building permit of Newhall Ranch. If the County Librarian decides that only one library will be constructed, the library will be completed and operational by the time of County's issuance of the 10,000th residential building permit of Newhall Ranch."*[2]

The Board of Supervisors found that adoption of the mitigation measures would reduce the identified potentially significant effects to less than significant levels.[3] The project applicant and the County are currently engaged in the MOU process referenced above.

4. EXISTING CONDITIONS

a. County of Los Angeles Public Library (County Library)

The County Library operates facilities and services Countywide in both unincorporated and incorporated areas of the County. The project area is located within the unincorporated areas of the County Library's Planning Area 1, which is the Santa Clarita Valley.[4] The project site is located within the Valencia Library service area and is served by the Valencia Library.

As illustrated in **Figure 4.17-1, Library Locations**, the County Library provides library services to the entire Santa Clarita Valley area with three libraries and one bookmobile. The three libraries are Valencia Library, Newhall Library, and Canyon Country Jo Anne Darcy Library. A description of the three libraries and the Santa Clarita Valley Bookmobile is set forth below.[5]

(1) Valencia Library

The Valencia Library, located at 23743 West Valencia Boulevard in Valencia, is located approximately 6.5 miles southeast of the intersection of Wolcott Way and SR-126. This library is a government publications repository. The library is 23,966 square feet in size and contains 340,203 items (books, periodicals, audio

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2 Ibid.

3 See, Mitigation Measure 4.19-1 in both the certified Newhall Ranch Specific Plan Program EIR (March 9, 1999) and the adopted Mitigation Monitoring Plan for the Specific Plan (May 2003).

4 Written correspondence from Malou Rubio, Head, Staff Services, County of Los Angeles Public Library, Library Headquarters, August 11, 2004 (**Appendix 4.17**).

5 Staffing information provided in written correspondence from Malou Rubio, Head, Staff Services, County of Los Angeles Public Library, Library Headquarters, August 11, 2004 (**Appendix 4.17**). Building sizes, operating hours, collection size, and other information is from the County of Los Angeles Public Library website <http://www.colapublib.org/libs >, accessed October 3, 2006.

cassettes, videos, etc.) in its collection. The library maintains a staff of 14 full-time employees and 40 part-time employees. The library is open Monday through Thursday 10:00 AM to 9:00 PM, Friday 10:00 AM to 6:00 PM, Saturday 10:00 AM to 5:00 PM, and Sunday 1:00 PM to 5:00 PM.

(2) Newhall Library

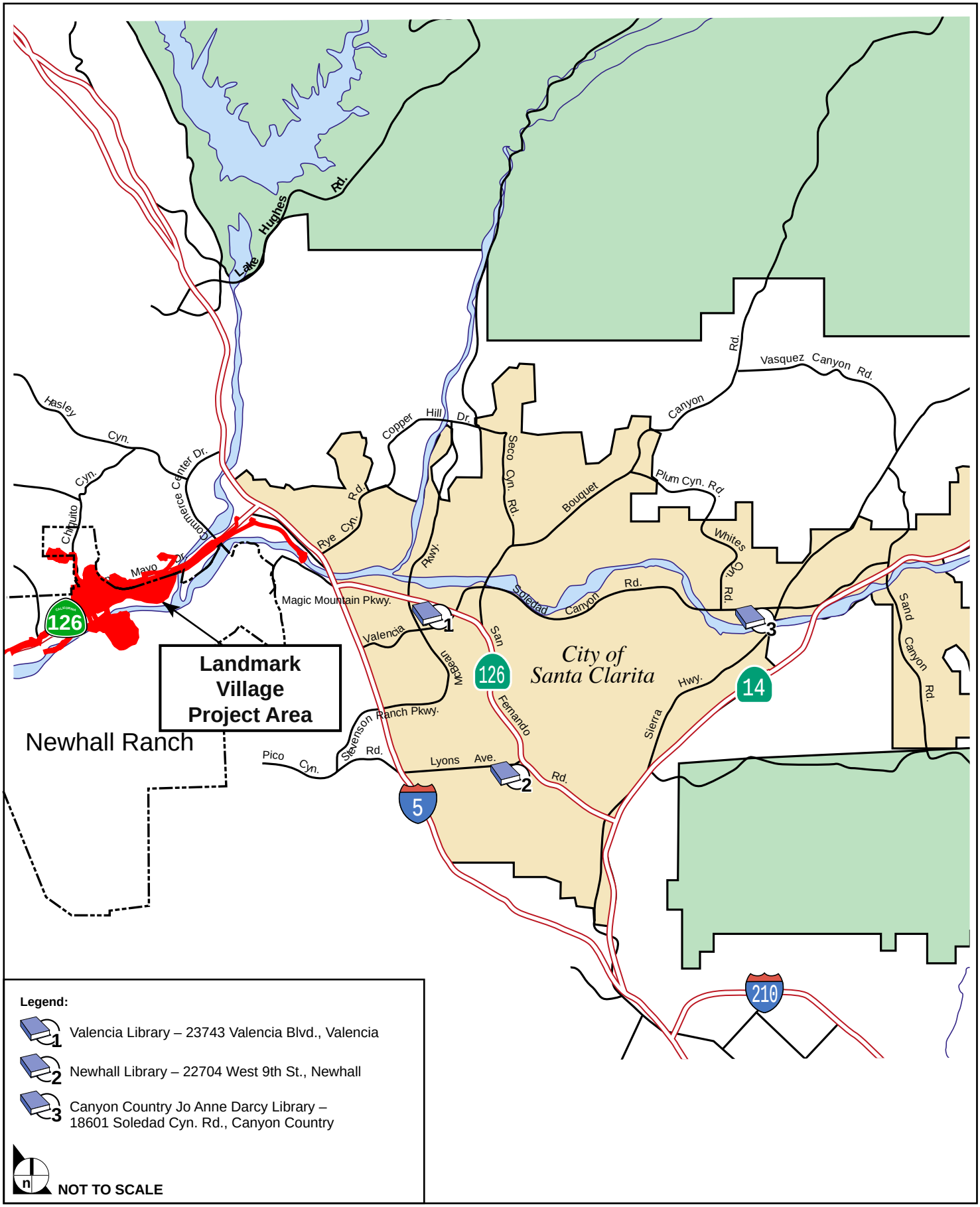
The Newhall Library, located at 22704 West 9th Street in Newhall, is approximately 9.5 miles southeast of the intersection of Wolcott Way and SR-126. This library is 4,842 square feet in size and contains 91,280 items in its collection. The library maintains a staff of four full-time employees and eight part-time employees. The Newhall Library houses the office for the Santa Clarita Valley Bookmobile. The library is open Monday through Wednesday 10:00 AM to 8:00 PM, Thursday and Friday 10:00 AM to 6:00 PM, and Saturday 10:00 AM to 5:00 PM.

(3) Canyon Country Jo Anne Darcy Library

The Canyon Country Jo Anne Darcy Library, located at 18601 Soledad Canyon Road in Canyon Country, is approximately 10 miles east of the intersection of Wolcott Way and SR-126. This library is 12,864 square feet in size and contains a total of 117,891 items in its collection. The library maintains a staff of five full-time employees and 18 part-time employees. The library is open Monday through Wednesday 10:00 AM to 8:00 PM, Thursday and Friday 10:00 AM to 6:00 PM, and Saturday 10:00 AM to 5:00 PM.

(4) Santa Clarita Valley Bookmobile

A bookmobile service is provided to outlying areas of the valley, such as Val Verde, Agua Dulce, Acton, Castaic, and the Friendly Valley Senior Community. This bookmobile consists of one vehicle and contains 14,355 items in its collection. The bookmobile staff consists of two full-time employees and one part-time employee.



SOURCE: Impact Sciences, Inc. – October 2004

FIGURE **4.17-1**

Library Locations

b. Funding and General Level of Service

The County Library has adopted service level guidelines of 0.5 gross square foot and 2.75 items per capita,[6] which serve as general planning tools for new library services and facilities. At the time of this writing, valley-wide library square footage totals 41,672 square feet and items available for review total 563,729.[7] Based on a valley-wide population of 200,000 persons, the library facilities, books, and other materials in the Santa Clarita Valley area are at 0.21 square foot per capita and 2.82 items per capita, respectively.

Therefore, while the existing libraries in the Santa Clarita Valley area meet the County Library's service level guideline for library items, they do not meet the guideline for available library space per capita.

Funding sources for the County Library consist of, in descending proportions, property taxes, County General Fund allocation, a special tax, and revenue from fines, fees, and other miscellaneous sources.[8] For several years, the Board of Supervisors has made an allocation from the County General Fund. However, there is no guarantee of ongoing funding from the County General Fund as a specific budget allocation. Decisions on funding for the public library are made on an annual basis by the Board of Supervisors based on total available funding for all County services. The funding in the County Library's operating budget does not provide for general replacement or the expansion of library facilities. Currently, the only funding available for the replacement or expansion of library facilities is that generated from the County's developer fee program. At the present time, the fees collected in the Santa Clarita Planning Area are insufficient for the construction of new facilities.[9]

In 1992, the state shifted property tax revenues from library operations to help finance education. In response to this lost revenue, in 1994, the County Board of Supervisors adopted a community facilities district for extended library services and facilities in the unincorporated areas of the County and 11 cities, including the unincorporated area of the Santa Clarita Valley. On June 3, 1997, Proposition L was passed by a two-thirds majority, which assessed an annual special tax for library services.[10] Effective July 1, 2006, the special tax is $25.72 per parcel. The special tax may increase annually on July 1. The County Library's special tax currently affects the unincorporated areas, including the project site, and 11 cities.

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6 Written correspondence from Michele Mathieu, County of Los Angeles Public Library, Library Headquarters, November 26, 2002 (**Appendix 4.17**).

7 This includes square footage from the Valencia Library, the Newhall Library, and the Canyon Country Jo Anne Darcy Library and items from the collections at the Valencia Library, the Newhall Library, the Canyon Country Jo Anne Darcy Library, and the Santa Clarita Valley Bookmobile.

8 Ibid.

9 Ibid.

10 Telephone interview with Fred Hungerford, Staff Services, Los Angeles County Public Library, July 7, 1997.

On October 27, 1998, the County Board of Supervisors established a permanent library facilities mitigation fee on all new residential development to mitigate impacts to County Library services. The library fee in Planning Area 1, within which the project site is located, is currently $737.00 per dwelling unit.[11] The County library's mitigation fee is subject to an annual Consumer Price Index (CPI) adjustment on July 1 of each year.[12]

5. PROPOSED PROJECT IMPROVEMENTS

The applicant proposes to develop 1,444 residential dwelling units with a total residential population of 3,680,[13] approximately 1,033,000 square feet of commercial/mixed use space, a 9-acre elementary school, a 16-acre Community Park, four private recreational facilities, open space and river trail uses, and supporting roadway, drainage and infrastructure improvements. In addition, the applicant proposes to construct the Long Canyon Road Bridge over the Santa Clara River, and install exposed and buried bank stabilization on portions of the south and north side of the river.

6. PROJECT IMPACTS

The analysis of potential impacts to library services associated with operation of the proposed project, including the significance criteria applicable to assessing such impacts, is presented below.

a. Significance Threshold Criteria

Significance threshold criteria specific to library services are not specified in the 2005 *California Environmental Quality Act (CEQA) Guidelines*. However, Appendix G to the *CEQA Guidelines* addresses public services, such as fire, police, schools, parks, and "other public facilities." Under Section XIII, the proposed project would have a potentially significant impact on public facilities if the project would result in:

(a) "Substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities; or

(b) The need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services."

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11 Ibid.

12 Michele Mathieu, County of Los Angeles Public Library, Library Headquarters, meeting on April 21, 2003.

13 Based on County provided estimates of 3.17 persons per single-family dwelling, 2.38 persons per multi-family dwelling and per apartment.

In addition, the County Library has adopted the following service level guidelines:

(a) 0.50 gross square foot of library facilities space per capita; and

(b) 2.75 library material items (books, periodicals, audio cassettes, videos, etc.) per capita.

The County Library uses these standards for planning future library services and facilities. These guidelines are 0.5 gross square foot of library space per capita, 2.75 items per capita in a built-out library, and one computer per 1,000 capita.

As proposed, the project would increase demand on existing County Library services through its residential development, as shown in the adopted Newhall Ranch Specific Plan. The impact of the proposed project on library services is addressed below.

b. Impact Analysis

Occupancy of the Landmark Village project would increase the demand placed on library services at the Valencia Library, thereby, increasing the need for additional library facility space and library items. The County Library has adopted a planning standard of 0.50 gross square foot and 2.75 items per capita.[14]

Based on the County Library's service level guideline of 0.50 square foot of library facilities per capita, it is anticipated that a community the size (population of 3,680) of Landmark Village would require a total of 1,840 square feet of library facilities.

Based on the County Library's service level guideline of 2.75 items per capita, it is anticipated that 10,120 items would be required to serve the project population. Please refer to **Appendix 4.17** for calculations.

The service level guidelines used by the County Library are 2.75 items per capita for a collection in a built-out community library, 2.0 items per capita for an opening day collection in a new community library, and one computer per 1,000 capita served.[15] Based on these guidelines, it is anticipated that a community of the size proposed for the project (population of 3,680) would have the following impact on the Valencia Library which currently serves the proposed project site: 10,120 additional library items and four additional public computers.

As discussed previously, the Santa Clarita Valley area is presently under-served with regard to available library space. The County Library staff has indicated that there are no current plans for facilities expansion due to lack of available funding. Consequently, without mitigation, project impacts upon

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14 Written correspondence from Malou Rubio, Head, Staff Services, County of Los Angeles Public Library, Library Headquarters, June 28, 2004 (**Appendix 4.17**).

15 Written correspondence from Malou Rubio, Head, Staff Services, County of Los Angeles Public Library, Library Headquarters, June 28, 2004 (**Appendix 4.17**).

existing library services would be significant. However, the potential increased demand for library space and library items associated with the development of residential uses of the Landmark Village project would be mitigated through compliance with the existing mitigation adopted as part of the Newhall Ranch Specific Plan Program EIR. The adopted mitigation requires funding for a maximum of two libraries, including site dedication, construction of new facilities, and provision of furniture, equipment, and materials. The adopted mitigation also requires the creation of a "Library Construction Plan" prior to issuance of the first residential building permit within the Newhall Ranch Specific Plan.

The applicant is currently in discussions with the County Librarian to establish library development criteria that comply with the MOU requirements of the Specific Plan. Under the Library Construction Plan component of the MOU, the following requirements are being discussed:

- The applicant would dedicate land for and construct one library adjacent to the community park within the Mission Village site of the Newhall Ranch Specific Plan;
- The library would be a minimum of 20,000 square feet; and
- The construction and completion of the library would be consistent with the requirements of the Newhall Ranch Specific Plan.

The Library Construction Plan, a completion schedule, land dedication criteria, and a funding plan also will be addressed in the MOU. The MOU requirements are deemed to fully mitigate for the Specific Plan's impacts to library services and must be in place prior to issuance of the first building permit within Newhall Ranch. With the proposed MOU mitigation, impacts to library services resulting from the Newhall Ranch Specific Plan, inclusive of Landmark Village, would be reduced to less than significant levels.

7. MITIGATION MEASURES

Although the proposed Landmark Village project may result in potential impacts to library services absent mitigation, the County already has imposed mitigation measures required to be implemented as part of the adopted Newhall Ranch Specific Plan. The mitigation measure, as it relates to libraries, is found in the previously certified Newhall Ranch Specific Plan Program EIR (March 8, 1999) and the adopted Mitigation Monitoring Plan for the Specific Plan (May 2003). The applicant has committed to implement the applicable mitigation measures from the Newhall Ranch Specific Plan to ensure that future development of the project site would not result in impacts to library services and not adversely affect adjacent properties.

a. Mitigation Measures Required by the Adopted Newhall Ranch Specific Plan, as they Relate to the Landmark Village Project

The following mitigation measure was adopted by the County in connection with its approval of the Newhall Ranch Specific Plan (May 2003). The applicable mitigation measure will be implemented to mitigate the potentially significant library service impacts associated with the proposed Landmark Village project and ensure sufficient availability of library space and materials. These measures are preceded by "SP," which stands for Specific Plan.

SP 4.19-1 The developer will provide funding for a maximum of two libraries (including the site(s), construction, furniture, fixtures, equipment, and materials) to the County Librarian. The developer will dedicate a maximum of two library sites for a maximum of two libraries located in Newhall Ranch in lieu of the land component of the County's library facilities mitigation fee, in accordance with the provisions of Section 22.72.090 of Section 2 of Ordinance No. 98-0068. The actual net buildable library site area required and provided by the developer will be determined by the actual size of the library building(s), the Specific Plan parking requirements, the County Building Code, and other applicable rules.

The total library building square footage to be funded by the developer will not exceed 0.35 net square feet per person. The developer's funding of construction of the library(s) and furnishings, fixtures, equipment and materials for the library(s) will be determined based on the cost factors in the library facilities mitigation fee in effect at the time of commencement of construction of the library(s).

Prior to County's issuance of the first residential building permit of Newhall Ranch to the developer, the County Librarian and the developer will mutually agree upon the library construction requirements (location, size, funding and time of construction) based upon the projected development schedule and the population of Newhall Ranch based on the applicable number of average persons per household included in the library facilities mitigation fee in effect at the time. Such mutual agreement regarding the library construction requirements ("Library Construction Plan") and the criteria for timing the completion of the library(s) will be defined in a MOU between the developer and the County Librarian. Such MOU shall include an agreement by the developer to dedicate sufficient land and pay the agreed amount of fees on a schedule to allow completion of the library(s) as described below. The developer's funding for library facilities shall not exceed the developer's fee obligation at the time of construction under the developer fee schedule.

If two libraries are to be constructed, the first library will be completed and operational by the time of County's issuance of the 8,000th residential building permit of Newhall Ranch, and the second library will be completed and operational by the time of County's issuance of the 15,000th residential building permit of Newhall Ranch. If the County Librarian decides that only one library will be constructed, the library will be completed and operational by the time of County's issuance of the 10,000th residential building permit of Newhall Ranch.

No payment of any sort with respect to library facilities will be required under Section 2.5.3.d. of the Specific Plan in order for the developer to obtain building permits for nonresidential buildings.

b. Additional Mitigation Measures Proposed by this EIR

No additional mitigation measures beyond those identified in the Newhall Ranch Specific Plan Program EIR are required or necessary, because the Landmark Village project does not result in any significant library service impacts after implementation of the above mitigation measures.

8. CUMULATIVE IMPACTS

To analyze the cumulative impacts on library service of the proposed Landmark Village project in combination with other expected future growth, the amount and location of growth expected to occur in addition to that of the project was determined. Two separate cumulative development scenarios were utilized to project future growth. The two scenarios were compared with existing conditions to meet County of Los Angeles and CEQA requirements.

a. DMS Build-Out Scenario

The first scenario (referred to as the "DMS Build-Out Scenario") is based on buildout of the subdivision and parcel maps listed in the County's Development Monitoring System (DMS), plus the proposed project. The County DMS lists all pending, recorded, and approved projects involving land divisions located on unincorporated lands in the Santa Clarita Valley and within the City of Santa Clarita. The most recent County DMS is dated October 2003. A list of the future subdivision activity (with and without the proposed project) expected to occur within the service boundary of the County library (the

Santa Clarita Valley Library Planning Area 1) is presented below in **Table 4.17-1**, **DMS Build-Out Scenario – Santa Clarita Valley Library Planning Area 1**.[16]

Table 4.17-1
DMS Build-Out Scenario – Santa Clarita Valley Library Planning Area 1

Land Use Types	DMS Buildout w/o Landmark Village[1]	Landmark Village	DMS Buildout w/ Landmark Village[1]
Single-Family	62,472 du	308 du	62,780 du
Multi-Family	29,037 du	1,136 du	30,173 du
Mobile Home	1,818 du		1,818 du
Commercial Retail	8,847,337 sq. ft.	1,033,000 sq. ft.	9,880,337 sq. ft.
Hotel	670 rooms		670 rooms
Sit-Down Restaurant	146,340 sq. ft.		146,340 sq. ft.
Fast Food Restaurant	15,100 sq. ft.		15,100 sq. ft.
Movie Theater	3,300 seats		3,300 seats
Health Club	54,000 sq. ft.		54,000 sq. ft.
Car Dealership	300,000 sq. ft.		300,000 sq. ft.
Hospital	222,800 sq. ft.		222,800 sq. ft.
Library	129,110 sq. ft.		129,110 sq. ft.
Church	323,190 sq. ft.		323,190 sq. ft.
Industrial Park	19,042,611 sq. ft.		19,042,611 sq. ft.
Business Park	3,100,321 sq. ft.		3,100,321 sq. ft.
Manufacturing/Warehouse	3,006,821 sq. ft.		3,006,821 sq. ft.
Utilities	1,037,240 sq. ft.		1,037,240 sq. ft.
Commercial Office	4,086,541 sq. ft.		4,086,541 sq. ft.
Medical Office	133,730 sq. ft.		133,730 sq. ft.
Golf Course	345.0 ac		345.0 ac
Developed Parkland	110.1 ac	16 ac	126.1 ac
Special Generator[2]	296.0 sg		296.0 sg

du = dwelling unit; sq. ft. = square feet; sta = staff; ac = acres; sg = special generator

[1] *Los Angeles County Department of Regional Planning, Service Provider Report (October 12, 2003) using data for the William S. Hart Union High School District, which encompasses the Santa Clarita Valley Planning Area. Includes existing development as contained in Santa Clarita Valley Consolidated Traffic Model, (November 2002).*

[2] *Includes Wayside Honor Ranch, Six Flags Magic Mountain, Travel Village, CHP Office, and Agua Dulce Airport.*

16 Los Angeles County Department of Regional Planning, Inventory Information for Library Service, October 12, 2003.

As shown, in **Table 4.17-2**, **Cumulative Supply and Demand – DMS Build-Out Scenario**, buildout of this scenario without the project and based on adopted planning standards would result in an additional demand for 43,398 square feet of library space and for 222,554 library items (books, periodicals, audio cassettes, videos, etc.). With the Landmark Village project, these numbers would increase by 1,840 square feet and 10,120 items for a total additional demand at DMS Buildout of 45,238 square feet and 232,674 items.

Over the build-out period of the project, other development activity will occur throughout the Santa Clarita Valley. This growth will cumulatively impact library services provided by the County Library within the Santa Clarita Valley Planning Area. Library impact data on these projects, taken from a recent Inventory Information report prepared by the County's Department of Regional Planning for the three libraries located within the Santa Clarita Valley, are summarized in **Table 4.17-2**.

Table 4.17-2
Cumulative Supply and Demand – DMS Build-Out Scenario

Library	Existing Supply	Existing Demand[1]	Cumulative Demand[2]	Total Demand[3]
Santa Clarita Valley				
Space (square feet)	41,672	62,518	43,398	105,916
Items[4]	563,729	320,598	222,554	543,152
Project				
Space (square feet)	0	0	1,840	1,840
Items	0	0	10,120	10,120
Totals				
Space (square feet)	41,672	62,518	45,238	107,756
Items	563,729	320,598	232,674	553,272

Source: Los Angeles County Department of Regional Planning, Inventory Information for Library Service, (October 12, 2003).

1 *Represents the square footage and number of books required to serve the existing population.*

2 *Represents additive requirement of square footage and number of books demanded by DMS plus Project.*

3 *Represents existing demand plus cumulative demand (does not include existing supply).*

4 *Items = books, periodicals, audiocassettes, videos, etc.*

The County requires that new residential developments in the valley either pay the current library fee, $737.00 per residential unit as of July 1, 2006, or construct library facilities in the valley, per County Public Library planning and service level guidelines, in order to fully mitigate cumulative impacts on library services. The Newhall Ranch Specific Plan would provide library facilities in accordance with the MOU process required as a condition of approval of the Specific Plan. Providing the specified library facilities and materials would reduce the impact of the Newhall Ranch Specific Plan, including the

Landmark Village project, to a less than significant level. Therefore, the Landmark Village project's contribution to the cumulative demand for library space and items would not be cumulatively considerable.

b. Santa Clarita Valley (SCV) Cumulative Build-Out Scenario

The SCV Cumulative Build-Out Scenario entails buildout of all lands under the current land use designations indicated in the Santa Clarita Valley Areawide Plan and the County of Los Angeles General Plan, plus the Landmark Village project, plus all known pending General Plan Amendment requests for additional urban development in the unincorporated area of the Santa Clarita Valley and the City of Santa Clarita. A list of future development activity (with and without the project) expected in the valley under the SCV Cumulative Build-Out Scenario is presented below in **Table 4.17-3**, **Cumulative Development Activity – Santa Clarita Valley Cumulative Build-Out Scenario**.

Upon buildout of the SCV Cumulative Build-Out Scenario, existing population plus new residential development (including the proposed project) would total 420,075 and would create a total per capita demand for 210,038 square feet of library facilities or 168,366 square feet more than the existing 41,672 square feet, and 1,155,206 items, or 591,477 items more than the existing 563,729 items, based on the planning guidelines of 0.5 gross square foot per capita and 2.75 items per capita. Please refer to **Appendix 4.17** for calculations. The operation of these facilities could be partially financed by new tax revenues that new developments would generate for the County on an ongoing basis. In addition, the County requires that new developments either pay the current library mitigation fee, $737.00 as of July 1, 2006, per residential unit, or construct library facilities in the valley, per County Public Library planning and service level guidelines, in order to fully mitigate cumulative impacts on County Library services.

Table 4.17-3
Cumulative Development Activity – Santa Clarita Valley Cumulative Build-Out Scenario (Project Option)

Land Use Types	Cumulative Buildout w/o Project[1]	Project	Cumulative Buildout w/ Landmark Village[1]
Single-Family	93,412 du	308 du	93,720 du
Multi-Family	47,621 du	1,136 du	48,757 du
Mobile Home	2,699 du		2,699 du
Commercial Retail	18,866,030 sq. ft.	1,033,000 sq. ft.	19,899,030 sq. ft.
Hotel	2,071 room		2,071 room
Sit-Down Restaurant	283,790 sq. ft.		283,790 sq. ft.
Fast Food Restaurant	23,600 sq. ft.		23,600 sq. ft.
Movie Theater	3,300 seats		3,300 seats
Health Club	54,000 sq. ft.		54,000 sq. ft.
Car Dealership	411,000 sq. ft.		411,000 sq. ft.
Elem./Middle School	278,590 students	750 students	279,340 students
High School	12,843 students		12,958 students
College	29,948 students		29,948 students
Hospital	247,460 sq. ft.		247,460 sq. ft.
Library	171,790 sq. ft.		171,790 sq. ft.
Church	501,190 sq. ft.		501,190 sq. ft.
Day Care	785,000 sq. ft.		785,000 sq. ft.
Industrial Park	41,743,950 sq. ft.		41,743,950 sq. ft.
Business Park	8,424,330 sq. ft.		8,424,330 sq. ft.
Manufacturing/Warehouse	3,932,470 sq. ft.		3,932,470 sq. ft.
Utilities	1,150,240 sq. ft.		1,150,240 sq. ft.
Commercial Office	6,380,520 sq. ft.		6,380,520 sq. ft.
Medical Office	133,730 sq. ft.		133,730 sq. ft.
Golf Course	1,209.0 ac		1,238.0 ac
Developed Parkland	477.3 ac	16 ac	493.3 ac
Undeveloped Parkland	1,000.0 ac		1,000.0 ac
Special Generator[2]	413.0 sg		413.0 sg

du = dwelling unit; sq. ft. = square feet; sta = staff; ac = acres; sg = special generator

[1] *Santa Clarita Valley Consolidated Traffic Model, (November 2002). Includes existing development, buildout under the existing City of Santa Clarita General Plan, Santa Clarita Valley Areawide Plan, and active pending General Plan Amendment requests.*

[2] *Includes Wayside Honor Ranch, Six Flags Magic Mountain, Travel Village, CHP Office, and Agua Dulce Airport.*

9. CUMULATIVE MITIGATION MEASURES

All new residential developments in the unincorporated areas of the Santa Clarita Valley (e.g., single- and multi-family residential projects, mobile homes) would be subject to the library impact fee on a project-by-project basis. No additional mitigation is recommended or required.

10. SIGNIFICANT UNAVOIDABLE IMPACTS

a. Project-Specific Impacts

With implementation of the recommended mitigation required by the Specific Plan, no significant unavoidable impacts would occur with respect to library services.

b. Cumulative Impacts

Mitigation measures are determined on a project-by-project basis. The County requires that new development either pay the current library fee, $737.00 as of July 1, 2006, per residential unit, or construct library facilities in the valley per County Public Library planning and service level guidelines, in order to fully mitigate cumulative impacts on the County Public Library. No significant unavoidable impacts would occur with implementation of the County's development fee program for libraries.

4.18 AGRICULTURAL RESOURCES

1. SUMMARY

Development of the Landmark Village tract map and related off-site improvements would convert to non-agricultural land uses 194 acres of Prime Farmland, 7 acres of Farmland of Statewide Importance, 126 acres of Unique Farmland, and 18 acres of Farmland of Local Importance, for a total of 338 acres of prime agricultural land. Additionally, site development would disturb 647 acres of Grazing Land. No feasible mitigation exists to reduce the impacts resulting from the conversion of prime agricultural land to a less than significant level. The proposed project's irreversible loss of 338 acres of prime agricultural land is considered a significant impact, consistent with the findings of the Newhall Ranch Specific Plan Program EIR. Based on the applicable significance thresholds, the loss of Grazing Land is not considered a significant impact.

2. INTRODUCTION

a. Relationship of Project to Newhall Ranch Specific Plan Program EIR

Section 4.4 of the Newhall Ranch Specific Plan Program EIR identified and analyzed the existing conditions, potential impacts, and mitigation measures associated with agricultural resources for the entire Newhall Ranch Specific Plan. The Newhall Ranch Specific Plan EIR mitigation program was adopted by the County of Los Angeles (County) in findings and in the revised Mitigation Monitoring Plan for the Specific Plan. The Newhall Ranch Specific Plan Program EIR concluded that Specific Plan implementation would result in significant impacts and that no feasible mitigation exists that would reduce the impacts to below a level of significance.

This project-level EIR is tiering from the previously certified Newhall Ranch Specific Plan Program EIR. **Section 4.18** discusses, at the project level, the Landmark Village project's existing conditions, the project's potential environmental impacts relative agricultural resources, the applicable mitigation measures from the Newhall Ranch Specific Plan Program EIR, and any additional mitigation measures recommended by this EIR for the Landmark Village project.

All subsequent project-specific development plans and tentative subdivision maps must be consistent with the Newhall Ranch Specific Plan, the County General Plan, and Santa Clarita Valley Areawide Plan.

3. SUMMARY OF THE NEWHALL RANCH SPECIFIC PLAN PROGRAM EIR FINDINGS

The Newhall Ranch Specific Plan Program EIR identified the conversion of agricultural land to urban use as a significant unavoidable impact associated with Specific Plan buildout. The analysis also found a potential for future residents of the Specific Plan to be incidentally exposed to agricultural-related activities. The Newhall Ranch Specific Plan Program EIR, and related findings, determined that no feasible mitigation exists for the conversion of 573 acres of Prime Farmland on the Newhall Ranch Specific Plan site.[1] Measures were adopted to protect future Specific Plan residents from incidental exposure to agricultural-related activities on agricultural lands in Ventura County, including the imposition of a development setback from the Los Angeles County/Ventura County line, and requirements to notify prospective homebuyers about the presence of on-going agricultural activities in Ventura County.[2]

The Newhall Ranch Specific Plan Program EIR acknowledged that cumulative development pressure in the County and the remainder of Southern California would continue, leading to a decline in the amount of cultivated agricultural land in the region. The contribution of the Newhall Ranch Specific Plan to the cumulative loss of prime agricultural land in the region was found to be significant.

Based on the Newhall Ranch Specific Plan Program EIR and record, the Board of Supervisors found that the Specific Plan's impacts to agricultural resources would be significant and unavoidable even with implementation of all feasible mitigation measures. Consistent with Section 15093 of the *California Environmental Quality Act (CEQA) Guidelines*, the Board of Supervisors found that the Specific Plan offered overriding economic, legal, social, planning, and other public benefits that outweighed the significant unavoidable impacts and made them acceptable.

4. EXISTING CONDITIONS

The information presented in the Newhall Ranch Specific Plan Program EIR, Section 4.4, Agricultural Resources, assessed the existing agricultural setting of the entire Newhall Ranch Specific Plan, including the Landmark Village project site, from an agricultural standpoint. Section 4.4 also provided detailed

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1 The Newhall Ranch Specific Plan Program EIR determined that implementation of the proposed Specific Plan would result in the conversion of 595 acres of prime agricultural land to urban uses. The Los Angeles County Board of Supervisors subsequently directed that revisions be made to the Specific Plan, which resulted in a reduction in the development footprint and a corresponding reduction of 22 acres of impacted prime agricultural land.

2 See, Mitigation Measures 4.4-1 and 4.4-2 in both the certified Newhall Ranch Specific Plan Program EIR (March 9, 1999) and the adopted Mitigation Monitoring Plan for the Specific Plan (May 2003).

background information and findings regarding the agricultural analysis conducted on the entire Specific Plan site.

Information from the prior Newhall Ranch Specific Plan Program EIR (see Draft EIR, Appendix 4.4) was assessed at the project-level to determine if there were agricultural effects pertinent to the Landmark Village project site (inclusive of the proposed off-site grading, utility corridor, and water tank locations) not examined in the prior Newhall Ranch Specific Plan Program EIR. Based on that review, it was determined that all significant agricultural effects associated with development of the Landmark Village project site and related off-site improvements were identified in the Newhall Ranch Specific Plan Program EIR and related environmental findings. Therefore, at the project level, this EIR incorporates by reference the existing conditions analysis and background information relating to agricultural resources from the certified Newhall Ranch Specific Plan Program EIR.

a. Agricultural Production

Figure 4.18-1, **Current Agricultural Uses**, shows the current agricultural uses on the Landmark Village project site. Of the 291 acres of land comprising the Landmark Village tract map site, 254.1 acres are used for irrigated crops.[3] These crops include 138.4 acres of vegetables (leased), 43.1 acres of alfalfa, 61.4 acres of sudan pasture, and 11.2 acres of sudan.[4] The remainder of the tract map site is used as storage for agricultural equipment or is vacant land. Previous uses of the site include agricultural and cattle grazing uses, and oil and gas operations.

The borrow site is in an undeveloped state with the exception of a few access roads for oil well drill pads. The site has been periodically used for cattle grazing and is covered with grasses, chaparral, and scattered oak trees. The land forming the utility corridor is vacant and primarily consists of road rights-of-way. The water tank locations consist primarily of vacant land. None of the off-site project areas are currently used for agriculture.

b. Farmland Suitability

Figure 4.18-2, **On-Site Important Farmland**, shows the State Important Farmlands present in the Landmark Village project site, as defined by the Farmland Map and Monitoring Program of the California Department of Conservation.[5] As shown, the Landmark Village project site (tract map site, grading areas, utility corridor, bank stabilization areas, and water tank locations) contains 194 acres of Prime Farmland, 7 acres of Farmland of Statewide Importance, 126 acres of Unique Farmland, and 18 acres of Farmland of

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3 The Newhall Land and Farming Company, February 2005.

4 Ibid.

5 State of California, Department of Conservation, Los Angeles County Important Farmland Map, 2004.

Local Importance, for a total of 338 acres of prime agricultural land. In addition, the project site contains 647 acres of Grazing Land.

According to the United States Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS), there are a total of 12 different soil types within the project area. **Table 4.18-1**, **On-Site USDA Soil Suitability**, lists these soils and identifies the agricultural activities for which each soil is most suited, or capable, (if any), and whether or not the soil meets NRCS criteria for Prime Farmland soils. As shown in **Table 4.18-1**, 7 of the 12 soil types meet the USDA NRCS criteria for Prime Farmland soils. These determinations are made whether or not the soils are farmed.

Figure 4.18-3, Site Suitability for Farming, identifies the areas of the project site that are suitable for farming based on the site's capability classes (see Appendix 4.4 of the Newhall Ranch Specific Plan EIR for a listing of the capability classes for each of the soils on the site, along with their vegetative soil groups, range site indices, Storie Indices,[6] and soil grades). As shown in **Figure 4.18-3**, based on USDA NCRS soil suitability, or capability, classifications, the Landmark Village tract map site is classified entirely as Very Good to Good. The majority of the utility corridor located north of State Route 126 (SR-126) and east of the Landmark Village tract map site is classified as Very Poor, while that portion of the utility corridor located west of the tract map site is designated Class I and II (Good to Very Good). Most of the Adobe Canyon borrow site, except for that portion located nearest to the river, is classified as VIII, which indicates areas unsuitable for farming.

6 The Storie Index numerically expresses the relative degree of suitability of a soil for general intensive agriculture. Four general factors are considered in the index rating, including the characteristics of the soil profile and soil depth, the texture of the soil surface, the dominant slope of the soil body, and other factors more readily subject to management or modification (i.e., drainage, flooding, salinity, sodicity, general nutrient level of the soil, and surface microrelief).

Legend:

- Landmark Village Project Area
- Newhall Ranch Specific Plan Boundary
- Newhall Ranch Agriculture
- Los Angeles County Agriculture
- Ventura County Agriculture

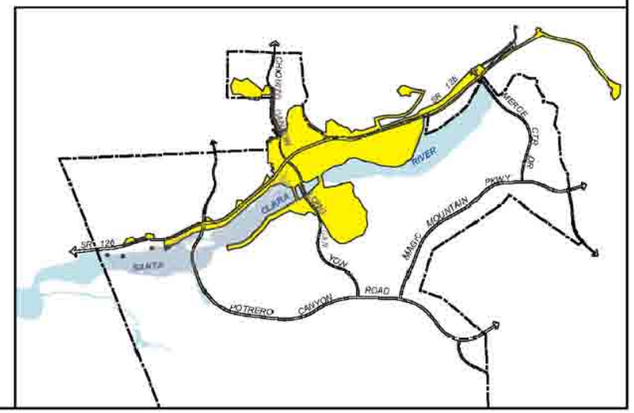
Vegetation Type

A	Alfalfa
D	Dry
S	Sudan
SD	Sudan/Dry
SP	Sudan Pasture
V	Vegetable

104b = Area Designation
D = Vegetation Type
1.7 = Acreage

2000 1000 0 2000

APPROXIMATE SCALE IN FEET

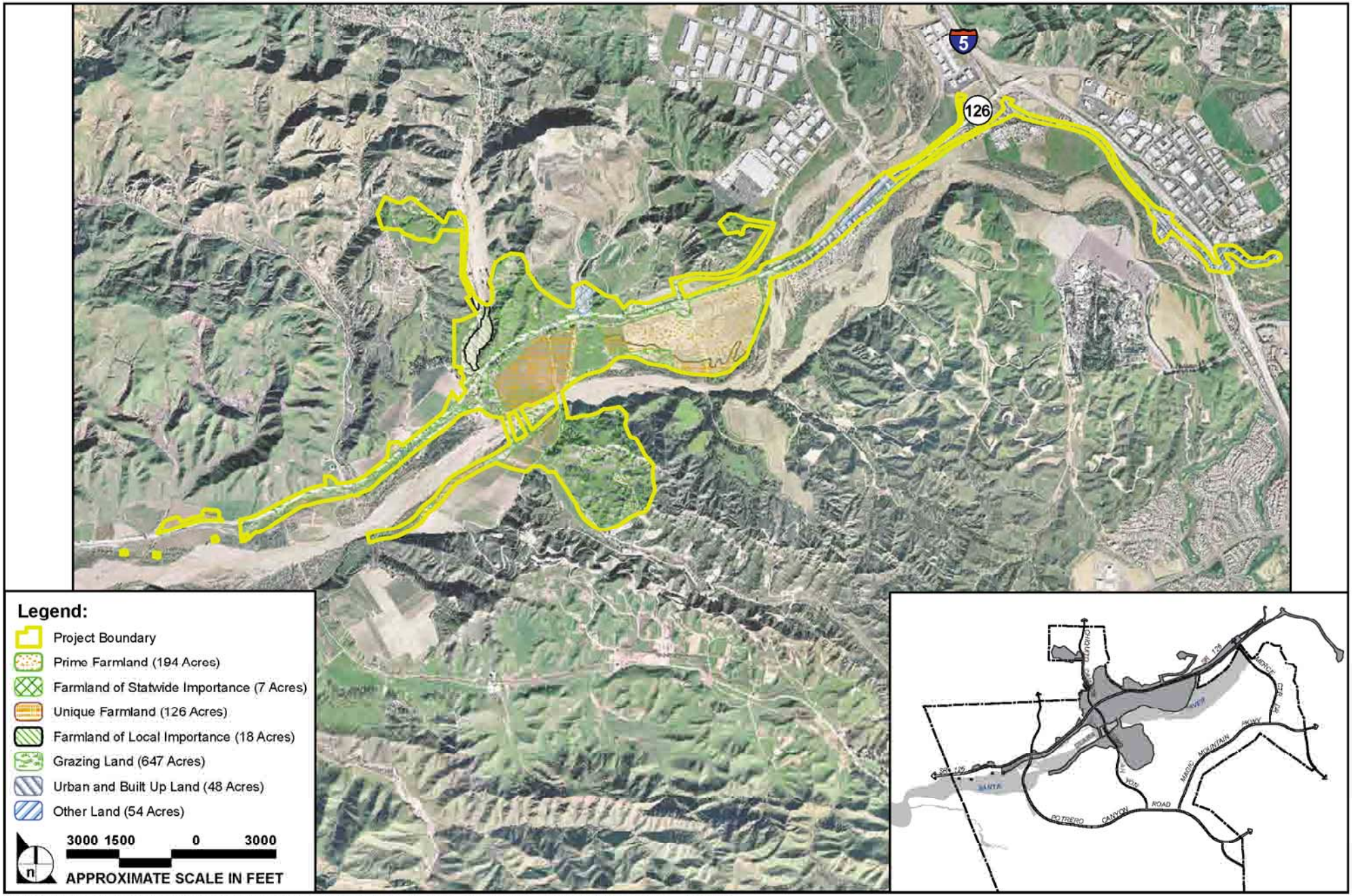


SOURCE: FORMA – October 30, 2004

FIGURE **4.18-1**

Current Agricultural Uses

32-92•05/06



SOURCE: © Department of Conservation, Farmland Mapping and Monitoring Program – 2004, AirPhoto USA – 2003, Impact Sciences, Inc. – May 2006

FIGURE **4.18-2**

On-Site Important Farmland

SOURCE: USDA SCS, Soil Survey for the Antelope Valley – February 1996

FIGURE **4.18-3**

On-Site USDA Soil Suitability

Table 4.18-1
On-Site USDA Soil Suitability[1]

Soil Type	Most Suitable Agricultural Activity for Soil Type	Meet Prime Farmland Criteria?
Castaic and Saugus Soils, 30 to 65% (CnG3)	None due to steep slopes and severe erosion	No
Cortina Sandy Loam, 0 to 2% (CYA)	Range, dryland small grains, pasture, irrigated alfalfa, and small grains	No
Hanford Sandy Loam, 0 to 2% (HcA)	Irrigated crops, dryland small grains, and range	Yes
Hanford Sandy Loam, 2 to 9% (HcC)	Irrigated crops, dryland small grains, and range	Yes
Metz Sandy Loam, 0 to 2% (MfA)	Irrigated crops and dryland farming	Yes
Metz Loamy Sand, 2 to 9% (MfC)	None	No
Mocho Loam, 0 to 2% (MpA)	Dryland and irrigated crops	Yes
Sandy Alluvial Land (Sa)	Grazing	No
Sorrento Loam, 0 to 2% (SsA)	Irrigated crops	Yes
River Wash (Rg)	None	No
Yolo Loam, 0 to 2% (YoA)	Irrigated crops and range	Yes
Zamora Loam, 9 to 15% (ZaD)	Dryland grains and range	Yes

Source: Compiled by Impact Sciences, Inc. (March 2005) from the Soil Survey [for the] Antelope Valley Area, *Issued January, 1970.*

[1] *Column one indicates the soil type and, if applicable, the percentage of specific soil constituents which indicate their suitability as prime farmland. Column two indicates the activity most suitable for the particular soil type, and the third column indicates whether or not the soil type is suitable as prime farmland.*

[2] *Range is defined as open land used for grazing.*

5. PROPOSED PROJECT IMPROVEMENTS

The applicant proposes to develop a total of 1,444 residential dwelling units with a total residential population of 3,680,[7] approximately 1,033,000 square feet of commercial/mixed use space, a 9-acre elementary school, a 16-acre Community Park, four private recreational facilities, open space and river trail uses, and supporting roadway, drainage and infrastructure improvements. In addition, the applicant proposes to construct the Long Canyon Road Bridge over the Santa Clara River, and install exposed and buried bank stabilization on portions of the south and north side of the river.

The proposed project would require up to 5.8 million cubic yards of imported fill. The needed fill would come from the Adobe Canyon borrow site located outside the Landmark Village tract map site, but within the approved boundary of the Newhall Ranch Specific Plan area. **Figure 1.0-3, Project**

[7] This is based on County-provided estimates of 3.17 persons per single-family dwelling, 2.38 persons per multi-family dwelling and per apartment.

Boundary/Environmental Setting, in **Section 1.0**, **Project Description**, depicts the location of the related off-site improvements, including the Adobe Canyon borrow site, the Chiquito Canyon grading site, the utility corridor, and the water tank locations.

6. PROJECT IMPACTS

The analysis of potential impacts to agricultural resources associated with construction and operation of the proposed project, including the significance criteria applicable to assessing such impacts, is presented below.

a. Significance Threshold Criteria

According to Appendix G of the 2005 *CEQA Guidelines*, a project would have a significant impact on agricultural resources if a project would:

- Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use;[8]
- Conflict with existing zoning for agricultural use or a Williamson Act contract; or
- Involve other changes in the existing environment which, due to their location or nature, could result in the conversion of Farmland to non-agricultural use.

These are the significance criteria to be applied to the proposed project.

b. Impact Analysis

(1) Conversion of State Important Farmlands

According to the above significance thresholds, a significant impact would occur if a project converts Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural uses. As previously indicated, the USDA and the Department of Commerce (DOC), pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, have identified prime agricultural lands on the project site, as well as certain soil types that may favor some agricultural activities. Development of the Landmark Village project and related off-site improvements would convert to non-agricultural land uses 194 acres of Prime Farmland, 7 acres of Farmland of Statewide Importance, 126 acres of Unique Farmland, and 18 acres of Farmland of Local Importance, for a total of 338 acres of prime agricultural land to urban uses. In addition, site development would disturb 647 acres of Grazing Land.

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8 The Farmland Mapping and Monitoring Program is administered by the California Resources Agency, Department of Conservation.

No feasible mitigation exists to reduce impacts resulting from the conversion of 338 acres of prime agricultural land to a less than significant level. The proposed project's irreversible loss of 338 acres of prime agricultural land is considered a significant project impact. Based upon the significance thresholds, the loss of Grazing Land is not considered a significant impact. These findings are consistent with those made by the Board of Supervisors for the adopted Newhall Ranch Specific Plan.

(2) Local Land Use Plans/Williamson Act Contracts

(a) Local Land Use Plans

Although land within the project site is currently used for agricultural purposes, development of the site would not conflict with existing land use designations and zoning, as the project site was rezoned from agricultural uses to non-agricultural uses when the Newhall Ranch Specific Plan was adopted by the Los Angeles County Board of Supervisors on May 27, 2003. (Please see Specific Plan, Exhibit 2.3-1, Land Use Plan.) The project site is currently regulated by, and the proposed Landmark Village project is consistent with, the Newhall Ranch Specific Plan. The Specific Plan serves as the zoning within the site. Therefore, no significant impacts to local land use plans would result from implementation of the Landmark Village project.

As noted in the certified Newhall Ranch Specific Plan Program EIR, there is the potential for agriculture-related activities (*i.e.*, dust, noise, odor, chemical exposure, etc.) on undeveloped land in the Specific Plan or in Ventura County to impact project residents. However, due to the distance of the Landmark Village project site from Ventura County (approximately 1 mile), and the lack of active agricultural activity on land adjacent to the tract map site, potential agriculture-related impacts to residents of the proposed project are not considered significant.

(b) Williamson Act Contracts

No lands within Los Angeles County have ever been under Williamson Act contract.[9] In addition, as of March 2002, Los Angeles County does not offer Williamson Act contracts.[10] Therefore, project development would not remove agricultural land from a Williamson Act contract and no significant impact would occur.

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9 Telephone Interview with Julie Striplin Lowry, Senior Regional Planning Assistant, Los Angeles County Department of Regional Planning, March 17, 2003.

10 Department of Conservation website, Division of Land Resource Protection, May 11, 2004.

7. PROJECT MITIGATION MEASURES

No feasible mitigation exists to reduce significant impacts resulting from the conversion of 335 acres of prime agricultural land on the Landmark Village project site to a less than significant level. While development of the Newhall Ranch Specific Plan has the potential to result in agriculture-related impacts to project residents as a result of agricultural activities conducted in Ventura County and in the vicinity of the project site, the County adopted mitigation measures for potential agriculture-related impacts as part of the Newhall Ranch Specific Plan that would reduce impacts to below a level of significance. These mitigation measures are found in the previously adopted Mitigation Monitoring Plan for the Specific Plan (May 2003). The project applicant has committed to implementing these mitigation measures to ensure that future development within the Newhall Ranch Specific Plan area is safe and that such development would not adversely affect adjacent agricultural operations.

a. Mitigation Measures Required by the Adopted Newhall Ranch Specific Plan, as they Relate to the Landmark Village Project

Mitigation measures to reduce potential impacts to residential uses resulting from agricultural operations in Ventura County were adopted by the County in connection with its approval of the Newhall Ranch Specific Plan (May 2003). These measures are preceded by "SP," which stands for Specific Plan. Mitigation Measure 4.4-1 is applicable to the Landmark Village tract map site; however, Mitigation Measure 4.4.2 is not applicable due to its distance from Ventura County.

SP 4.4-1 Purchasers of homes located within 1,500 feet of an agricultural field or grazing area are to be informed of the location and potential effects of farming uses prior to the close of escrow.

SP 4.4-2 New homes within 1,500 feet of farming uses within Ventura County, if any, are to be informed that agricultural activities within Ventura County are protected under the County's right-to-farm ordinance, and are to be provided with copies of the County's Amended Ordinance 3730-5/7/85. (*This mitigation measure is not applicable to the Landmark Village tract map site due to its distance from Ventura County.*)

b. Additional Mitigation Measures Proposed by this EIR

No feasible mitigation measures exist to reduce impacts resulting from the conversion of 338 acres of prime agricultural land to a less than significant level; therefore, this impact was considered a significant unavoidable impact of the Newhall Ranch Specific Plan. Based on the information contained in the certified Newhall Ranch Specific Plan Program EIR, the County Board of Supervisors adopted mitigation and a Statement of Overriding Considerations.

The implementation of Specific Plan Mitigation Measure 4.14-1 would mitigate potential impacts to project residents purchasing homes located within 1,500 feet of an agricultural field or grazing area from being incidentally exposed to agricultural-related activities. The proposed project would not result in any other significant impacts relating to agricultural resources and, therefore, no additional mitigation is needed or required.

8. CUMULATIVE IMPACTS

Conversion of agricultural land to urban uses has a long history in Los Angeles County. According to Los Angeles County Farmland Conversion Reports prepared by the California Department of Conservation, Division of Land Resource Protection, for the 10 years between 1992 and 2002 approximately 54,543 acres of cultivated land have been committed to non-agricultural uses. This figure includes 2,448 acres of State Important Farmlands and 10,519 acres of Grazing Land.

Buildout of the Newhall Ranch Specific Plan and other reasonably foreseeable future related cumulative development in the region will result in the conversion of prime agricultural soils to non-agricultural uses; continuing an on-going trend in Los Angeles County. Given that implementation of the Landmark Village project and related off-site improvements would eliminate 338 acres of prime agricultural land, the Landmark Village project's contribution to the conversion of prime agricultural land in the region is considered cumulatively considerable.

Continued development of agricultural lands also has the potential to result in indirect impacts to agricultural operations (land use conflicts, crop theft, etc.). These impacts can result in a decline in the profitability of agriculture operations such that adjacent farmland owners may be induced to sell their properties in urbanizing areas. The Landmark Village project site is not located adjacent to lands zoned for agricultural use, nor is active agricultural land located adjacent to the tract map site. Moreover, mitigation measures have been incorporated into the Specific Plan requiring a setback separating development within the Newhall Ranch Specific Plan from agricultural activity in Ventura County. Therefore, the proposed project would not contribute significantly to this indirect cumulative impact. The conversion of agricultural lands to urban uses is a policy issue that lies in the hands of the local jurisdiction. Such conversion in Los Angeles County may not be considered significant, whereas, it may be significant in another jurisdiction. Each cumulative project should be evaluated on a case-by-case basis relative to its impact on local agricultural productivity.

9. CUMULATIVE MITIGATION MEASURES

No feasible mitigation measures exist to reduce the identified cumulative impacts to a less than significant level.

10. SIGNIFICANT UNAVOIDABLE IMPACTS

a. Project-Specific Impacts

The irreversible loss of 338 acres of prime agricultural land is considered a significant project impact. No feasible mitigation exists to reduce the impact resulting from the conversion of 338 acres of prime agricultural land on the Landmark Village project site to a less than significant level. Therefore, the project-specific impacts resulting from the loss of prime agricultural land are considered significant and unavoidable.

b. Cumulative Impacts

The cumulative conversion of prime agricultural land to non-agricultural uses constitutes a loss of an irreplaceable resource and is considered a significant cumulative impact. No feasible mitigation exists for this conversion; therefore, it constitutes a significant unavoidable cumulative impact.

4.19 UTILITIES

1. SUMMARY

Uses proposed by the Landmark Village project are within those allowed by the Newhall Ranch Specific Plan and that were previously analyzed in the Newhall Ranch Specific Plan Program EIR. The Landmark Village project would require energy resources and infrastructure to serve the project site. Projections for energy supply and demand by Southern California Edison and the Southern California Gas Company indicate that the agencies would have sufficient electricity and natural gas supply to serve the project site. Consistent with the Newhall Ranch Specific Plan Program EIR, providing electricity and natural gas to the Landmark Village project site would not require considerable extension of infrastructure. In addition, the Landmark Village project would be required to comply with Title 24 and AB 970 energy conservation measures. With implementation of the mitigation measures from the certified Newhall Ranch Specific Plan Program EIR, no significant impacts to electricity and natural gas resources or infrastructure would occur as a result of the Landmark Village project.

2. INTRODUCTION

a. Relationship of Project to Newhall Ranch Specific Plan Program EIR

Sections 4.13 and 4.14 of the Newhall Ranch Specific Plan Program EIR identified and analyzed the existing conditions, potential impacts, and mitigation measures associated with natural gas and electricity resources, respectively, for the entire Newhall Ranch Specific Plan. The Newhall Ranch Specific Plan EIR mitigation program was adopted by the County of Los Angeles (County) in findings and in the revised Mitigation Monitoring Plan for the Specific Plan. The Newhall Ranch Specific Plan Program EIR concluded that Specific Plan implementation would result in significant impacts to natural gas and electricity resources, but that the identified mitigation measures would reduce the impacts to below levels of significance. All subsequent project-specific development plans and tentative subdivision maps must be consistent with the Newhall Ranch Specific Plan, and the County of Los Angeles General Plan and Santa Clarita Valley Areawide Plan.

This project-level EIR is tiering from the previously certified Newhall Ranch Specific Plan Program EIR. **Section 4.19** discusses, at the project-specific level, the Landmark Village project's existing conditions relative to utilities, the project's impacts on energy resources, the applicable mitigation measures from the Newhall Ranch Specific Plan Program EIR, and any additional mitigation measures recommended by this EIR for the Landmark Village project.

3. SUMMARY OF THE NEWHALL RANCH SPECIFIC PLAN PROGRAM EIR FINDINGS

a. Electricity

Buildout of uses in the Specific Plan would place new demands on electrical service provided by Southern California Edison (SCE), including the need for new delivery infrastructure; however, neither the Newhall Ranch Specific Plan nor the anticipated cumulative project development would have a significant impact on electrical resources provided by SCE. Nonetheless, because petroleum-based energy is a nonrenewable and finite resource, the Specific Plan would be subject to the conservation measures required under Title 24 of the *California Code of Regulations*, which would assure responsible electricity consumption on the part of the Specific Plan developer, residents, employees, and others. In addition, the Specific Plan would be required to meet the requirements of SCE in terms of infrastructure relocation (if applicable). Environmental safety concerns relative to the high-power transmission lines on the project site and electromagnetic fields are discussed in **Section 4.21**, **Environmental Safety**.

b. Natural Gas

Buildout of uses in the Specific Plan would place new demands on natural gas service provided by the Southern California Gas Company (SCGC), including the need for new delivery infrastructure. Neither the proposed Specific Plan (including the proposed water reclamation plant) nor anticipated cumulative project development would have a significant impact on natural gas resources provided by SCGC. However, because natural gas is a nonrenewable and finite resource, the Specific Plan would be subject to the conservation measures required under Title 24 of the *California Administrative Code*, which would assure responsible natural gas consumption on the part of the Specific Plan developer, residents, employees, and others. In addition, the Specific Plan would be required to meet the requirements of SCGC in terms of infrastructure relocation (if applicable) and development within SCGC easements. Potential safety impacts relative to placing development in proximity to SCGC high-pressure transmission lines are discussed in **Section 4.21**.

4. EXISTING CONDITIONS

The information presented in the Newhall Ranch Specific Plan Program EIR, Sections 4.13 and 4.14, Natural Gas and Electricity, respectively, assessed the existing setting of the entire Newhall Ranch Specific Plan, including the Landmark Village project site. It was determined that all significant natural gas and electricity effects were identified, adequately addressed and mitigated or avoided in the Newhall Ranch Specific Plan Program EIR and related environmental findings. Therefore, at the project level, this EIR incorporates by reference the existing conditions analysis and background information relating to

natural gas and electricity resources and infrastructure from the certified Newhall Ranch Specific Plan Program EIR (Sections 4.13 and 4.14).

a. Electricity

The Landmark Village tract map site is currently vacant and no electrical distribution infrastructure presently exists on the site. The nearest facility is an SCE tower located north of State Route 126 (SR-126) and east of Chiquito Canyon Road. There is also an existing 66 kilovolts (kV)/16kV overhead electric power line that runs parallel to SR-126. In addition, electrical lines exist approximately 700 feet north of SR-126 and the eastern edge of the project site.

b. Natural Gas

The Landmark Village tract map site is currently vacant and no natural gas infrastructure exists on the site. The closest facility is an SCGC pipeline located in the northern utility easement and crosses Long Canyon Road, in the western portion of the site. In addition, there is a gas distribution main that runs east/west within the southern right-of-way of SR-126 and extends to Chiquito Canyon Road from The Old Road.

c. Energy Conservation

The California Energy Commission passed Assembly Bill (AB) 970 in the summer of 2000 and it was signed into law on September 6, 2000. This legislation modified Title 24 requirements in order to promote energy efficiency in new construction. The new standards are effective for building permits issued on or after June 1, 2001. The standards are intended to reduce peak demand and so are more stringent in areas with high cooling loads such as Sacramento, the Central Valley, and all of inland Southern California. All new development projects are required to comply with the Title 24 requirements for the climate zone in which the project is proposed. The primary changes involve tighter air duct systems to reduce energy loss and high efficiency window glass. The new duct provisions will require leakage to be less than 6 percent of nominal airflow and certification of installation from installers. The improved windows have spectrally selective glass that reduces heat radiation. These standards are estimated to improve energy efficiency up to 23 percent for residential uses in climate zone 15 (High Desert). Certain features in the new standards require third party verification.

5. PROPOSED PROJECT IMPROVEMENTS

The applicant proposes to develop 1,444 residential dwelling units with a total residential population of 3,680[1] approximately 1,033,000 square feet of commercial/mixed use space, a 9-acre elementary school, a 16-acre Community Park, four private recreational facilities, open space and river trail uses, and supporting roadway, drainage and infrastructure improvements. In addition, the applicant proposes to construct the Long Canyon Road Bridge over the Santa Clara River, and install exposed and buried bank stabilization on portions of the south and north side of the river. Please refer to **Section 1.0**, **Project Description**, of this EIR for a complete description of the proposed project.

6. PROJECT IMPACTS

The analysis of potential impacts to electricity and natural gas resources associated with construction and operation of the proposed Landmark Village project, including the significance criteria applicable to assessing such impacts, is presented below.

a. Significance Threshold Criteria

(1) Electricity

Appendix G of the *California Environmental Quality Act (CEQA) Guidelines* does not include thresholds for determining the significance of impacts related to electricity. For purposes of this analysis, impacts related to electricity are considered significant if the project would:

- Consume fuel or energy that could not be accommodated within the long-term electricity source and distribution planning of SCE;
- Fail to comply with the energy building regulations adopted by the California Energy Commission (Title 24 of the California Code of Regulations).
- Require utilities or services that are not available to serve the proposed project; or the service facility requires considerable extension to the project site; and/or there exists an inadequate service supply.

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1 This is based on County provided estimates of 3.17 persons per single-family dwelling, 2.38 persons per multi-family dwelling and per apartment.

(2) Natural Gas

Appendix G of the *CEQA Guidelines* does not include thresholds for determining the significance of impacts related to natural gas. For purposes of this analysis, impacts related to natural gas are considered significant if the project would:

- Consume fuel or energy that could not be accommodated within the long-term natural gas source and distribution planning of SCGC;
- Rail to comply with the energy building regulations adopted by the California Energy Commission (Title 24 of the California Code of Regulations); or
- Require utilities or services that are not available to serve the proposed project; or the service facility requires considerable extension to the project site; and/or there exists an inadequate service supply.

b. Impact Analysis

(1) Electricity

(a) Electrical Supply and Demand

During construction of the proposed uses, energy would be required to serve construction trailers, power tools, tool sheds, work and storage areas, and other facilities associated with development activities. Construction of the proposed uses is not expected to consume significant amounts of electricity or significantly impact the distribution network, because the construction activity would be phased over a five-year development period, and would cease as the development is built out.

At buildout, electricity would be required to operate heating and cooling equipment, and provide lighting, power appliances, and equipment. As shown in **Table 4.19-1, Electrical Demand – Landmark Village**, the annual electrical demand for the project site at buildout would be approximately 47,608,151 kilowatt-hours of energy per year. Energy resources are available commercially and would likely be utilized at other sites if not used for this project.

Table 4.19-1
Electrical Demand – Landmark Village

Designation	Quantity	Units	Usage Rate (kWh/year)	Total (kWh/year)
Residential Units	1,444	du	6,081	8,780,964
Non-Residential				
Office	695,400	sq.ft.	8.8	6,119,520
Retail	337,600	sq.ft.	11.8	3,983,680
School[1]	392,040	sq.ft.	6.3	2,469,852
Misc (Recreation)[2]	2,983,424	sq.ft.	8.8	26,254,135
			Total	**47,608,151**

Source: Consumption factors are from the South Coast Air Quality Management District, Air Quality Handbook for Preparing EIRs, Revised 1994.
kWh = kilowatt-hour; du = dwelling unit; sq.ft. = square feet
[1] *Assumes a student population of 750 (per the School Facilities Funding Agreement between the Castaic Union School District and the Newhall Land and Farming Company) and 55 square feet per student (California Department of Education, School Site Analysis and Development [1987]).*
[2] *24.0/sq.ft. is estimated based on similar land use rates.*

The most recent projections for energy supply and demand in California are available through 2010. The California Energy Commission has indicated that power providers, including SCE, will have an available supply of approximately 62,000 megawatts of power to meet a projected statewide demand of about 58,000 megawatts in 2010.[2] SCE will monitor the power situation within its service area and obtain firm contracts with out-of-state suppliers as necessary.

Section 4.14 of the Newhall Ranch Specific Plan states that the total electricity consumption by the Specific Plan at buildout would be approximately 233.2 million kilowatt hours (kWh) per year. It was determined that no significant impact on SCE's electricity supply was expected to result from Specific Plan implementation. Therefore, the increase in electricity demand created by full occupancy of the Landmark Village project, which is part of the Newhall Ranch Specific Plan, could be accommodated by available sources of supply, and the impact of the project on electrical supply would be less than significant.

With regard to energy consumption, all units constructed must comply with Title 24 requirements, which is consistent with the mitigation measures described below, and adopted by the County's Board of Supervisors for the approved Newhall Ranch Specific Plan.

2 California Energy Commission, California's Summer 2004 Electrical Supply and Demand Outlook, Table 3, June 2004.

(b) Infrastructure Extension

Electrical utilities to serve the proposed project would be constructed in two phases. The first phase would relocate the existing 66kV/16kV overhead electric power line running parallel to SR-126. New power lines would be constructed from The Old Road west across Castaic Creek to approximately 300 feet west of the Commerce Center Drive and Harrison Parkway intersection within an existing SCE easement. The second phase would construct new transmission lines continuing west along the existing SCE easement approximately 12,000 lineal feet crossing the Chiquito Canyon Landfill, Chiquito Canyon Road, and Chiquito Canyon Creek. An interim 66kV/16kV overhead line would continue southerly approximately 1,200 lineal feet along the west side of the creek, and tie in to the existing electric lines approximately 700 feet north of SR-126. The existing 66KV/16KV overhead line would be utilized to bring electricity east to the proposed Long Canyon Road. A new 16kV line would then be constructed southerly along Long Canyon Road and placed under ground prior to reaching SR-126. This would be the primary electric service for the project site.

The Newhall Ranch Specific Plan concluded that an extension of service facilities to the project site was not considerable and that an adequate electrical service supply existed in the area surrounding the Newhall Ranch Specific Plan. As part of the Specific Plan, an on-site substation would be located adjacent to the existing transmission lines running parallel to the SR-126, in the Potrero Community, and would serve the Newhall Ranch Specific Plan site. The substation location was designed to be as close as possible to existing electrical transmission lines and the center of the Specific Plan site, so that no additional transmission lines would need to be erected between the existing lines and the substation. All utilities constructed for the proposed project would be consistent with SCE Rule 15, which states that the developer is responsible for trenching, backfilling, necessary conduits, and substructures for the installation of distribution lines as their contribution for extending service to a project site. In addition, SCE would review the Landmark Village tract map to ensure access consistency with its standards. Therefore, the proposed project would not require considerable extension of service facilities to the project site, an adequate service supply exists to serve the site, and impacts would be less than significant.

(2) Natural Gas

(a) Natural Gas Supply and Demand

It is expected that little natural gas would be consumed during project construction phases, with the possible exception of gas released during the installation and upgrade of natural gas facilities. The amount consumed by such activities would be minimal and is not considered to significantly impact natural gas supplies or infrastructure.

At buildout, natural gas would be required to operate heating equipment and power appliances. As shown in **Table 4.19-2, Natural Gas Demand - Landmark Village**, the annual natural gas demand for the project site at buildout would be approximately 135,505,776 cubic feet. Energy resources are available commercially and would likely be utilized at other sites if not used for this project.

SCGC predicts that residential, core non-residential, and wholesale requirements are expected to increase through the year 2022, while demand for natural gas associated with oil recovery, electrical power generation, and commercial and industrial uses are expected to drop. Overall, the SCGC predicts that the demand for natural gas within the service area will drop by 6 percent to 1,109 billion cubic feet in the year 2022.[3] Therefore, the increase in natural gas demand created by full occupancy of the Landmark Village project could be accommodated by available sources of supply and the impact of the project on natural gas supply would be less than significant.

With regard to natural gas consumption, all units constructed must comply with Title 24 requirements, which is consistent with the mitigation measures described below, and adopted by the County's Board of Supervisors for the approved Newhall Ranch Specific Plan.

Table 4.19-2
Natural Gas Demand - Landmark Village

Designation	Quantity	Units	Usage Rate (cu.ft./year)	Total (cu.ft./year)
Residential Units				
Single-Family	308	du	79,980	24,633,840
Multi-Family	1,336	du	49,260	65,811,360
Non Residential				
Office	695,400	spineflower	24.0	16,689,600
Retail	337,600	sq. ft.	34.8	11,748,480
School[1]	392,040	sq. ft	24.0[2]	9,408,960
Misc (all other uses)	300,564	sq. ft	24.0	7,213,536
			Total	**135,505,776**

Source: Consumption factors are from the South Coast Air Quality Management District, Air Quality Handbook for Preparing EIRs, Revised 1994.
du = dwelling unit; sq.ft. = square feet
(1) Assumes a student population of 750 (per the School Facilities Funding Agreement between the Castaic Union School District and the Newhall Land and Farming Company) and 55 square feet per student (California Department of Education, School Site Analysis and Development [1987]).
(2) 24.0/sq.ft. is estimated based on similar land use rates.

3 Southern California Gas Company, 2002 California Gas Report.

(b) Infrastructure Extension

New natural gas distribution infrastructure would need to be extended onto the Landmark Village site. The gas distribution main needed to serve the site would be constructed in two phases. The first phase would consist of an 8-inch line extending from the northeast corner of the project site at Castaic Creek Bridge that would connect to the existing 8-inch gas distribution main that runs east/west along SR-126. The second phase of the gas distribution main would continue from the Castaic Creek Bridge crossing and continue to Commerce Center Drive where it would cross SR-126 and continue east along the south Henry Mayo Drive right-of-way and tie in at the existing Saugus WRP on The Old Road. Design and sizing of all natural gas infrastructure would support the Landmark Village project and meet all relevant engineering requirements to the satisfaction of SCGC and the Los Angeles County Department of Regional Planning. Because serving new areas and upgrading the size of existing gas mains is routine for SCGC, and because SCGC's long-term infrastructure planning takes local and regional general plans into account so that new developments are planned for, extending natural gas infrastructure to the project site would not result in a significant impact.

7. MITIGATION MEASURES

Although the proposed Landmark Village project may result in potential significant impacts to electricity and natural gas utilities, the County already has imposed mitigation measures required to be implemented as part of the Newhall Ranch Specific Plan. These mitigation measures, as they relate to electricity and natural gas utilities, are found in the certified Newhall Ranch Specific Plan Program EIR and the adopted Mitigation Monitoring Plan for the Specific Plan (May 2003). The project applicant has committed to implementing the applicable mitigation measures from the Newhall Ranch Specific Plan to ensure that future development of the project site would not result in impacts to electricity and natural gas utilities and not adversely affect adjacent properties.

a. Mitigation Measures Required by the Adopted Newhall Ranch Specific Plan, as they Relate to the Landmark Village Project

The following mitigation measures (**Mitigation Measure Nos. 4.14-1 – 4.14-6 and 4.13-1 – 4.13-4, below**) were adopted by the County in connection with its approval of the Newhall Ranch Specific Plan (May 2003). The applicable mitigation measures will be implemented to mitigate the potentially significant electricity and natural gas utility impacts associated with the proposed Landmark Village project. These measures are preceded by "SP," which stands for Specific Plan.

(1) Electricity

SP 4.14-1 All development within the Specific Plan area shall comply with the Energy Building Regulations adopted by the California Energy Commission (Title 24 of the *California Code of Regulations*).

SP 4.14-2 Southern California Edison or other energy provider is to be notified of the nature and extent of future development on the Specific Plan site prior to recordation of all future subdivisions.

SP 4.14-3 All future tract maps are to comply with Southern California Edison or other energy provider guidelines for grading, construction, and development within SCE easements.

SP 4.14-4 Electrical infrastructure removals and relocations are to be coordinated between the Specific Plan engineer and Southern California Edison or other energy provider as each tract is designed and constructed.

SP 4.14-5 All future tract maps are to be reviewed by Los Angeles County to ensure adequate accessibility to Edison or other energy provider facilities as a condition of their approvals.

SP 4.14-6 Upon transfer of the High Country Special Management Area to another entity for long-term maintenance, continued and adequate access to all Southern California Edison facilities in the High Country Special Management Area is to be ensured within the transfer agreement. (*This mitigation measure is not applicable to the Landmark Village project because Landmark Village is not located within the High Country SMA.*)

(2) Natural Gas

SP 4.13-1 All development within the Specific Plan area shall comply with the Energy Building Regulations adopted by the California Energy Commission (Title 24 of the *California Code of Regulations*).

SP 4.13-2 A letter from the Southern California Gas Company or other gas provider is to be obtained prior to recordation of all future subdivisions stating that service can be provided to the subdivision under construction.

SP 4.13-3 The Specific Plan is to meet the requirements of SCGC in terms of pipeline relocation, grading in the vicinity of gas mains, and development within Southern California Gas

Company easements. These requirements would be explicitly defined by SCGC at the future tentative map stage.

SP 4.13-4 All potential buyers or tenants of property in the vicinity of Southern California Gas Company transmission lines are to be made aware of the line's presence in order to assure that no permanent construction or grading occurs over and within the vicinity of the high-pressure gas mains.

b. Additional Mitigation Measures Proposed by this EIR

No additional mitigation measures beyond those identified in the Newhall Ranch Specific Plan Program EIR are required or necessary, because the Landmark Village project does not result in any significant electricity and natural gas utilities impacts after implementation of the above mitigation measures.

8. CUMULATIVE IMPACTS

Because the Landmark Village project implements a part of the Newhall Ranch Specific Plan, this EIR is tiering from the certified Newhall Ranch Specific Plan Program EIR in accordance with Public Resources Code section 21093(a) and *CEQA Guidelines* Section 15168(c). Public Resources Code Section 21093 encourages a lead agency to "tier" from a previously certified program EIR, whenever feasible. In this way, the Draft EIR can focus on site-specific issues and allow the County, as the lead agency, to concentrate on issues ripe for decision while excluding from consideration issues already decided (*CEQA Guidelines* Sections 15168(c) and 15385).

In this case, cumulative impacts on energy supply and infrastructure associated with development of the entire Newhall Ranch Specific Plan were fully evaluated in Sections 4.13, Natural Gas and 4.14, Electricity of the Newhall Ranch Specific Plan Program EIR. Consequently, this EIR incorporates by reference the natural gas and electricity analysis and conclusions from that certified EIR. That analysis concluded that the cumulative development scenario (referred to as the "Santa Clarita Valley Cumulative Buildout Scenario") would not have a significant impact on electricity or natural gas. Therefore, the Landmark Village project, in conjunction with other related cumulative development in the Valley, would have less than significant impacts on electricity and natural gas resources.

9. CUMULATIVE MITIGATION MEASURES

Cumulative development would be subject to the Energy Building Regulations adopted by the California Energy Commission (Title 24 of the *California Code of Regulations*); therefore, no further mitigation for cumulative development is required.

10. SIGNIFICANT UNAVOIDABLE IMPACTS

a. Project-Specific Impacts

Provided that the above mitigation measures are implemented, no significant unavoidable impacts are expected to result from implementation of the proposed project.

b. Cumulative Impacts

Provided that the above mitigation measure is implemented, no significant unavoidable cumulative impacts are expected to result from implementation of the proposed project.

4.20 MINERAL RESOURCES

1. SUMMARY

The Landmark Village project site, utility corridor, and borrow site are located within a Mineral Resource Zone (MRZ) 2 zone, which indicates that information exists that identifies the area as a location with significant mineral deposits present, or a location with a high likelihood of the presence of mineral deposits. The water tank sites are located in the MRZ-3 zone, which indicates that mineral deposits are expected to occur in this area, but the extent of such deposits is unknown at the present time. However, neither the tract map site, utility corridor, borrow site, nor water tank sites are located in active mineral extraction operation areas. Further, the tract map site, utility corridor, borrow site, and water tank sites are not identified as a "locally-important mineral resource recovery site" or a "regionally significant construction aggregate resource area" by the County of Los Angeles General Plan, the Santa Clarita Valley Areawide Plan, or the Newhall Ranch Specific Plan. In addition, at the time the Newhall Ranch site was designated by the County of Los Angeles as "Specific Plan," which serves as the zoning designation for the property, there were no areas within Newhall Ranch used for mineral extraction. Under the Specific Plan designation, the area currently is zoned for development of various Specific Plan land uses and not long-term mineral extraction activities.

The Specific Plan zoning designation allows for the development of a mixed-use planned community, with sand and gravel extraction activities allowed during tract grading and construction phases on the sites to be developed. Additionally, extraction activities are permitted in the Visitor-Serving (VS) and Open Area (OA) zones under a conditional use permit, which is not proposed. Thus, the current zoning designation for the entire Newhall Ranch site allows the area to be available for mineral extraction uses on a limited basis in areas that are already proposed for, and in association with, development (i.e., on tentative tract map sites). Furthermore, the majority of mineral resources of value are expected to be located in the River Corridor and not on the project site, and the continued availability of these resources would not be significantly affected by the proposed project. Therefore, project implementation will not result in a significant impact in relation to the loss of availability of a known mineral resource or a locally important mineral resource recovery site.

2. BACKGROUND

a. Relationship of Project to Newhall Ranch Specific Plan Program EIR

Sections 2.0 and 4.1 of the Newhall Ranch Specific Plan Program EIR identified the existing conditions and impacts associated with mineral resources for the entire Newhall Ranch Specific Plan. All subsequent project-specific development plans and tentative subdivision maps must be consistent with the Newhall Ranch Specific Plan, adopted May 2003, the County of Los Angeles General Plan, and the Santa Clarita Valley Areawide Plan.

This project-level EIR is tiering from the previously certified Newhall Ranch Specific Plan Program EIR. This section discusses the Landmark Village project's existing conditions, potential environmental impacts, and mitigation measures, if any, recommended by this EIR for the Landmark Village project.

3. SUMMARY OF THE NEWHALL RANCH SPECIFIC PLAN PROGRAM EIR FINDINGS

The Specific Plan site is underlain by mineral and gravel deposits and contains three types of MRZs as identified by the California Department of Conservation, Division of Mines and Geology. The predominant source of such deposits is found along the Santa Clara River, which is designated as an MRZ-2 zone. This zone indicates that information exists that identifies the area as a location with significant mineral deposits present, or a location with a high likelihood of the presence of mineral deposits. The vast majority of the Newhall Ranch site, primarily within the Santa Susana Mountains, is designated as an MRZ-3 zone. This zone indicates that mineral deposits are expected to occur in this area, but the extent of such deposits is unknown at the present time. The remainder of the Newhall Ranch site is classified as an MRZ-1 zone, which indicates that information exists to indicate no substantial deposits of mineral or gravel are found within the area.

On May 27, 2003, the Los Angeles County Board of Supervisors determined that the existing (and historical) land uses on the Newhall Ranch site, including oil and natural gas operations, agriculture, and cattle grazing would give way to a Specific Plan zoning designation to allow for development of a mixed-use planned community. As a result, the entire Newhall Ranch site is currently zoned for Specific Plan uses, as described in the adopted Newhall Ranch Specific Plan.

4. EXISTING CONDITIONS

a. State Surface Mining and Reclamation Act

The State Surface Mining and Reclamation Act of 1975 (SMARA), as amended, 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.

In compliance with SMARA, the State Division of Mines and Geology prepared Mineral Resource Zone maps that identify the following mineral resource zones:

MRZ-1 Areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence.

MRZ-2 Areas where adequate information indicates that significant mineral deposits are present, or where it is judged that a high likelihood for their presence exists.

MRZ-3 Areas containing mineral deposits the significance of which cannot be evaluated from available data.

MRZ-4 Areas where available information is inadequate for assignment to any other MRZ zone.

As shown in **Figure 4.20-1, Mineral Resource Zones**, the Landmark Village project site, utility corridor, and borrow site are located within an MRZ-2 zone. The water tank sites are located in the MRZ-3 zone.

b. Local Land Use Plans

Two adopted land use plans govern unincorporated land development in the Santa Clarita Valley Planning Area. The plans are the County of Los Angeles General Plan and the Santa Clarita Valley Areawide Plan. The County of Los Angeles General Plan serves as the overall policy document for the unincorporated portions of the County, including the Specific Plan site. The land use designations in the General Plan are broad in nature, as are the types of uses permitted within each designation. More detailed Area Plans have been prepared for various planning areas throughout the County. These include the Santa Clarita Valley Areawide Plan, which provides detailed policy statements, land uses, and development standards for the Santa Clarita Valley. The Santa Clarita Valley Areawide Plan includes the unincorporated Newhall Ranch Specific Plan area. In addition to the County's General Plan and the Santa Clarita Valley Areawide Plan, land development on the project site is governed by the Newhall Ranch Specific Plan, which serves as the zoning for the property. Neither the County of Los Angeles General Plan, the Santa Clarita Valley Areawide Plan, nor the Newhall Ranch Specific Plan identifies the Landmark Village project site as a "locally-important mineral resource recovery site," a "regionally significant construction aggregate resource area," or an available site with known mineral resources of value to the area, region, or state.

5. PROPOSED PROJECT IMPROVEMENTS

The applicant proposes to develop 1,444 residential dwelling units with a total residential population of 3,680,[1] approximately 1,033,000 square feet of commercial/mixed use space, a 9-acre elementary school, a 16-acre community park, four private recreational facilities, open space and river trail uses, and supporting roadway and infrastructure improvements within the Newhall Ranch Specific Plan site. In addition, the applicant proposes to construct the Long Canyon Road Bridge over the Santa Clara River, and install exposed and buried bank stabilization on portions of the south and north side of the Santa Clara River.

6. PROJECT IMPACTS

The analysis of potential impacts to mineral resources associated with construction and operation of the proposed project, including the significance criteria applicable to assessing such impacts, is presented below.

a. Significance Threshold Criteria

According to Appendix G of the 2005 *California Environmental Quality Act (CEQA) Guidelines*, a project would have a significant impact on mineral resources if it would:

- Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state; or,
- Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.[2]

This is the significance criteria to be applied to the proposed project.

b. Impact Analysis

The Landmark Village project site, utility corridor, and borrow site are located within an MRZ-2 zone, which indicates that information exists that identifies the area as a location with significant mineral

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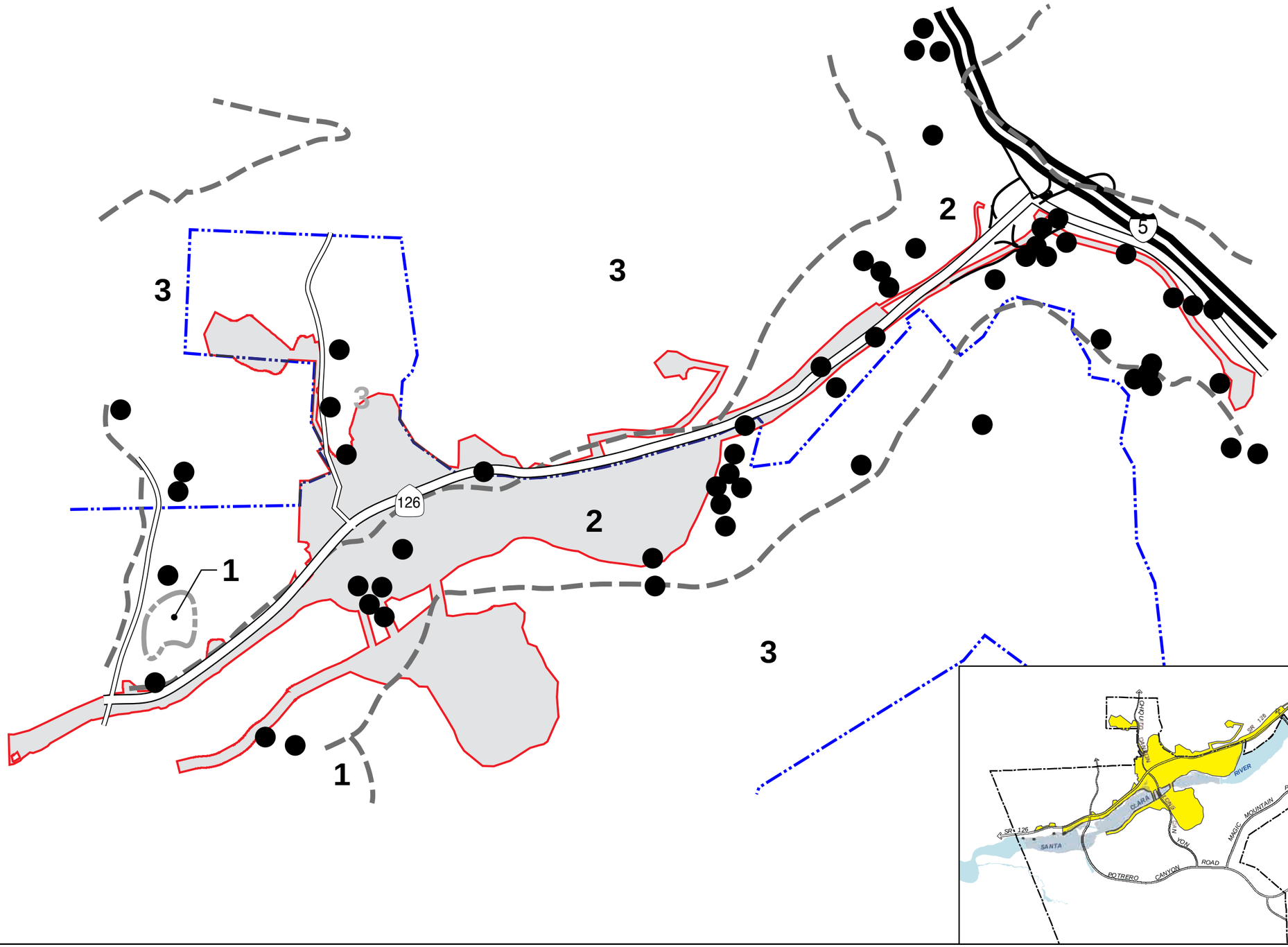
1 This number is based upon County of Los Angeles provided estimates of 3.17 persons per single-family dwelling and 2.38 persons per multi-family dwelling and apartment.

2 The Initial Study prepared for the Landmark Village project identified "oil extraction activities in portions of the site" and that the "Project site has been previously used for oil extraction" as relevant to this impact category. However, presently, there are no active oil extraction operations on the Landmark Village project site as the oil companies that previously conducted such operations have determined that oil extraction operations are no longer economically feasible at this location.



SOURCE: California Department of Conservation, Division of Mines and Geology; Mineral Land Classification Map, Aggregate Resources Only, 1987.

FIGURE **4.20-1**

Mineral Resource Zones

deposits present, or a location with a high likelihood of the presence of mineral deposits. The water tank sites are located in an MRZ-3 zone, which indicates that mineral deposits are expected to occur in this area, but the extent of such deposits is unknown at the present time. However, neither the tract map site, utility corridor, borrow site, nor water tank sites are located in active mineral extraction operation areas. Further, the tract map site, utility corridor, borrow site, and water tank sites are not identified as a "locally-important mineral resource recovery site," a "regionally significant construction aggregate resource area," or an available site with known mineral resources of value to the area, region, or state by the County of Los Angeles General Plan, the Santa Clarita Valley Areawide Plan, or the Newhall Ranch Specific Plan. In addition, at the time the Newhall Ranch site was designated by the County of Los Angeles as "Specific Plan," which serves as the zoning designation for the property, there were no areas within Newhall Ranch used for mineral extraction. Under the Specific Plan designation, the area currently is zoned for development of various Specific Plan land uses and not long-term mineral extraction activities.

The Specific Plan zoning designation allows for the development of a mixed-use planned community, with sand and gravel extraction activities allowed during tract grading and construction phases on the sites to be developed. Additionally, extraction activities are permitted in the VS and OA zones under a conditional use permit, which is not proposed. Thus, the current zoning designation for the entire Newhall Ranch site allows the area to be available for mineral extraction uses on a limited basis in areas that are already proposed for, and in association with, development (i.e., on tentative tract map sites). Furthermore, the majority of mineral resources of value are expected to be located in the River Corridor and not on the project site and, therefore, the continued availability of these resources would not be significantly affected by the proposed project. Therefore, project implementation would not result in a significant impact in relation to the loss of availability of a known mineral resource or a locally important mineral resource recovery site.

7. PROJECT MITIGATION MEASURES

a. Mitigation Measures Required by the Adopted Newhall Ranch Specific Plan, as they Relate to the Landmark Village Project

No mitigation measures relating to mineral resources were recommended or adopted for the Newhall Ranch Specific Plan.

b. Additional Mitigation Measures Proposed by this EIR

No mitigation measures are recommended by this EIR as no significant impacts have been identified.

8. CUMULATIVE IMPACTS

The California Division of Mines and Geology (CDMG) monitors the consumption of aggregate resources in six separate Production-Consumption (PC) regions within Los Angeles County. In the most recent update report, the CDMG reported that demand for aggregates in the Saugus-Newhall PC region was approximately 13.6 million tons for the 12-year period from 1982 to 1994. The CDMG estimates that the existing sand and gravel resources in Los Angeles County will be exhausted by the year 2016 unless new reserves are permitted. The County is responsible for the permitting of new or expanded mineral extraction operations (e.g., sand and gravel). Because the Newhall Ranch site, generally, and the Landmark Village site, specifically, are zoned for designated Specific Plan land uses, the County has no plans to utilize the proposed project site for long-term mineral extraction. Therefore, the proposed project would not result in a long-term cumulatively considerable loss of mineral resources. Hence, no cumulative impact would occur due to development of the proposed project site.

9. CUMULATIVE MITIGATION MEASURES

No mitigation is required, because project implementation would not result in a cumulatively considerable loss of mineral resources.

10. SIGNIFICANT UNAVOIDABLE IMPACTS

a. Project Impacts

No significant unavoidable project impacts would occur with regard to mineral resources due to the proposed development of the Landmark Village project site.

b. Cumulative Impacts

No significant unavoidable cumulative impacts would occur with regard to mineral resources due to the proposed development of the Landmark Village project site.

4.21 ENVIRONMENTAL SAFETY

1. SUMMARY

The potential environmental safety impacts relative to development of the Landmark Village project site include soil contamination attributable to past and present agricultural activities, on-site petroleum (i.e., oil) drilling and pipeline activities, and the disposal of on-site hazardous materials debris. Hazardous materials generally include petroleum products (including oil and gasoline), automotive fluids (antifreeze, hydraulic fluid), paint, cleaners (dry cleaning solvents, cleaning fluids), and pesticides from agricultural uses (at higher concentrations). Byproducts generated as a result of activities using hazardous materials (such as dry cleaning solvents, oil and gasoline) are considered hazardous waste. Contamination usually takes the form of a hazardous materials or waste spill in soil. Such contamination can penetrate soils into the groundwater table, resulting in the pollution of a local water supply. Commercial uses, particularly those using underground storage tanks (UST), are most common in causing such contamination.

Potential environmental safety impacts associated with the project site involve observed stained soil (including possible petroleum hydrocarbon contamination) near abandoned oil wells and pipelines, aboveground storage tanks (ASTs), and equipment storage areas. Unless mitigated, these potentially contaminated soils could result in significant impacts, especially if construction utilizing these soils, or contamination within these soils, was permitted without proper monitoring and testing. When remediated to local, state, and federal standards, including re-abandonment procedures for previously abandoned wells and pipelines, any potentially significant impacts relative to these conditions would be reduced to below a level of significance and, therefore, would not result in environmental safety hazards to Landmark Village residents, employees, and/or visitors, or to adjacent properties.

Another potential safety impact associated with the project site relates to the disposal of on-site debris, including asbestos-containing materials (ACMs). Unless appropriately disposed of, ACMs could result in safety hazards to project construction workers.

The presence of pesticides in the soils from historic agricultural operations, and the continuing use of pesticides in connection with ongoing agricultural activities, constitutes a potential impact, although the impact does not rise to a significant level. Soil sampling has been conducted to determine on-site concentrations of pesticides. The results showed no concentration of hazardous pesticides exceeding the residential or industrial use Preliminary Remediation Goals. Additionally, no Proposition 65 pesticides have been used on the Landmark Village project site. With respect to the future use of pesticides, due to the regulation of those pesticides used by agricultural activities occurring on Newhall Ranch, including the chemical and physical properties of those pesticides used, the requirement to use the pesticides in accordance with manufacturer specifications, and the mode of application of the pesticides, it is not expected that humans would be subject to either acute overexposure or chronic exposure to any of

the pesticides used. Therefore, the on-site use of pesticides would not create a potential public health hazard, and would create no significant impact to the development property or its residents.

2. INTRODUCTION

a. Relationship of Project to Newhall Ranch Specific Plan Program EIR

Section 4.19 of the Newhall Ranch Specific Plan Program EIR examined the environmental safety issues relative to the Newhall Ranch Specific Plan, described the Specific Plan's potential environmental impacts, and proposed mitigation measures specific to the identified impacts. The Newhall Ranch Specific Plan EIR mitigation program was adopted by Los Angeles County (County) in findings and in the revised Mitigation Monitoring Plan for the Specific Plan. The Final Program EIR concluded that any potentially significant impacts relative to environmental safety that would result from development of the Specific Plan would be reduced to below a level of significance with implementation of the recommended mitigation measures.

This project-level EIR is tiering from the previously certified Newhall Ranch Specific Plan Program EIR. **Section 4.21** discusses, at the project-specific level, the extent of potentially hazardous conditions that exist on the Landmark Village project site, and the potential environmental impacts associated with those conditions. This section also identifies mitigation measures proposed to reduce the identified potentially significant impacts to below a level of significance. The mitigation measures include those measures from the Newhall Ranch Specific Plan Program EIR applicable to the Landmark Village project, in addition to any project-specific mitigation measures recommended by this EIR.

b. References for this EIR Section

This section is based on information contained in three Phase I Environmental Site Assessments specifically prepared for the proposed Landmark Village project, and these reports are included in **Appendix 4.21** of this EIR:

1. *Phase I Environmental Site Assessment Addendum Letter, Parcel Map No. 53108, Highway 126, Newhall Ranch, California*, BA Environmental, May 6, 2004 (see **Appendix 4.21**);

2. *Phase I Environmental Site Assessment of River Village Tentative Tract Map No. 53108, Highway 126, Newhall Ranch, California*, BA Environmental, September 27, 2004 (see **Appendix 4.21**);

3. *Phase I Environmental Site Assessment Addendum Letter of Proposed Water Tank Locations and Utility Corridor Easements Associated with the proposed River Village Development, Tentative Tract Map No. 53108, Highway 126, Newhall Ranch, California*, BA Environmental, September 28, 2004 (see **Appendix 4.21**); and

4. *Phase I Environmental Site Assessment Addendum Letter of Potable and Reclaimed Water Tank Site Associated with the Proposed Landmark Village Development, Tentative Tract Map No. 53108, State Highway 126, Newhall Ranch, California*, BA Environmental, October 3, 2005 (see **Appendix 4.21**).

3. SUMMARY OF THE NEWHALL RANCH SPECIFIC PLAN PROGRAM EIR FINDINGS

The Newhall Ranch Specific Plan Final Program EIR identified certain potentially significant hazardous materials impacts that would result with implementation of the Specific Plan. Specifically, the Final Program EIR determined that potentially significant on-site impacts would occur with respect to past and present oil and natural gas production operations, existing Southern California Edison (SCE) electrical transmission lines, existing high-pressure natural gas lines, the future transport of hazardous waste along State Route 126 (SR-126), and the project's proximity to the Chiquita Canyon Landfill.

In response to the identified potentially significant impacts, the Newhall Ranch Specific Plan Program EIR identified nine feasible mitigation measures.[1] The Board of Supervisors found that adoption of the recommended mitigation measures would reduce the identified potentially significant effects to less than significant levels.

4. EXISTING CONDITIONS

a. Historic Uses, Current Uses and Current Physical Conditions

A brief description is presented below of the historic and current on-site uses of the Landmark Village tract map site, the Adobe Canyon borrow site, the Chiquito Canyon grading site, the utility corridor and the two water tank locations.

(1) Landmark Village Tract Map Site

The tract map site consists of an approximately 292-acre site, located south of Henry Mayo Drive (Highway 126), north of the Santa Clara River, east of the intersection of Henry Mayo Drive (SR-126) and Chiquito Canyon Road, and west of Castaic Creek.

Since prior to 1903 through the present, this site has been used primarily for agricultural production. Between approximately 1968 and 1994, an airstrip occupied the central portion of the site, approximately 200 feet south of SR-126. The airstrip was subsequently removed. The Indian Dunes Motorcycle Park also occupied the central portion of the tract map site from approximately 1972 until approximately 1994,

1 See, Mitigation Measures 4.19-1 through 4.19-9 in both the certified Newhall Ranch Specific Plan Program EIR and the adopted Mitigation Monitoring Plan for the Specific Plan (May 2003).

when it was abandoned and subsequently removed. Since 1994, the development site has been used for agricultural purposes.

From prior to 1903 until prior to 1991, railroad tracks of the Southern Pacific Railroad ran along the northern boundary of the site, approximately 20 to 50 feet south of SR-126. The railroad tracks have been removed; however, some ballast materials still remain. Debris and trash piles were observed along the site of the former tracks.

Several small structures have been located throughout the Landmark Village tract map site from prior to 1947 through the present. The configurations and locations of these structures have changed several times since 1947. One of the building sites on the site is an equipment storage area, located approximately 50 feet south of the intersection of Wolcott Way and SR-126. The storage area contains various pieces of farm equipment and was used for storage purposes between 1952 and 1972, and since approximately 1994 to the present day.

Much of the land was graded and utilized for agriculture at the time the site was inspected. A portion of the property currently is producing crops, while other areas lay fallow. Numerous dirt roads traverse the site. Approximately four small buildings exist on the site and are used in activities related to on-site agricultural production. The site also is occupied by several irrigation wells.

A sheet metal building approximately 400 square feet in size is located in a fenced storage area on the tract map property (approximately 50 feet south of the intersection of Wolcott Way and SR-126). The building, which presently is used to store equipment and grain, was formerly an aircraft hangar, associated with the airstrip formerly located on the site. It is likely that this area was used to fuel and maintain the aircraft and may have been an area used to mix pesticides.

The eastern storage area consists of three buildings and a plastic-sheeting hothouse. The buildings are used for farm equipment storage and packaging, as well as agricultural chemical mixing. There are several small ASTs in this area, several 55-gallon drums and smaller 5-gallon buckets. None of these containers was labeled. Some staining was observed on the dirt in this storage area.

(2) Adobe Canyon Borrow Site

The Adobe Canyon borrow site is located within the Newhall Ranch Specific Plan, just south of the Santa Clara River, west of I-5, easterly and adjacent to Long Canyon. This borrow site is approximately 215 acres in size and, generally, is in an undeveloped state with the exception of a few access roads for oil well drill pads. Elevations range from approximately 925 feet in the vicinity of the Santa Clara River to approximately 1,350 feet at the natural ridgeline in the vicinity of the proposed water tank site. The

borrow site is covered with natural grasses, chaparral and scattered oak trees. Dumped fill associated with past oil well drilling activities is present at various locations within the borrow site. A portion of the borrow site was used in the past for agricultural purposes; however, no pesticides were used in this area. There is evidence of one former oil well, but no staining was observed in the area. Concrete and wood debris were found on the land. No hazardous substances, evidence of USTs, ASTs, or wastewater clarifiers were observed on the borrow site.

(3) Chiquito Canyon Grading Site

The Chiquito Canyon grading site is located primarily within the Newhall Ranch Specific Plan area, in the low-lying hills north of SR-126 and the Santa Clara River. The site consists of approximately 120 acres, covered with natural grasses and scattered chaparral with the exception of the alluvial area within Chiquito Canyon, which is commonly used for farming.

This site is generally undeveloped. The site shows evidence of past oil wells, including a few access roads for oil well drill pads. Two pads (one concrete, one dirt) are located on the site, both likely former oil exploration wells. Some staining was noted around one of these two pads. Dumped fill associated with past oil well drilling activities is present at the eastern portion of this site.

Sometime prior to 1976, related electrical transmission lines crossed from west to east across the Chiquito Canyon grading site. A dirt road crosses the tract map property and leads to an SCE transmission tower located on this grading site. An SCE easement traverses the northern portion of the grading site. An existing electrical tower within this easement is located at the top of one of the proposed, semicircular cut-slopes. A second power line easement is located at the southern portion of the grading site.

No hazardous substances, evidence of USTs, ASTs, or wastewater clarifiers, were observed on the Chiquito Canyon grading site.

(4) Utility Corridor

The utility corridor consists of a narrow strip of land (approximately 35 feet to 140 feet wide), extending approximately 0.8 mile west of San Martinez Grande Canyon Road along SR-126. To the east, the corridor extends along SR-126 to Henry Mayo Road and then along Henry Mayo Road to the Old Road. The utility corridor then extends southeast along the Old Road to the existing Valencia WRP, approximately 1.2 miles southeast of the intersection of SR-126 and I-5.

Portions of the utility corridor site were occupied by Southern Pacific Railroad track easements from prior to 1903 until prior to 1991 when they were removed. Since that time, the former railroad track

easement has been used as an access road. The access road is predominately dirt, with some gravel. Some debris and trash is located along portions of the road. There was no staining or distressed vegetation observed on any portion of the utility corridor. Portions of the utility easement ran beneath both Henry Mayo Road and The Old Road. Both roads have occupied their respective locations from prior to 1952 until present. Additionally, portions of the utility corridor have been occupied by agricultural land from the early 1900s through the present day. The majority of the utility corridor is occupied by agricultural land, although portions of the utility corridor are occupied by vacant undeveloped land covered by native vegetation. Several structures (houses) are located in close vicinity to the utility corridor site.

Portions of the utility corridor are located in the southeast tip of the former Del Valle Oil and Gas Field, which is no longer producing oil. In addition, portions of the utility corridor cross through a part of the Castaic Junction Oil Field, which also is no longer producing oil. Several oil wells and three wash tanks are located in the immediate vicinity of the utility corridor in the Castaic Junction Oil Field. Two oil wells formerly were located approximately 100 feet southeast of SR-126, south of the utility corridor, while a third oil well was located approximately 600 feet to the southeast, also south of the utility corridor.

During the site visit, no hazardous substances, or evidence of USTs, ASTs, or wastewater clarifiers, were observed on the utility corridor site.

(5) Water Tank Sites

The proposed project includes the construction of water tanks, one to be located northeast of the tract map property, one to be located to the northwest and the other to the southwest. From 1903 until the present, the northeastern water tank site, which is located within the Castaic Junction Oil Field, consisted of vacant land. This site consists of approximately 1.24 acres, about 1,300 feet from the northeast corner of the tract map site. One tank is proposed for this site. The easement leading from the tank to the main easement in Chiquito Canyon traverses a small dirt road. An area of oil staining was observed just north of the easement. A pipeline easement, estimated to be approximately 10 feet wide, runs from the tank location, along Wolcott Avenue to the tract map site. Wolcott Avenue occupies a portion of the site, and an oil pipeline crosses Wolcott Avenue near its intersection with SR-126. On the site, low on the slopes of the hill, two pads were cut into the hillside. These pads may have been the locations of former oil production wells or exploratory wells. No staining was observed on the soil surface of either pad.

An alternate location for a water tank is located southwest of the Landmark Village tract map site, in the Adobe Canyon borrow site, located on the south side of the Santa Clara River. This site consists of an approximately 200-foot by 200-foot area, located about 3,000 feet south of the tract map site. A pipeline

easement, estimated to be approximately 10 feet wide, runs from the tank location to the tract map site. The site is undeveloped land, although it shows some evidence of past oil exploration.

Pads cut into the hillsides of the Adobe Canyon borrow site are believed to have been the locations of former oil production wells or exploratory wells. No staining was observed on the soil surface of this area. A pipeline easement runs northwest through the borrow site, and then to the north through agricultural land and across the Santa Clara River into the tract map site. Scattered non-hazardous trash was observed around this area.

Storage would be required for the reclaimed water system, and 500,000 gallons of storage would be provided at the Newhall Ranch WRP as a fore bay for the pump station. Additional operational storage would be required and this storage would be provided by converting the 3.3 million gallon Round Mountain Tank, which is currently being used for potable water, to a reclaimed water reservoir. The reclaimed water would be delivered to this tank through the pipeline that is connected to the Valencia WRP. To utilize this tank, pipes would be extended southward in The Old Road and then follow the Santa Clarita trails system eastward to connect to the existing Round Mountain Tank.

As an option to the Round Mountain Tank, the potable and reclaimed water tank site, located west of Chiquito Canyon is proposed. This site is occupied by vacant undeveloped land, with a dirt road traversing the tank site. The tank site consists of approximately 3.86 acres. The easement leading from these tanks to the main easement in Chiquito Canyon traverses undeveloped land. Two former oil well locations were observed to the north of the easement. In addition, a geotechnical boring location was observed to the north of the easement.

The water line easement along the western edge of Chiquito Canyon is occupied by Chiquito Canyon Road. A Unocal Pipeline was observed to run beneath Chiquito Canyon Road. Several other pipelines, including Mobil Oil, Chevron and Shell Oil Company pipelines cross the easement. There are no indications that these pipelines have leaked. These pipelines and any environmental; issues regarding these pipelines are the responsibility of the oil company which owns and operates them. Several active and former oil wells, along with several former tank battery locations are located near the easement to the east and west. In addition, agriculture land was observed at the east of the easements.

The proposed water tank locations are situated on undeveloped hilltops covered by native vegetation. Adjacent properties to the tank locations include vacant undeveloped land to the north, south, east and west. Oil wells were formerly located in the site vicinity to the west, east and south. The easements for both sites were observed to be located near a dirt access road running along an intermittent stream channel. Along both roads areas where trash was formerly dumped with various bottles, cans, wood and metal debris was observed. No evidence of distressed vegetation or oil staining on the water line

easements was observed on the water tank locations. No hazardous substances, or evidence of USTs, ASTs or wastewater clarifiers, were observed on the sites.

b. Oil Wells

(1) Landmark Village Tract Map Site

As shown in **Figure 4.21-1**, **Abandoned Oil Wells**, the eastern portion of the tract map property is located within the Castaic Junction Oil Field. Two former oil wells were located in that area, although each has been abandoned. Historical documents reveal another possible well in that area, although there is no confirmation of its existence. A third oil well was located on the central portion of the site, approximately 555 feet south of the intersection of SR-126 and Wolcott Way. This well also has been abandoned. The three former wells were recorded with the California Department of Conservation, Division of Oil, Gas and Geothermal Resources (DOGGR), and are listed as "abandoned and uncompleted." None of the oil wells was observed during the site inspection.

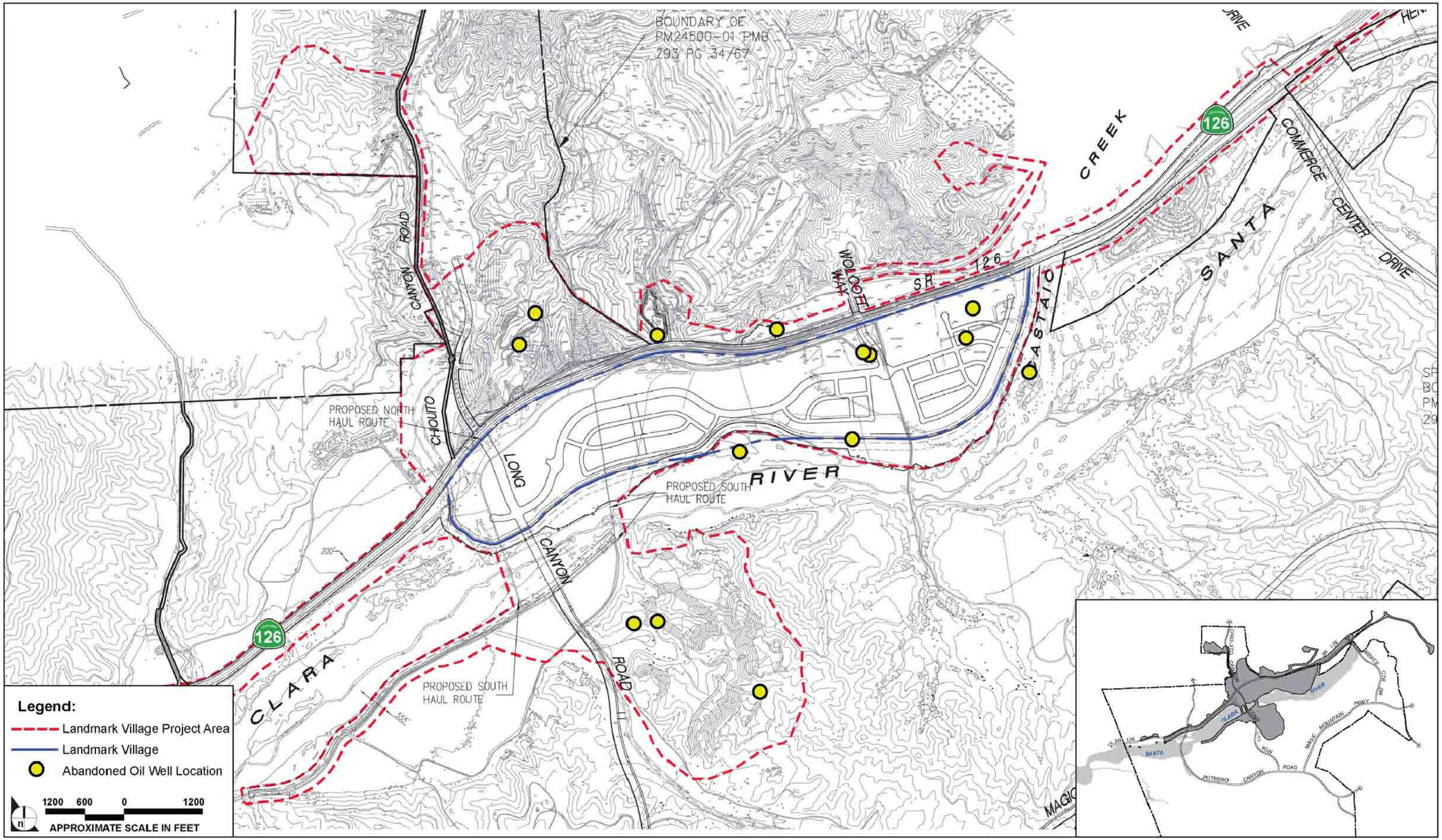
An additional five oil wells were drilled at various locations within 500 feet of the perimeter of the tract map property, as shown in **Figure 4.21-1**. Each of these five wells also has been abandoned.

Thus, all eight of the oil wells located either on the tract map site or in the immediate vicinity, have been abandoned. **Table 4.21-1**, **Oil Wells Located in Site Vicinity**, depicts the location of each well, the operator of the well, and the year it was abandoned.

Table 4.21-1
Oil Wells Located in Site Vicinity

Section	Township	Range	Operator	Well No.	Year Abandoned
15	4 North	17 West	Texaco E&P Inc.	'Newhall' 1	Unknown
14	4 North	17 West	Exxon Mobil Corp	'NHL&F' 50	1993
14	4 North	17 West	Exxon Mobil Corp	'NHL&F' 2	1993
14	4 North	17 West	Exxon Mobil Corp	'NHL&F' 9	1993
14	4 North	17 West	Exxon Mobil Corp	'NHL&F' 77	1993
23	4 North	17 West	Exxon Mobil Corp	'NHL&F' 54	1956
23	4 North	17 West	Exxon Mobil Corp	'NHL&F' 45	1955
23	4 North	17 West	Exxon Mobil Corp	'NHL&F' 1	1994

Source: Impact Sciences, Inc. 2005



SOURCE: PSOMAS – July 2005, B.A. Environmental – September 2004, Impact Sciences, Inc. – July 2005

FIGURE **4.21-1**

Abandoned Oil Wells

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(2) Adobe Canyon Borrow Site

As shown in **Figure 4.21-1**, the Adobe Canyon borrow site is located in the Newhall-Potrero Oil Field. In 1941, two oil wells were located near the northern boundary of the borrow site. There is no evidence of production from either of these two wells. In 1989 and 1993, visual evidence of possible oil exploration activities were observed on the floor of a small valley/canyon located on the borrow site. No oil wells currently exist on the site.

During the site investigation, concrete and wood debris were observed scattered in the agricultural field on the floor of the small valley/canyon. The debris may be the indication of either a former structure or oil exploration activities. A flat roughly graded dirt pad was observed near an abandoned road running along the northern boundary of this borrow site. This is the location of what is believed to have been an exploratory oil well. At the eastern end of this small valley/canyon is a graded dirt pad with what appears to be a filled-in concrete vault. This is likely the location of a second former oil well. No oil staining was observed on this graded pad.

(3) Chiquito Canyon Grading Site

The Chiquito Canyon grading site is located on the eastern end of the Del Valle Oil and Gas Field. Sometime prior to 1947, what appear to be two oil wells were drilled on this site. Refer to **Figure 4.21-1** for their locations. No evidence of production was observed.

During the site investigation, a concrete pad was observed along the dirt road crossing the tract map property leading to the SCE transmission tower. This pad had a configuration similar to that used for an oil derrick and a cable tool-drilling rig. It is believed that this was the location of a former oil exploration well. There was no staining around this pad. Approximately 500 feet up a small access road was a second flat dirt pad, which may have been the location of a second exploratory oil well. Soil in this area was stained by what is believed to be crude oil.

(4) Utility Corridor

The utility corridor runs through an area that was known to have been in the Del Valle Oil and Gas Field. Several concrete footings, possibly related to oil production, were observed in the immediate vicinity of the corridor. No pipelines were observed near the Del Valle Oil and Gas Field; however, since this site is located within a portion of an oil field, oil pipelines may exist beneath or adjacent to the utility corridor.

(5) Water Tank Sites

As determined by the California DOGGR, no oil wells are located on the proposed water tank sites.

c. Storage Tanks

(1) Above Ground Storage Tanks (ASTs)

The locations of former and existing ASTs are shown in **Figure 4.21-2, Locations of Above Ground Storage Tanks**. Sometime prior to 1952, three oil ASTs (located within a containment berm) were located near the eastern boundary of the tract map property. By 1968, these ASTs had been removed. From prior to 1952 until prior to 1968, a circular AST was located approximately 555 feet south of SR-126 and approximately 1,000 feet east of the intersection of Wolcott Way and SR-126. The purpose of this AST is unknown.

During the site investigation, two ASTs were observed mounted on trailers near the equipment storage area, approximately 50 feet south of the intersection of Wolcott Way and SR-126. These trailers appeared to be empty. Several empty and partially full 55-gallon steel drums were observed on site. These drums appeared to contain oil or petroleum products. Staining was observed on the soil throughout this area.

Several small ASTs were observed in the eastern storage area, as well as several 55-gallon drums and smaller five-gallon buckets. None of these containers was labeled. Some staining was observed on the dirt in the storage area.

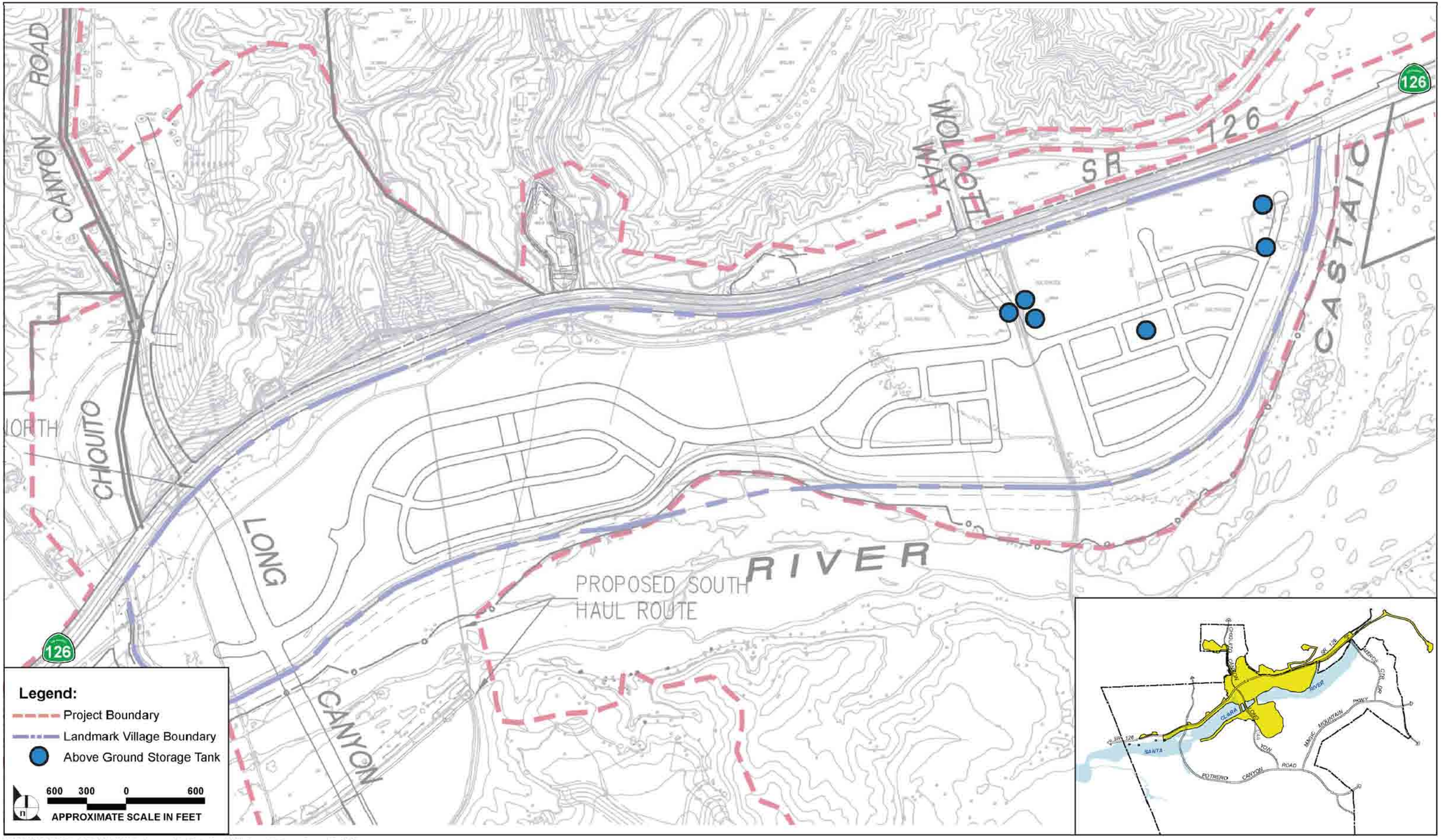
Several ASTs containing liquid fertilizers and various other agricultural chemicals were observed in the eastern portion of the tract map property. Minor staining was observed on the dirt beneath these ASTs.

A small 100-gallon AST was observed on a trailer near the eastern property boundary, as was an approximate 500-gallon AST sitting on a wooden pallet, both associated with a diesel-powered pump. The 500-gallon AST was labeled, diesel fuel, likely for the pump. Staining was observed on the outside of the AST, as well as on the soil beneath the AST.

There is no evidence of ASTs on the Adobe Canyon borrow site or the Chiquito Canyon grading site, the water tank locations or in the utility corridor.

(2) Underground Storage Tanks (USTs)

During the site investigation, there was evidence of USTs or wastewater clarifiers on the tract map site. The locations of former USTs are shown in **Figure 4.21-2**. According to the records of LACDPW, in 1989, PW Environmental removed one 1,000-gallon gasoline UST and one 1,000-gallon diesel UST, in the vicinity of the central farm equipment storage area south of Wolcott Way. One sample collected beneath the gasoline UST was reported to contain 96 milligrams per kilogram (mg/kg) of Total Petroleum



SOURCE: PSOMAS – July 2005, B.A. Environmental – September 2004, Impact Sciences, Inc. – July 2005

FIGURE **4.21-2**

Locations of Above Ground Storage Tanks

Hydrocarbons as gasoline (TPH-g). LACDPW requested a description of sampling methods and manifests for the UST removal, which was provided by PW Environmental in August and September 1989.

The State Water Resources Control Board (SWRCB) maintains an inventory of registered USTs. According to April 2003 records, there are no registered USTs on the tract map property; three UST sites are listed as within a 0.5-mile radius of the tract map property.[2]

No evidence of USTs or wastewater clarifiers was observed on the Adobe Canyon borrow site, the Chiquito Canyon grading site, the water tank locations, or in the utility corridor.

d. Debris

A few piles of asphalt and concrete debris are scattered throughout the tract map property and along its northern and western boundaries. Other debris consisted of old piping (possibly oil), concrete pipes, the body of an old pickup truck, wood, household trash, and construction debris. The easements for both water tank sites are located near dirt access roads running along intermittent stream channels. Along both roads are areas where trash was discarded. Various bottles, cans, wood and metal debris were observed.

e. Visual Asbestos Survey

A visual survey of suspect friable and non-friable ACM was conducted. Asbestos was used for years in many building materials for its fireproofing and insulating properties. Friable materials are materials that can be crumbled, pulverized, or reduced to powder by hand pressure when dry. Non-friable materials are materials in which the fibers have been locked in by a bonding agent, coating, or binder, and may not release fibers during normal use and handling. Any activity that involves cutting, grinding, or drilling during demolition could release friable asbestos fibers unless proper precautions are taken. Inhalation of airborne fibers is the primary mode of asbestos entry into the body, making friable materials the greatest potential risk to health. Therefore, ACM debris is a hazardous material that may require appropriate disposal.

Asbestos is a known human carcinogen and there is no known threshold level of exposure at which adverse health effects are not anticipated (SCAQMD September 14, 1989). The U.S. Environmental Protection Agency (U.S. EPA) has identified asbestos as a hazardous air pollutant pursuant to Section 12 of the federal Clean Air Act. Further, the California Air Resources Board (CARB) has identified asbestos

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2 The EDR Radius Map with GeoCheck®, Inquiry No. 1108642.4s, January 8, 2004.

as a Toxic Air Contaminant (TAC) pursuant to California Health and Safety Code Section 39650, *et seq*. Asbestos also is regulated as a potential worker safety hazard by the Occupational Safety and Health Administration (OSHA). These rules and regulations prohibit emissions of asbestos from asbestos-related demolition or construction activities, require medical examinations and monitoring of employees engaged in activities that could disturb asbestos, specify precautions and safe work practices that must be followed to minimize the potential for release of asbestos fibers, and require notice to federal and local government agencies prior to beginning renovation or demolition that could disturb asbestos.

During the site reconnaissance, scattered suspect ACMs were observed. These suspects ACMs included pieces of transite pipe, construction material debris along the old railroad easement, and tar-like coating observed on metal pipe sections located in the western portion of the development site.

f. Pipelines

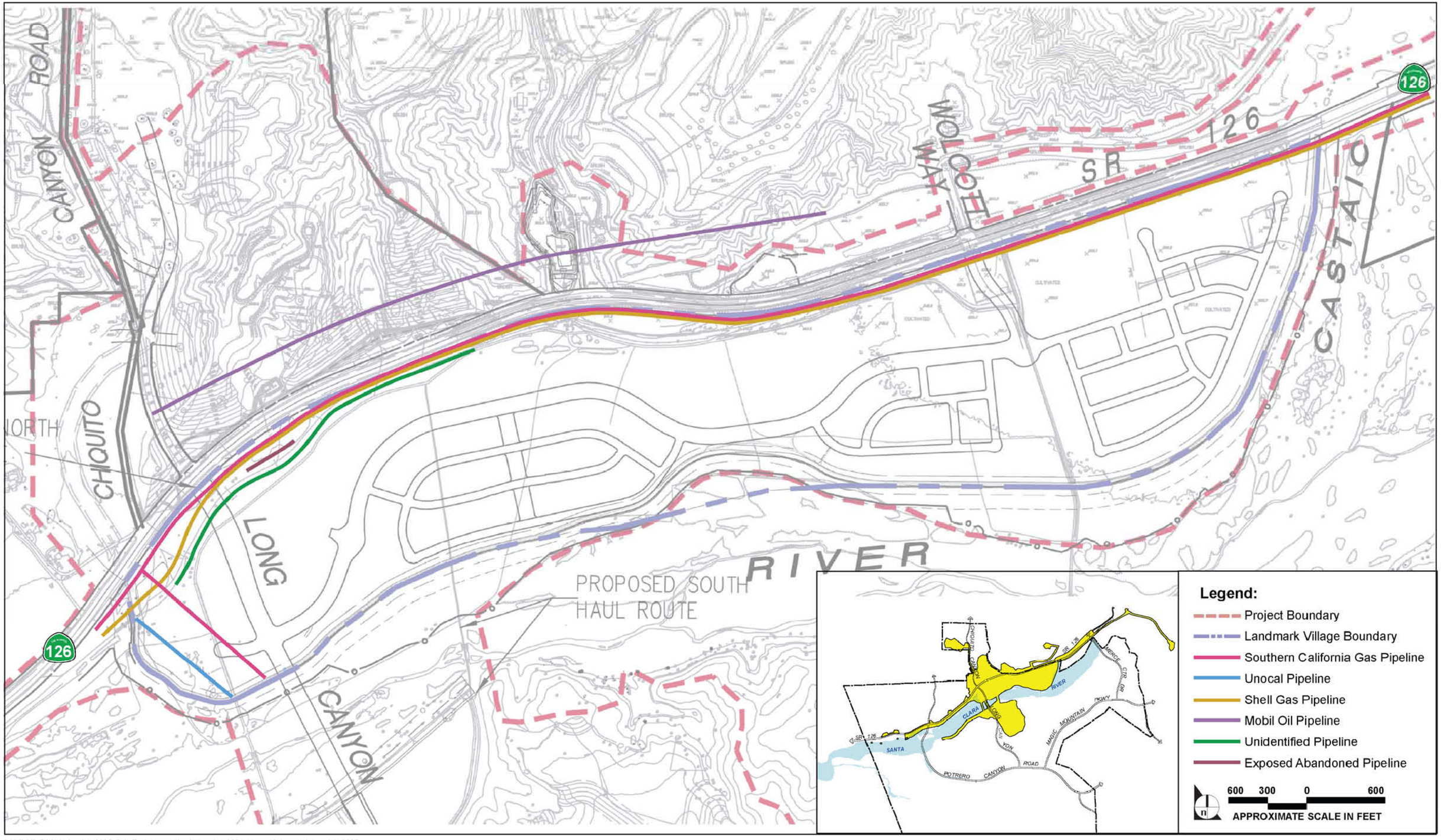
(1) Landmark Village Tract Map Site

Several pipelines, including natural gas and oil pipelines, cross the tract map site, as well as the utility corridor. A map identifying the location of these pipelines is provided in **Figure 4.21-3**, **Existing Pipelines**.

A Shell Oil Company petroleum pipeline runs along the northern property boundary, parallel to the old railroad easement. This pipeline likely contains crude oil.

Approximately 250 feet southeast of the intersection of Chiquito Canyon Road and SR-126 is a fenced enclosure. The enclosure is adjacent to the Shell Oil Company pipeline and a Shell Oil pipeline vault. The enclosure is the Del Valle Booster station, likely a booster station for an oil pipeline. Inside the enclosure was a pump, a 100-gallon AST (likely containing diesel fuel) and two electrical transformers. The pump and AST are located in a concrete containment.

An unidentified pipeline runs along the southern edge of the old railroad easement. Where exposed, the pipeline is approximately 18 to 20 inches in diameter and coated with a tar-like substance to prevent corrosion. Two vents, similar to those used in oil pipelines, were observed associated with this pipeline. Damaged piping also was observed on the surface in the old railroad easement. It appeared that this pipeline had been removed, although it is uncertain whether it was replaced or completely removed. The pipeline is approximately 16 to 18 inches in diameter. Oil staining was observed in the areas where this pipeline was exposed.



SOURCE: PSOMAS – July 2005, B.A. Environmental – September 2004, Impact Sciences, Inc. – July 2005

FIGURE **4.21-3**

Existing Pipelines

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A Unocal pipeline runs across the western end of the tract map property and likely carries oil. Reportedly, this pipeline is currently idle, and not being used.

(2) Utility Corridor

In addition to each of the several pipelines observed adjacent to the tract map property, all of which intersect or run parallel to the utility corridor, a number of additional pipelines were observed in the vicinity of the corridor.

A Shell Oil pipeline runs parallel along the northern side of the utility corridor (beneath what appeared to be the future rail easement). At a small stream crossing, the pipeline was exposed. The pipeline was comprised of steel construction and appeared to be approximately 8 inches in diameter. A second pipeline runs parallel along the southern side of the corridor. This pipeline appeared to no longer be in use, since a portion of the pipeline was exposed and cut. This pipeline appeared to be 10 to 12 inches in diameter. No staining was observed on the surface surrounding the exposed sections of pipe.

A Shell Oil vault or booster station is located along the north side of the utility corridor, near the eastern boundary. No staining was observed on the surface surrounding the vault/booster station. In addition, two old pipe sections were observed near this site. These sections are believed to have been former sections of oil pipelines.

An 8-inch Texaco oil pipeline, and two 6-inch abandoned Mobil Oil pipelines run down the center of SR-126, just north of the proposed utility corridor.

A 5-foot-wide General Petroleum Pipeline easement crosses the utility corridor property in the west and east. In addition, an 8-inch Texaco oil pipeline, and two 6-inch abandoned Mobil Oil pipelines run down the center of SR-126, just south of the corridor.

Based on Underground Services Alert markings on the road, underground pipelines are located between approximately 3 feet and 153 feet south of The Old Road and running parallel to The Old Road. These pipelines include a 6-inch Mobil Oil pipeline approximately 3 feet south of The Old Road, a 12-inch high pressure gas pipeline and a 10-inch Flexismer pipeline approximately 28.5 feet south of The Old Road, a 6-inch Mobil Oil pipeline approximately 42 feet south of The Old Road, an 8-inch Epsilon Oil pipeline approximately 137 feet south of The Old Road, and a 10-inch Mobil Oil pipeline approximately 153 feet south of The Old Road. There is also an 8-inch Shell Oil pipeline located south of the Old Road.

g. Soil Sampling for Pesticides and Herbicides

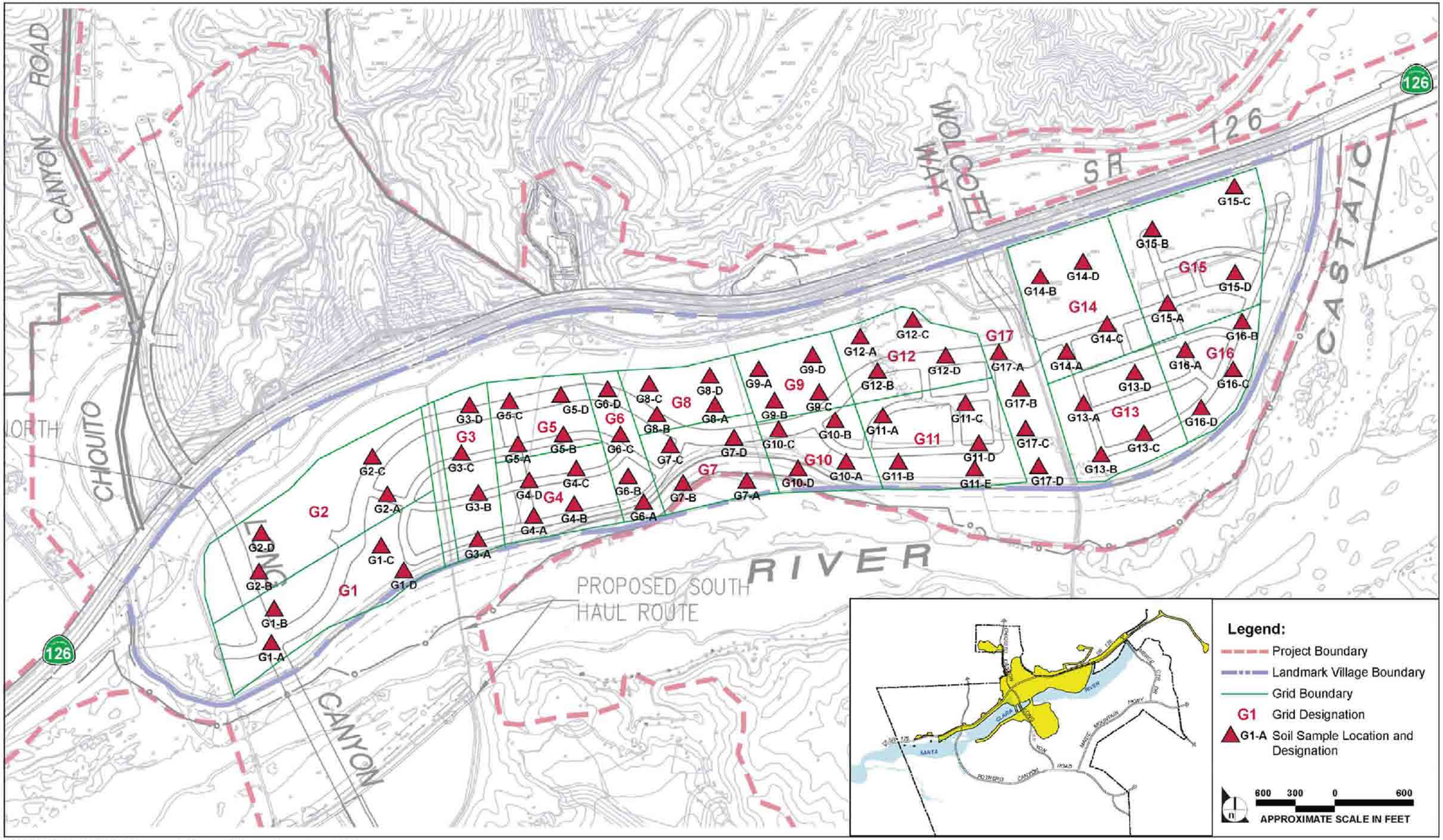
A pesticide is any substance used to kill crop pests, such as insects, rodents, weeds and fungi. They are inherently toxic and, used improperly, can have adverse effects on human health and the environment. The pesticides discussed in this section include insecticides, rodenticides, herbicides and fungicides, since each is used and stored on, and adjacent to, the proposed project site in connection with ongoing agricultural activities. None of the pesticides used on land owned by the applicant is hazardous enough to receive a Proposition 65 warning.

The pesticides that have been used and stored on the Newhall Ranch site are listed in **Table 4.21-2, Pesticides Used on Newhall Ranch Site – The Newhall Land and Farming Company – December 1994**. Between January 29, 2004 and February 5, 2004, 69 soil samples were collected from the tract map property. **Figure 4.21-4, Soil Sample Locations**, shows the soil sample locations. Field observations of the samples collected from the borings revealed no unusual odors or staining.

Table 4.21-2
Pesticides Used on Newhall Ranch Site
The Newhall Land and Farming Company
December 1994

Insecticides	Rodenticides	Herbicides	Fungicides
Pounce	PCQ Squirrel Bait	Dacthal	Ridomil
Diazinon	Gopher Getter	Caparol	
Asana Insecticide		Roundup	
Lannate Insecticide		Simazine	
		Krovar/Diuron	
		Karmex/Diuron	

The soil sample analysis determined that the samples contained some concentrations of Organochlorine Pesticides (OCP) contamination in the form of alpha-chlordane, gamma-chlordane, 4,4-DDD, 4,4-DDE, 4,4-DDT, dieldrin, endosulfan I, endosulfan II, endosulfan sulfate, endrin, and heptachlor epoxide. The detected concentrations of OCPs were compared with the Public Remediation Goals (PRGs) set by the U.S. EPA for various compounds and metals. The comparison revealed that none of the OCPs detected at the tract map site exceeded the residential or industrial use PRGs for those compounds. Based on these results, there is a low potential for threat to human health or the environment. No detectable concentrations of Organophosphorous Pesticides (OPP) or Chlorinated Herbicides (CH) were contained in the samples analyzed.



SOURCE: PSOMAS – July 2005, B.A. Environmental – September 2004, Impact Sciences, Inc. – July 2005

FIGURE **4.21-4**

Soil Sample Locations

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h. Water Wells

(1) Landmark Village Tract Map Site

Three water wells are located in the western portion of the tract map property. Another well is located near the intersection of Wolcott Way and SR-126. Approximately six additional water wells are located along the eastern property boundary. See **Figure 4.21-5**, **Existing Water Well Locations**, for the location of these wells. All of these water wells are used to supply irrigation water to the agricultural crops on the tract map site. Several pumps associated with the water wells also are located on the site. Minor staining was observed beneath the pumps.

(2) Utility Corridor

Two water lines cross the utility corridor to the west and then run parallel along the northern side of the corridor.

i. Pits, Ponds, Lagoons, Septic Tanks and Cesspools

There are no pits, ponds, lagoons, septic tanks or cesspools currently existing on the Landmark Village project site. Based on a review of historical records, it is unlikely that these features existed on the site in the past.

j. Radon Gas Survey

Radon is a radioactive gas that occurs naturally in the environment, and cannot be seen, smelled or tasted. The human health effect associated with exposure to elevated levels of radon is an increased risk of developing lung cancer. The U.S. EPA and the US Center for Disease Control are concerned about the increased risk of lung cancer developing in individuals exposed to above average levels of radon in their homes or offices. In order to address these concerns, the U.S. EPA conducted a radon survey and presented the results for various counties in the U.S. EPA Map of Radon Zones, 1993.

The U.S. EPA's Map of Radon Zones assigns each of the 3,141 counties in the United States to one of three zones. The zone designations were determined by assessing five factors that are known to be important indicators of radon potential: indoor radon measurements, geology, aerial radioactivity surveys, soil parameters and foundation types. Los Angeles County, the location of the project site, lies within Zone 2, which indicates a predicted average indoor radon screening level of greater than or equal to 2.0 picocuries per liter (pCi/l) and less than or equal to 4.0 pCi/l. Based on the results of the survey, the project site is located within an area with a radon screening level at or below the recommended U.S. EPA Action Level of 4.0 pCi/l.

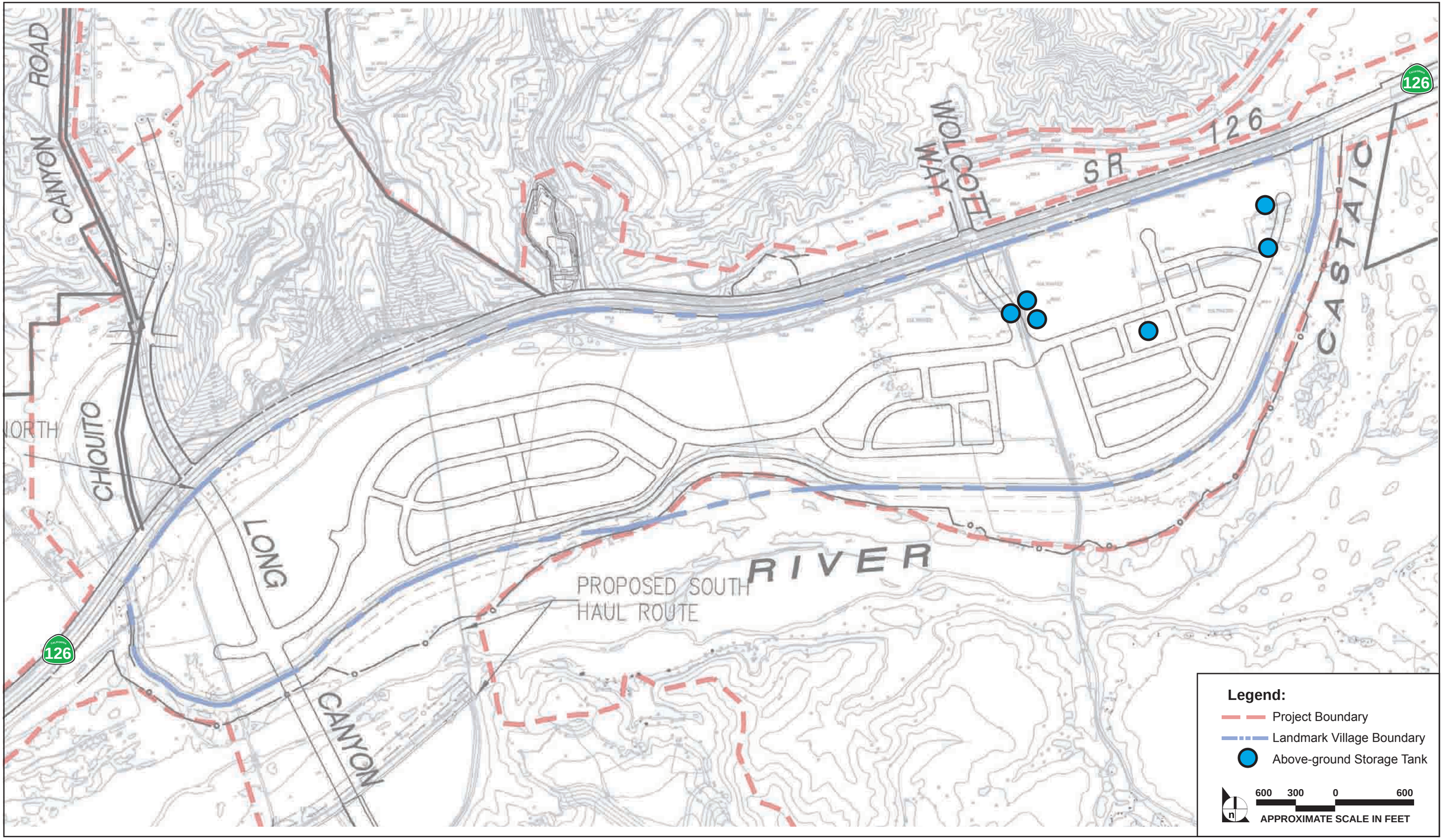
k. Existing Southern California Edison Transmission Lines

Electric service to the tract map property is provided by SCE. An electrical transmission tower is located in the Chiquito Canyon grading site within an existing SCE easement that traverses the northern portion of the site. The electrical tower within this easement is located at one of the proposed, semicircular cut-slopes. A second powerline easement is located at the southern portion of the grading site.

Because high voltage electrical transmission lines create electromagnetic fields (EMFs), and because of the ongoing debate over the potential health effects of EMFs, they are discussed in this section.

Electromagnetic fields are created as electrical charges (current), pass through conductors and are formed in association with alternating current (AC) electrical power, which serves most of our electrical needs. AC electrical power does not flow steadily in one direction, but alternates back and forth 60 times each second; therefore, it is referred to as 60-hertz (Hz) electrical power. Two kinds of fields associated with 60 Hz power are electrical fields that result from the strength of the charge, and magnetic fields that result from the motion of the charge. Taken together, these are referred to as electromagnetic fields. The strength of an electromagnetic field is affected by the distance from the source, the voltage of the object creating it, and the electrical/physical environment in which the conductor is placed.

In analyzing the impacts of EMFs, it is useful to look at the various EMF levels associated with typical household appliances as a benchmark example. The most common unit of measurement of the strength of magnetic fields is the gauss (G). Since the gauss is a large unit of measurement, the milligauss (mG), or 1/1,000 of a gauss, is used to report the strength of magnetic fields associated with most objects. For comparison purposes, the typical American home has a background magnetic field level (away from any appliances) ranging from 0.5 mG to 4 mG. **Table 4.21-3, Magnetic Field Levels for Common Household Appliances,** contains a listing of the magnetic field levels associated with various household appliances at varying distances.



SOURCE: PSOMAS – July 2005, B.A. Environmental – September 2004, Impact Sciences, Inc. – July 2005

FIGURE **4.21-5**

Existing Water Well Locations

32-92•05/06

Table 4.21-3
Magnetic Field Levels for Common Household Appliances

Appliance	Distance From Source			
	6 Inches	1 Foot	2 Feet	4 Feet
Blender				
Lowest 30 mG1	5 mG	-	-	-
Median 70 mG	10 mG	2 mG	-	-
Highest	100 mG	20 mG	3 mG	-
Can Opener				
Lowest 500 mG	40 mG	3 mG	-	-
Median 600 mG	150 mG	20 mG	2 mG	-
Highest	1,500 mG	300 mG	30 mG	4 mG
Refrigerators				
Lowest	-	-	-	-
Median 2 mG	2 mG	1 mG	-	-
Highest	40 mG	20 mG	10 mG	10 mG
Color TV				
Lowest	-	-	-	-
Median	7 mG	2 mG	-	-
Highest		20 mG	8 mG	4 mG
Vacuum Cleaners				
Lowest 100 mG	20 mG	4 mG	-	-
Median 300 mG	60 mG	10 mG	1 mG	-
Highest	700 mG	200 mG	50 mG	10 mG

1 mG = milligauss
Note: The dash (-) indicates that the magnetic field measurement at this distance from the operating appliance could not be distinguished from background measurements taken before the appliance had been turned on.
Source: United States Environmental Protection Agency, Office of Radiation and Indoor Air, EMF In Your Environment, Magnetic Field Measurements of Everyday Electrical Devices*, December 1992.*

The magnetic fields associated with the large power lines are also a function of the height and distance of the transmission line from the receptor as well as the power loads, expressed as amperage or amps, on those lines and the amount of time that electricity is actually being transmitted over those lines. Typical magnetic field levels for electrical power lines are shown in **Table 4.21-4, Typical Magnetic Field Levels for Electrical Power Lines**. According to the U.S. EPA, the magnetic field of a typical 230 kV transmission line would probably be less than 120 mG at a distance of 20 feet, 15 mG at a distance of 100 feet, and less than 2 mG at a distance of 300 feet. From these examples, it is clear that, as the distance from the source of the magnetic or electric field increases, the level of exposure is reduced substantially.

Table 4.21-4
Typical Magnetic Field Levels for Electrical Power Lines

Types of Transmission Lines	Maximum Right-of-Way	Distance from Transmission Lines			
		50 Inches	100 Feet	200 Feet	300 Feet
115 Kilovolts (kV)					
Average Usage	30	7 mG	2 mG	0.4 mG	0.2 mG
Peak Usage	63	14 mG	4 mG	1.8 mG	0.8 mG
230 Kilovolts (kV)					
Average Usage	58	20 mG	7 mG	1.8 mG	0.8 mG
Peak Usage	118	40 mG	15 mG	3.6 mG	1.6 mG
500 Kilovolts (kV)					
Average Usage	87	29 mG	13 mG	3.2 mG	1.4 mG
Peak Usage	183	62 mG	27 mG	6.7 mG	3.0 mG

Source: United States Environmental Protection Agency, Office of Radiation and Indoor Air, EMF In Your Environment, Magnetic Field Measurements of Everyday Electrical Devices, December 1992.

Exposure to 60 Hz EMFs produces weak electrical currents inside the body by a process called induction. According to a Library of Congress Congressional Research Service Issue Brief, "…a growing amount of research indicates that these currents may alter the binding of molecules to receptors on the surface of the cell membrane [which] may disrupt membrane signaling events, and trigger abnormal biochemical reaction." Just what this finding means in terms of the effects of EMFs on our overall health has been the focus of a number of research efforts. Although many studies have been done on this topic to date, their findings are inconclusive. For example, the Journal of the American Medical Association states:

> *"Some, but not all, epidemiological studies of health among populations exposed to ambient low-power frequency EMF show associations between exposure to EMF and health effects. However, because of the poor and inconsistent exposure assessment in these studies, the absence of an appropriate dose-response relationship, and absence of supporting laboratory evidence, any conclusion of human health risks at this time is premature."*

In addition, the British National Radiological Protection Board concludes:

> *"The epidemiological findings that have been reviewed provide no firm evidence of the existence of a carcinogenic hazard from exposure of paternal gonads, the fetus, children, or adults to the extremely low frequency electromagnetic fields that might be associated with residence near major sources of electricity supply, the use of electrical appliances, or work in the electrical, electronic, and telecommunications industry."*

Because it is not possible to establish a clear relationship between EMF exposure and human health effects, there are no generally accepted criteria for determining acceptable or hazardous levels of electromagnetic fields.

The California Public Utilities Commission (CPUC), in its ongoing investigations of EMFs, has also noted that recent studies have failed to establish that an EMF health hazard actually exists, or that there is a clear cause-and-effect relationship between utility property or operations and public health or that some degree of exposure limitation, such as the 2 mG level considered by the CPUC at one time, is appropriate to protect public health. Thus, rather than establish new regulations, such as setbacks or exposure levels based on specific EMF levels, the CPUC has elected to continue research efforts regarding potential health hazards and examine ways to minimize EMF exposures along existing or future transmission line rights-of-way.

(1) Regulatory Controls

There are no federal regulations for restricting human exposure to power-line EMFs; however, seven states have established limits on electric field strengths at the edge of power-line rights-of-way, and two have established limits on magnetic field strength. In addition, some state utility commissions have issued their own EMF guidelines. There are no similar requirements in California; however, the California State Board of Education, in consultation with the State Department of Health Services (DHS) and electric power companies, has established the following limits for locating any part of a new school site property line near the edge of easements for high-voltage power transmission lines: 100 feet from the edge of an easement for a 50–133 (kilovolts) kV line; 150 feet from the edge of an easement for a 220–230 kV line; and 350 feet from the edge of an easement for a 500–550 kV line. These figures represent kV strengths of transmission lines used by utility companies in January 1993. Utility companies report that strengths for distribution lines are below 50 kV.[3] The County has not issued standards for EMF exposure or guidelines for new development in proximity to sources of EMFs and does not anticipate adopting such standards or guidelines in the near future.

l. Existing Southern California Gas Company High-Pressure Lines

A Southern California Gas (SCG) pipeline runs along the northern property boundary in the railroad easement, and crosses the western end of the tract map property. The pipeline is 18 to 20 inches in diameter and likely carries natural gas. Where visible, the pipeline is coated with a tar-like material to prevent corrosion. In addition, an Underground Services Alert marking along The Old Road indicated the presence of a 12-inch high-pressure gas pipeline.

CPUC General Order 112E, which is based upon the Federal Department of Transportation Guidelines contained in Part 192 of the Federal Code of Regulations, specifies a variety of design, construction,

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3 California Department of Education, School Facilities Planning Division, *School Site Section and Approval Guide*. Available at http://www.cde.ca.gov/ls/fa/sf/schoolsiteguide.asp. Website accessed July 2, 2004.

inspection and notification requirements. The CPUC conducts annual audits of pipeline operations to ensure compliance with these safety standards. In addition, the SCGC has a safety program which has reduced the risk of gas distribution fires by improving welds on the larger diameter (24- to 30-inch) pipelines and by replacing old distribution pipes with flexible plastic pipes. According to SCGC staff, high-pressure gas mains are common in developed areas throughout the country, and SCGC lines are inspected regularly and must comply with CPUC mandated safety requirements. However, as is the case anywhere, in the event that a gas main is ruptured, explosion and fire could result.

m. Transport of Hazardous Materials Along SR-126

The transport of hazardous materials throughout the State of California is regulated by the California Highway Patrol (CHP). The Hazardous Materials Section of the CHP, located in Sacramento, licenses companies that haul hazardous materials. Three categories of hazardous materials are regulated by the CHP in that their transport is limited to designated routes and stopping places. These categories include explosives, inhalation hazard materials (i.e., materials that are poisonous if inhaled), and radioactive materials. Title 13, California Code of Regulations, Division 2, Chapter 6, Articles 1., 2.5 and 2.7 identify SR-126 as a designated route for the transport of explosive and inhalation materials, but not for radioactive materials. Therefore, it is very likely that explosives and inhalation hazard materials are transported on SR-126 and that, although unlikely, there is a potential for accidental explosions or releases of hazardous gases to occur.

In the event of a spill, or release of hazardous gases, the Los Angeles County Environmental Health Division and/or the Los Angeles County Fire Department Hazardous Material Unit (located at Fire Station 76, 27223 Henry Mayo Drive in Valencia, which is the closest fire station to the site with a Hazardous Material Unit), would provide response coordination, spill identification, and clean-up supervision. Local law enforcement and fire authorities would provide traffic control and spill containment. County response personnel would be coordinated with appropriate state and, if necessary, federal response agencies.

n. Dam Inundation Area

The Castaic and Forebay Reservoirs are contained by earthen dams that were constructed on Castaic Creek in 1974. Based on the California Department of Water Resources Dam Inundation Map for Castaic Dam, the Landmark Village project site is currently located within the dam inundation area. It is difficult if not impossible to estimate the actual risk of dam failure, which is dependent upon a number of factors, such as the structural integrity of the dam, the probability that the reservoir would be filled to peak capacity, the likelihood of catastrophic earthquake, and many other unknown variables, such as the long-

term threat of underlying geologic hazards.[4] The dam inundation area was delineated in 1975 in compliance with Section 8589.5 of the California Government Code. It is based on an assumed catastrophic failure of the dam during peak storage capacity and encompasses all probable routes that a flood might follow after exiting the dam or canyon opening. Division 3 of the California Water Code places the responsibility for dam safety under the jurisdiction of the California Department of Water Resources, Division of Safety of Dams. This agency is responsible for regular inspection and maintenance of dams under state jurisdiction. According to the Chief of this Division, development is permitted within a dam inundation area.[5]

Most failures of earthen dams are caused by foundation failures, inadequate spillways, and poor construction and site selection; less than 1 percent of the 308 recorded worldwide dam failures between 1766 and 1944 are attributable to earthquakes.[6] The embankments of the Castaic Lake Dam, which are the components of a dam most likely to fail during an earthquake, are composed of strong and densely compacted materials. According to the Los Angeles County Safety Element, "most engineered, mechanically-compacted dam embankments or fills of earth or rock materials have performed well under seismic shaking."[7] The dams held up well during the Northridge Earthquake (magnitude 6.8 on the Richter Scale) with no signs of damage reported, and are likely to hold up well during other earthquakes of similar, if not greater magnitude.[8] According to the California Department of Water Resources, the Castaic Dam is designed to resist both the maximum credible earthquake and the probable maximum precipitation flood. The dam's spillway has several times the capacity of creeks flow of record, and the dam's freeboard can easily handle any potential landslide, which might occur into the lake. Additionally, the dam provides incidental control benefits downstream.

o. Sludge Disposal Site

Approximately 60 acres of land on the project site was historically used as a municipal sewage sludge disposal site pursuant to a contract between the Newhall Land & Farming Company and the Los Angeles County Sanitation Districts. This activity was permitted under the Regional Water Quality Control Board, Los Angeles Region (LARWQCB), Waste Discharge Requirements Order No. 75-14 issued on

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4 County of Los Angeles Department of Regional Planning, Safety Element in the County of Los Angeles General Plan (Los Angeles, California: December 1990), p. 3.85.

5 Interview with Vernon Persson, Chief of the Division of Safety of Dams, Department of Water Resources, Sacramento, California, 8 March 1995.

6 County of Los Angeles Department of Regional Planning, Safety Element in the County of Los Angeles General Plan (Los Angeles, California: December 1990), p. 3.85.

7 Ibid.

8 Interview with Vernon Persson, Chief of the Division of Safety of Dams, Department of Water Resources, Sacramento, California, 14 April 1995.

March 10, 1975. The material deposited consisted of anaerobically digested sewage sludge (biosolids) from the Saugus and Valencia Water Reclamation Plants. The County Sanitation Districts of Los Angeles County issued a report titled: Districts 26/32 Sludge Disposal Study, Progress Report No. 1, September 1977 which stated that sludge on the Landmark Village site was used for several years but is not now (1977) in use.

> *"It was commonly called the Forneris site after the individual who farmed it. In the fall of 1973, Newhall Land and Farming, which owns the site, requested the Sanitation Districts to cease operation on the Forneris site when odor complaints were received from nearby commercial enterprises. Operations were transferred to Site 1 [Hasley Canyon]."*

The limits of the disposal site are depicted in **Figure 4.21-6, Sludge Site**. As part of the planning process for the proposed project, a study was undertaken to assess the presence, or lack thereof, of any potential contamination associated with the use of this land as a municipal sewage sludge disposal site. According to the BA Environmental, Third-Party Review of Environmental Documents, August 30, 2006 (**Appendix 4.21**),

> *"The eastern 25% of the proposed Landmark Village site was used in the 1960's and early 1970's for the disposal of treated municipal sewage sludge. Since the cessation of the disposal operations in 1973, the disposal site has been used for agricultural cropland. These agricultural activities would have included frequesnt disking and turning of the soils. This frequent turning of the soils, would have aerated the shallow soils beneath the subject site. Based on the length of time since the last disposal event and the frequent turning of the soils in the former disposal site #6, it is highly unlikely that any pathogens remain in the soil from the former sludge disposal activities."*

Furthermore, the third-party review concludes the following:

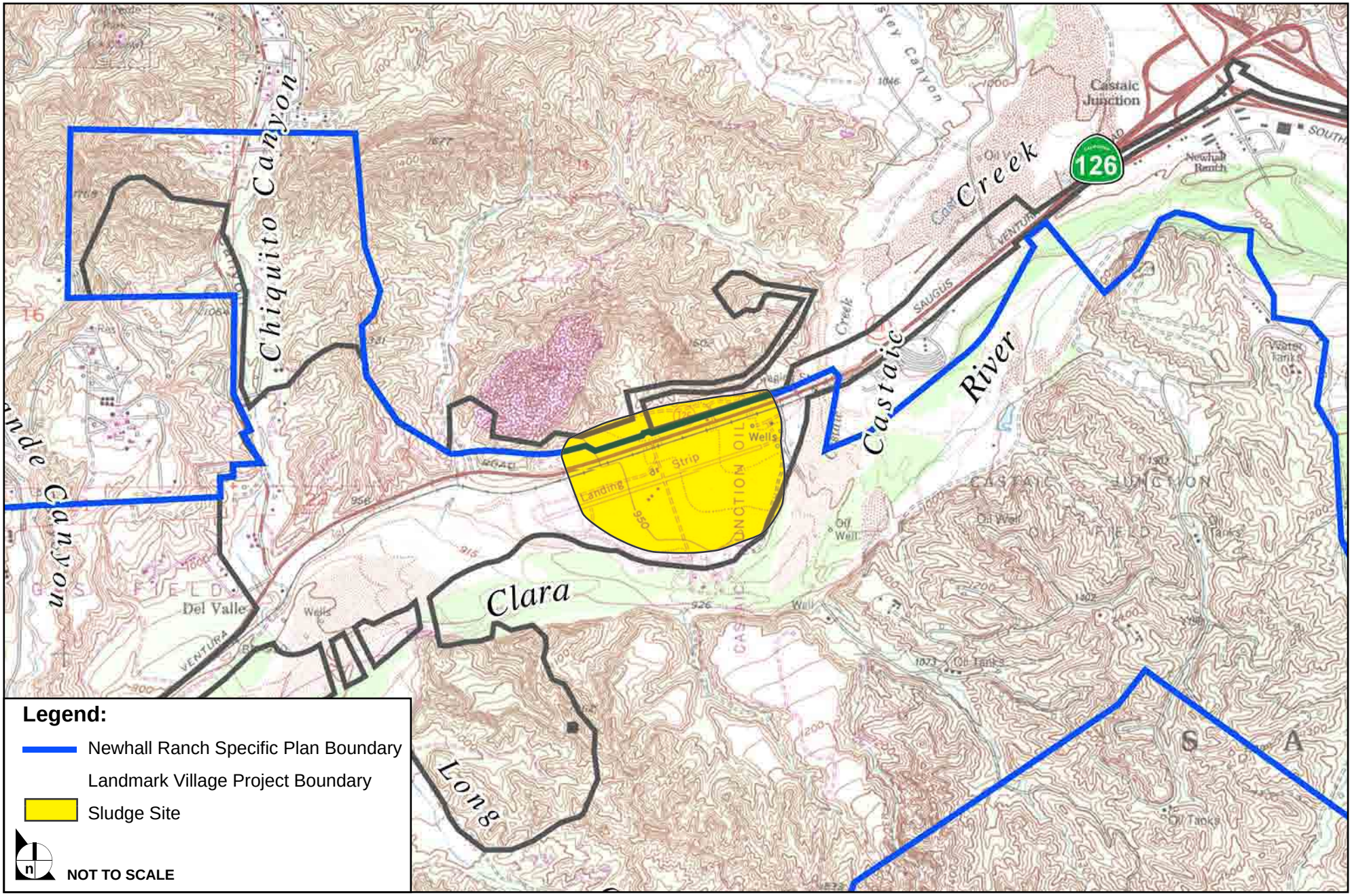
> *"…due to the frequent turning of the soil, the usage of the land for agricultural crops and the natural leaching of the soils by rainwater percolation, it is highly unlikely that any of the original concentrations of nitrates, ammonia, phosphates or heavy metals in the sludges deposited in the sol due to sludge disposal remain."*

5. SURROUNDING USES

The following is a brief description of the existing uses surrounding the tract map property, the Adobe Canyon borrow site, the Chiquito Canyon grading site, utility corridor and water tank sites.

a. Landmark Village Tract Map Site

Land uses adjacent to the tract map site include agricultural and undeveloped land to the west, Castaic Creek to the east, the Santa Clara River to the south, and SR-126 and Chiquita Canyon Landfill to the north. Adjacent land within a 0.25-mile radius is undeveloped or agricultural, with oil fields to the northwest and south.



SOURCE: Impact Sciences, Inc. – September 2006

FIGURE **4.21-6**

Sludge Site

32-99•09/06

b. Adobe Canyon Borrow Site

Adjacent properties to the Adobe Canyon borrow site include agricultural land to the west, and undeveloped land to the north, south and east. An oil field lies south of this site.

c. Chiquito Canyon Grading Site

Adjacent properties to the Chiquito Canyon grading site include undeveloped land to the north, Chiquito Canyon Road and an oilfield to the west, undeveloped land and the Chiquita Canyon Landfill to the east, and SR-126 followed to the south.

d. Utility Corridor

The utility corridor is adjacent to the tract map property and intersects SR-126 as well as other major roads in the area. Vacant and agricultural lands mostly surround the corridor. Portions of the corridor are adjacent to the Del Valle Oil and Gas Field. Travel Village is located south of several portions of the corridor. In the vicinity of Henry Mayo Road and The Old Road, various commercial businesses surround the corridor, including two gas stations.

e. Water Tanks

Properties adjacent to the northeastern water tank location include primarily vacant undeveloped parcels in all directions. An existing water tank is located on the hill to the southwest of the proposed new water tank site. Commercial/industrial development is located in the valley to the north-northeast.

Properties adjacent to the northwestern water tank locations include vacant undeveloped parcels in all directions. Two former oil wells are located north of the easement that runs from the proposed tank site to the main easement in Chiquito Canyon.

Properties adjacent to the southern water tank location and pipeline easement include vacant undeveloped parcels in all directions. An oil field is located to the south of this site. Single oil wells are located to the north and south of the pipeline easement. None of the wells is located on the tank site property.

6. SITES INCLUDED IN GOVERNMENT RECORDS REVIEW

Regulatory compliance with Government Code Section 65962.5 requires a review of state and federal government databases for the presence of hazardous wastes or hazardous materials, on site or at neighboring sites, which may present certain liabilities. In connection with preparation of Environmental

Site Assessments (ESAs), a review of applicable government databases was conducted by Environmental Data Resources, Inc. (EDR).[9] The review, which searches the databases for properties located within a certain radii of the target property, provides the most recent information regarding hazardous materials sites within the vicinity of a proposed project, including the proposed project.

a. Tract Map Site, Adobe Canyon Borrow Site, and Chiquito Canyon Grading Site

The tract map property, the Adobe Canyon borrow site, and the Chiquito Canyon grading site are not listed on any of the searched databases. Nor have there been any reported releases of hazardous substances on the tract map property or the Adobe Canyon borrow site and the Chiquito Canyon grading site.[10]

Five properties within proximity to the tract map property were listed as a potential environmental concern. A description of each of the sites is provided below. All five of these properties have a low potential for environmental impact.

(1) Chiquita Canyon Landfill

The property closest to the tract map site, across SR-126 to the north, at about a 500-foot distance, is the Chiquita Canyon Landfill boundary, owned by Republic Services Systems, Inc., and located at 29201 Henry Mayo Drive. The Chiquita Canyon Landfill is a Class III (non-hazardous) landfill. This landfill is permitted to accept 30,000 tons (42,860 cubic yards) per week.[11] In 2003, the landfill accepted an average daily waste disposal of 5,000 tons (7,196 cubic yards).[12] The Conditional Use Permit for operation of the landfill expires in 2019.[13] Please refer to **Section 4.12, Solid Waste Services**, for more information regarding solid waste disposal services.

The landfill is listed on several databases, although it is reported as having had no violations of applicable hazardous waste laws. The environmental concerns associated with this property, including odors, leachate, methane gas migration, water quality, dust generation, and windblown refuse, are mitigated through landfill design, construction and maintenance in accordance with federal, state, and

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9 The EDR Radius Map with GeoCheck®, Inquiry No. 1108642.4s, January 8, 2004.

10 According to the Emergency Response Notification System (ERNS) national database used to collect information on reported releases of oil and hazardous substances.

11 Los Angeles County Department of Public Works, Los Angeles County Integrated Waste Management Plan, 2003 Annual Report on the Countywide Summary Plan and Countywide Siting Element, March 2005.

12 Ibid.

13 Ibid.

local regulations. Specific design features include surface water controls, groundwater protection barriers, and landfill gas collection systems.

Impacts to the groundwater table beneath the landfill site are unlikely for two reasons. First, the landfill is lined with clay, synthetic fabric, or other types of liners to prevent materials from entering ground or surface waters. Second, the facility is located in an assumed cross-gradient location relative to the regional groundwater flow direction. Therefore, the potential environmental impact from this property is low.

(2) Other Sites

Of the six other sites located within a range of concern of the tract map property, one site, located within 500 feet of the tract map property and identified as Newhall Land and Farming, 3003 Walnut Orchard Road, was the location of a soil-only release, but the case has been since closed. There is a low potential of environmental impact at this site.

A second site, 27900 Chiquito Canyon Road, located within 1,000 feet of the tract map property and on the Chiquito Canyon easement, was the site of the release of an unknown compound in 1989. The exact location of the release is unknown and is not considered likely to be on the proposed project site. Therefore, there is a low potential of environmental impact at this site.

A third site, identified as Travel Village, 27946 Henry Mayo Drive, and located within 2,000 feet of the tract map property, is included on numerous databases, although it is not on the leaking underground storage tank (LUST) database, the database of concern for this project site. Therefore, there is a low potential of environmental impact at this site.

The fourth site, identified as TA Manufacturing, 28065 W. Franklin Parkway, and located within 2,000 feet of the tract map property, is listed as a large quantity hazardous waste generator, with no violations listed. Therefore, there is a low potential of environmental impact at this site.

The fifth site, as identified as LA City Fire Department/Delval Target Center/Unocal-Lincoln Lease 28101 Chiquito Canyon Road, which is 2,000 feet south of the tank sites and west of Chiquito Canyon easement (cross and down-gradient) is listed as HAZENET LA County Site Mitigation, LA County HMS, LUST, Cortese, AST, CA Spills Leaks Investigation and Cleanup (SLIC) and CHMIRS. The site was the location of the disposal of waste oil, release of hydrocarbon to soil only and the release of crude oil due to damaged pipeline. The site is presently undergoing remediation. Therefore, there is low potential of environmental impact at this site.

The database search revealed that the tract map property, the Adobe Canyon borrow site and the Chiquito Canyon grading site are neither located within a 0.5-mile radius of a Federal Superfund property, nor are they located within a 0.5-mile radius of a hazardous waste treatment, storage and disposal facility.

b. Utility Corridor and Water Tank Sites

The utility corridor and water tank sites are not listed on any of the searched databases. Twelve sites were reported near the utility corridor and water tank sites, in addition to the six sites reported near the tract map property, the Adobe Canyon borrow site and the Chiquito Canyon grading site discussed previously. Several of these reported sites are adjacent to the utility corridor stretch of land, and are listed as either UST or LUST sites. Although there have been releases at these adjacent sites, since the adjacent property at issue is the narrow utility corridor, there is a low potential for the adjacent site to have an environmental impact on the utility corridor.

7. PROJECT IMPACTS

a. Significance Threshold Criteria

Generally, a proposed project would result in significant environmental safety impacts if it would result in the exposure of people to risks beyond acceptable levels. According to Appendix G of the 2005 *California Environmental Quality Act (CEQA) Guidelines*, a project would have a significant effect on the environment relative to hazards and hazardous materials if the project would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school;
- Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment;
- Result in a safety hazard for people residing or working in the project area due to the project's location within 2 miles of a public airport or public use airport;
- Result in a safety hazard for people residing or working in the project area due to the project's location within the vicinity of a private airstrip;

- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan;

- Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands; or

- Expose people to existing sources of potential health hazards (e.g., electrical transmission lines, gas lines, oil pipelines).

In this case, the proposed project entails the construction of a residential, mixed-use, and non-residential development with supporting school, park and other supporting uses. The proposed project will not entail the routine transport, use or disposal of hazardous materials. Based on the proposed uses, the project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school. Therefore, Criterion (a) and (c), are not applicable to the project and will not be analyzed further.

The proposed project is not located within 2 miles of a public airport or public use airport, nor is it located within the vicinity of a private airstrip. Therefore, the proposed project will not result in a safety hazard for people residing or working in the project area due to proximity to aviation uses. Therefore, Criterion (e) and (f) are not applicable to the project and will not be analyzed further.

As to whether the proposed project would impair implementation or physically interfere within an adopted emergency response plan, Criterion (g), please see EIR **Section 4.13**, **Sheriff Services.** As to whether the proposed project would expose people or structures to a significant risk involving wildland fires, Criterion (h), please see **Section 4.14**, **Fire Protection Services**.

Based on the *CEQA Guidelines*, the only significant impact criterion potentially applicable to the proposed project are Criterion (d), location on a site included on a list of hazardous materials, and Criterion (i), exposure of people to existing sources of potential health hazards. As discussed previously**,** the proposed Landmark Village project site is not located on a site that is included on the list of hazardous materials compiled pursuant to Government Code Section 65962.5. Therefore, the proposed project will not create a significant hazard to the public or environment under Criterion (d).

Accordingly, the only significance criterion relevant to the proposed project is Criterion (i), whether the proposed project would expose people to existing sources of potential health hazards.

b. Site-Specific Project Impacts

An analysis of each of the sources of potential health hazards presently existing on the Landmark Village project site is presented below.

(1) Soil Staining

As discussed in **subsections 4b, 4c(1), 4f(1), and 4(h)1**, soil staining was observed in the following areas of the proposed project site: (1) beneath an abandoned pipeline along the old railroad easement; (2) near a former oil well on the Chiquito Canyon grading site; (3) beneath a diesel AST associated with a portable water pump located on the eastern portion of the tract map property; (4) near an equipment storage area located in the eastern portion of the tract map property, where agricultural chemical storage and mixing may have taken place; and (5) near a storage area in the central portion of the tract map property associated with a former airstrip, where agricultural chemical storage and mixing may have taken place.

Surficial soil staining with crude oil is a common result of oil field operations. As noted, there is localized staining of soils with crude oil on the project site. The California Hazardous Substances Control Act excludes unrefined petroleum and crude oil from the list of hazardous substances, unless the crude contains volatile organic compounds (VOCs) in the form of naturally occurring benzene, toluenes, ethylbenzenes, or xylenes. In these cases, the crude is considered to be hazardous waste (see, *California Code of Regulations*, Title 22). Additionally, crude oil production, storage, processing, and transport are commonly associated with petroleum hydrocarbons, a hazardous substance potentially present in on-site soils. Soils contaminated with petroleum hydrocarbons near oil fields and abandoned wells are capable of generating methane gas through anaerobic biodegradation. In the event on-site soils contain crude oil and VOCs, this could pose a potentially significant impact to residential development, parks and schools unless remediated to applicable federal, state, and local standards.

Additionally, unless on-site contaminated soils are remediated, the potential for worker exposure to toxins is high during both construction and subsequent use of the developed site. If the stained soils contain high levels of petroleum hydrocarbons, heavy metals, or chemicals specifically regulated by Title 22, and the soils are not remediated, the impact to construction workers would be a significant impact.

(2) Oil Wells

As discussed in **subsection 4b**, up to three former oil wells and their associated production areas may exist on the tract map property. Several former wells also may exist on the Adobe Canyon borrow site and the Chiquito Canyon grading site. Soil staining was noted near at least one former oil well on the Chiquito Canyon grading site. Releases may have occurred near these former oil wells that potentially

may have impacted the surrounding soils and groundwater table. Unremediated contaminated soil or groundwater could pose a potentially significant impact to construction workers and future residents.

(3) ASTs

As discussed in **subsection 4c(1)**, several ASTs, likely associated with oil production, existed on site in the 1950s. Soil staining was noted beneath a diesel AST on the eastern portion of the tract map property. Past releases may have occurred if a pipeline connected to a storage tank ruptured, if a tank was punctured or damaged, or during the transfer of crude between a storage tank and a transport vehicle. Under these scenarios, releases may have occurred near these ASTs that potentially may have impacted the surrounding soils and groundwater table.

(4) Debris and Asbestos

As discussed in **subsection 4d**, accumulations of miscellaneous debris, including concrete pipes, old oil pipelines, transite concrete pipe, construction debris piles, an old pickup truck body, wood debris, old trash piles, old telephone poles, and household trash, are located on the tract map site, primarily in the western portion of the site. Former trash piles with various bottles, cans, wood and metal debris were observed along the easements for both water tank sites. Concrete and wood debris also were observed on the Adobe Canyon borrow site.

As noted previously, during site investigations, scattered suspect ACMs were observed. These suspect ACMs included pieces of transite pipe, construction material debris along the old railroad easement, and tar-like coating observed on metal pipe sections located in the western portion of the development site.

ACM debris is a hazardous material that may require appropriate disposal. The presence of these hazardous materials on the proposed project site would be a potentially significant impact.

(5) Pipelines

As discussed in **subsection 4f**, several pipelines cross the tract map property, and one pipeline crosses the Chiquito Canyon grading site. These pipelines can carry crude oil, water and natural gas. Soil staining was noted beneath an abandoned pipeline along the railroad easement. A pipeline rupture could have impacted surrounding soils and potentially the groundwater table.

(6) Pesticides

As discussed in **subsection 4g**, in order to assess the potential impacts associated with the past use of pesticides on the proposed project site, ESA conducted a soil sampling analysis. As previously noted, soil

samples taken from the tract map site contain some concentrations of Organochlorine Pesticides (OCP), but none of the samples revealed concentration that exceeded the residential or industrial use Preliminary Remediation Goals for those compounds. Additionally, no detectable concentrations of Organophosphorous Pesticides or Chlorinated Herbicides were contained in the samples analyzed. Based on the results of the soil sampling analysis, there is a low potential for threat to human health or the environment due to the past use of pesticides on the proposed project site.

As to potential impacts associated with the future use of pesticides, agricultural cultivation is likely to continue on the tract map site over time as the uses are developed. Eventually, urban land uses will completely replace the agricultural uses on site. However, agricultural activities and pesticide use to the west of the site in other areas of the Specific Plan would continue until the Specific Plan builds out, while land cultivated in Ventura County is assumed to continue indefinitely. Pesticide use on other lands will subject residents to minimal and incidental exposure. Due to the regulation of pesticides used in connection with ongoing agricultural activities, including the chemical and physical properties of the pesticides, use according to manufacturer specifications, and their mode of application, it is not expected that humans would be subject to either acute overexposure or chronic exposure to any of the pesticides used. Therefore, the on-site use of pesticides would not create a potential public health hazard, and would not result in a significant impact to the tract map property or future residents.

(7) Electrical Transmission

As discussed in **subsection 4k**, an electrical transmission tower is located in the Chiquito Canyon grading site.

As indicated previously, the California State Board of Education requires that no schools be sited 100 feet from the edge of the right-of-way of 100–110 kV lines; 150 feet from 220–230 kV lines; and 250 feet from 345 kV lines. There are no 100–110 kV, 220–230 kV or 345 kV lines within the boundary of the project site and none are proposed; consequently, no schools are proposed within approximately 500 feet of SCE transmission lines within the project site, which is consistent with the referenced restrictions.

There is no known EMF exposure threshold level for biological effects, and the County has no threshold of significance for EMFs. Because there is no established significance threshold, and because the issue of EMF effects is still largely unknown, there is no known significant impact associated with placing development adjacent to SCE transmission easements. However, in light of public debate over EMFs and inconclusive findings of the research that has been conducted on this issue, as well as easement restrictions, no development is proposed to occur within these easements. Therefore, the proposed project would not expose people, animal, or plant life populations to known health hazards from SCE

transmission lines. Based upon this information, impacts relative to EMFs would be reduced to less than significant levels. No mitigation is required or recommended.

(8) Sites Included on Agency Lists

As discussed in **subsection 6**, the closest facility to the proposed project site that is included in the government hazardous materials/hazardous waste databases is the Chiquita Canyon Landfill, located to the north of the project site across SR-126. As previously noted, the landfill has implemented measures, in compliance with federal, state, and local regulations, to mitigate any potential environmental impacts, and is located in an assumed cross-gradient location relative to the regional groundwater flow direction. Therefore, no impacts to the proposed project from this facility are likely.

As also previously noted, the other four properties located within a range of environmental concern proximate to the tract map property, are all identified within the databases as having a low potential impact. Therefore, based on the status and distances of these facilities, there is a low potential of environmental impact due to contamination from these off-site sources.

(9) Southern California Gas Company High-Pressure Line

According to Southern California Gas Company (SCGC) staff, the high-pressure gas line in the northern portion of the Landmark Village site and in the utility corridor would not pose a significant environmental safety impact to future residents. Similar high-pressure gas lines located close to development commonly occur throughout California and the Santa Clarita Valley. SCGC lines are inspected regularly and must comply with CPUC-mandated safety requirements. Such safety precautions are also taken on the high-pressure gas lines within the site and no significant impacts associated with placing development in close proximity to these lines would occur. The Landmark Village project would not expose people, animal, or plant life populations to potential health hazards from SCGC high-pressure gas lines. Based upon this information, impacts relative to the high-pressure gas line would be less than significant. No mitigation is required or recommended.

(10) Transport of Hazardous Materials Along SR-126

Because hazardous materials can be transported on SR-126, increased traffic on this highway could increase the potential for an accident involving a hauler of these substances. Because the hauler of these substances must be trained and licensed, and because their transport is highly regulated and monitored, the potential for an accident involving explosive and inhalation materials is diminished to below the threshold of significance. The Landmark Village project would not expose people, animal, or plant life populations along SR-126 to significant health hazards associated with hazardous material transport.

Based upon this information, impacts relative to the transport of hazardous materials on SR-126 would be less than significant. No mitigation is required or recommended.

(11) Dam Inundation Area

Dams are regularly inspected and maintained by the California Water Resources Division of Safety of Dams. Since 1928, there have only been two major failures and one near dam failure within the County. Nonetheless, dam failure is remotely possible and, under a worst-case scenario, the Landmark Village site and the development areas proposed within it could be inundated should the Castaic and Forebay Reservoir dams fail. Given the continuous efforts of the Division of Safety of Dams of the Department of Water Resources to inspect and maintain the structural integrity of the state's dams, the Landmark Village project is not likely to expose people to potential health hazards associated with dam failure. Based upon this information, impacts relative to dam inundation would be less than significant. No mitigation is required or recommended.

(12) Radon

As previously noted, the U.S. EPA's Map of Radon Zones indicates that all of Los Angeles County has been designated as lying within Zone 2, which indicates a predicted average indoor radon screening level of greater than or equal to 2.0 pCi/l and less than or equal to 4.0 pCi/l. Therefore, based on this information, the Landmark Village project site is located within an area with a predicted average indoor radon screening level that is at or below the recommended U.S. EPA Action Level of 4.0 pCi/l.

As of November 2005, the California DHS has conducted a total of 69 radon detection tests in homes located in the surrounding communities of Santa Clarita, Valencia, Newhall and Stevenson Ranch. None of the tests conducted by DHS detected radon concentrations in excess of the 4.0pCi/l standard.[14] Therefore, based on the results of the DHS tests, and the determination by the US EPA that the project site lies within an area with a predicted indoor screening level either below or at the minimum recommended U.S. EPA Action Level, the potential for radon to adversely affect the residents of the proposed project is not considered to be significant. Therefore, no mitigation measures are required.

(13) Sludge Disposal Site

Related to the issue of sludge disposal safety, the County of Los Angeles, Department of Health Services, Public Health recently conducted a review of the documentation concerning sludge disposal on the Westcreek site located approximately 3.5 miles east of the Landmark project site. Like the Landmark

14 *California Department of Health Services, California Indoor Radon Levels Sorted by Zip Code,* November 7, 2005 (http://www.dhs.ca.gov/radon/PDFs/California%20Radon%20Data%20base.pdf), accessed February 2006.

project site, the County Sanitation Districts of Los Angeles County also used the Westcreek site for sludge disposal purposes. The Department of Health Services concluded that: The most compelling factor demonstrating that there is no public health risk, is the significant time that has passed since it was last utilized as a municipal sewage disposal site. This land has not been used for sludge disposal since 1986. Consequently, any potential biological hazards at that time, would not be hazardous today." Considering that sludge disposal activities ceased on the project site in 1973, given the findings on the Westcreek site it can be safely concluded that there would be no potential biological hazards at this time.

Additionally, a third party review of sludge conditions on the site conducted by BA Environmental on August 30, 2006, concluded that:

> *"Since the cessation of the disposal operations in 1973, the disposal site has been used for agricultural cropland. These agricultural activities would have included frequent disking and turning of the soils. This frequent turning of the soils would have aerated the shallow soils beneath the subject site. Based on the length of time since the last disposal event and the frequent turning of the soils in the former disposal site #6 [portion of project site], it is highly unlikely that any pathogens remain in the soil from the former sludge disposal activities. In addition, due to the frequent turning of the soil, the usage of the land for agricultural crops and the natural concentrations of nitrates, ammonia, phosphates or heavy metals in the sludges deposited in the soil due to sludge disposal remain. In addition, Newhall Land has informed BA Environmental that the current grade of the land for the Landmark Village site is going to be brought up a minimum of 10 feet. This will place at least 10 feet of fill between the planned grade and the soil in which the sludge was deposited. Based on the additional 10 feet of fill on top of the former sludge disposal site, it is highly unlikely that humans could come into contact with the soil from the former sludge disposal site. Therefore, it is BA Environmental's opinion that the former sludge disposal site poses a very low threat to human health, and does not pose any significant environmental issues."*

8. MITIGATION MEASURES

Although the proposed Landmark Village project may result in potential environmental safety impacts absent mitigation, the County already has imposed mitigation measures required to be implemented as part of the Newhall Ranch Specific Plan. These mitigation measures, as they relate to environmental safety, are found in the previously certified Newhall Ranch Specific Plan Program EIR and the adopted Mitigation Monitoring Plan for the Specific Plan (May 2003). In addition, this EIR identifies recommended mitigation measures specific to the Landmark Village project site. The project applicant has committed to implementing the applicable mitigation measures from the Newhall Ranch Specific Plan and will implement the mitigation measures recommended for the proposed Landmark Village project to ensure that future development of the project site and related off-site grading activities would be safe from environmental safety, and that such development would not adversely affect adjacent properties.

a. Mitigation Measures Required of the Newhall Ranch Specific Plan and Relevant to the Landmark Village Project

The following mitigation measures (Mitigation Measure Nos. 4.21-1 through 4.21-9, below) were adopted by the County in connection with its approval of the Newhall Ranch Specific Plan (May 2003). The applicable mitigation measures will be implemented to mitigate the potentially significant environmental safety impacts associated with the Landmark Village project. These measures are preceded by "SP," which stands for Specific Plan.

SP 4.21-1 All final school locations are to comply with the California State Board of Education requirement that no schools be sited within 100 feet from the edge of the right-of-way of 100–110 kV lines; 150 feet from the 220–230 kV lines; and 250 feet from the 345 kV lines. (*This mitigation measure is not applicable to the Landmark Village project, because the school on the project site will be located over 500 feet from the nearest overhead transmission line.*)

SP 4.21-2 Only non-habitable structures shall be located within SCE easements.

SP 4.21-3 Prior to issuance of grading permits, all abandoned oil and natural gas-related sites must be remediated to the satisfaction of the California Department of Oil and Gas, the Los Angeles County Hazardous Materials Control Program, the South Coast Air Quality Management District, and/or the Regional Water Quality Control Board (Los Angeles region).

SP 4.21-4 All ongoing oil and natural gas operational sites adjacent to or in close proximity to residential, mixed-use, commercial, business park, schools and local and Community Parks shall be secured by fencing and emergency access to these locations shall be provided. (*This mitigation measure is not applicable to the Landmark Village project, because no ongoing oil and natural gas operational sites will occur within the project site.*)

SP 4.21-5 The Specific Plan is to meet the requirements of Southern California Gas Company (SCGC) in terms of pipeline relocation, grading in the vicinity of gas mains, and development within SCGC easements. These requirements would be explicitly defined at the future tentative map stage.

SP 4.21-6 All potential buyers or tenants of property in the vicinity of Southern California Gas Company transmission lines are to be made aware of the line's presence in order to assure that no permanent construction or grading occurs over and within the vicinity of the high-pressure gas mains.

SP 4.21-7 In accordance with the provisions of the Los Angeles County Building Code, Section 308(d), all buildings and enclosed structures that would be constructed within the Specific Plan located within 25 feet of oil or gas wells shall be provided with methane gas protection systems. Buildings located within 25 feet and 200 feet of oil or gas wells shall, prior to the issuance of building permits by the County of Los Angeles, be evaluated in accordance with the current rules and regulations of the State of California Division of Oil and Gas.

SP 4.21-8 In accordance with the provisions of the Los Angeles County Building Code, Section 308(c), all buildings and structures located within 1,000 feet of a landfill containing decomposable material (in this case, Chiquita Canyon Landfill) shall be provided with a landfill gas migration protection and/or control system.

SP 4.21-9 In accordance with the provisions of the Los Angeles County Code, Title 11, Division 4, Underground Storage of Hazardous Materials regulations, the County of Los Angeles Department of Public Works shall review, prior to the issuance of building permits by the County of Los Angeles, any plans for underground hazardous materials storage facilities (e.g., gasoline) that may be constructed or installed within the Specific Plan.

b. Additional Mitigation Measures Proposed By This EIR

The following project-specific mitigation measures are recommended to mitigate the potentially significant environmental safety impacts that may occur with implementation of the proposed Landmark Village project. These mitigation measures are in addition to those adopted in the previously certified Newhall Ranch Specific Plan Program EIR. To indicate that the measurers relate specifically to the Landmark Village project, each measure is preceded by "LV," which stands for Landmark Village.

(1) Soil Staining

LV-4.21-1 Prior to the issuance of grading permits, those areas of the Landmark Village tract map property, the Adobe Canyon borrow site, and the Chiquito Canyon grading site identified as formerly containing above-ground storage tanks, current agricultural storage areas and current soil staining by the Phase I Environmental Site Assessment of Landmark Village Tentative Tract Map No. 53108, Highway 126, Newhall Ranch, California (BNA Environmental, May 2004) and Addendum Letter Phase I Environmental Site Assessment of Proposed Water Tank Locations and Utility Corridor Easements Associated With the Proposed Landmark Village Development Tentative Tract Map No. 53108, State Highway 126, Newhall Ranch, California (BNA Environmental, September 2004), shall be investigated for the presence of petroleum hydrocarbons and hazardous materials and/or wastes, and,

where necessary, shall be remediated in conformance with applicable federal, state, and local laws, to the satisfaction of the California Department of Conservation, Division of Oil and Gas, the Los Angeles County Hazardous Materials Control Program, the South Coast Air Quality Management District, and/or the Regional Water Quality Control Board (Los Angeles region).

(2) Oil Wells

LV-4.21-2 Prior to the issuance of grading permits, all former oil wells located on the Landmark Village tract map property, the Adobe Canyon borrow site and the Chiquito Canyon grading site shall be reabandoned according to the requirements of the California Department of Conservation, Division of Oil and Gas, if such sites are to be disturbed or are located in an area of development.

(3) Pipelines

LV-4.21-3 Prior to the issuance of grading permits, all pipelines located on the Landmark Village tract map property or the Chiquito Canyon grading site that will no longer be used to transport oil products shall be reabandoned according to the requirements of the California Department of Conservation, Division of Oil and Gas. The soil beneath these pipelines shall be assessed for petroleum hydrocarbons. Any contaminated soil located within grading operations or development areas shall be remediated in conformance with applicable federal, state, and local laws, to the satisfaction of the California Department of Conservation, Division of Oil and Gas, the Los Angeles County Hazardous Materials Control Program, the South Coast Air Quality Management District, and/or the Regional Water Quality Control Board (Los Angeles region). Any pipeline to remain in use shall be assessed for hydrocarbon leakage.

(4) Debris and Asbestos

LV-4.21-4 Prior to the issuance of grading permits, all scattered suspect asbestos-containing material debris located on the Landmark Village tract map property, the Adobe Canyon borrow site and the Chiquito Canyon grading site shall be disposed of in accordance with applicable federal, state, and local requirements.

(5) Previously Unidentified Hazards

LV-4.21-5 In the event that previously unidentified, obvious, or suspected hazardous materials, contamination, underground storage tanks, or other features or materials that could present a threat to human health or the environment are discovered during construction, construction activities shall cease immediately until the subject site is evaluated by a qualified professional. Work shall not resume until appropriate actions recommended by the professional have been implemented to demonstrate that contaminant concentrations do not exceed risk-based criteria.

9. CUMULATIVE IMPACTS

As man-made hazards are site-specific issues, no impacts would occur with respect to cumulative impacts.

10. CUMULATIVE MITIGATION MEASURES

There would be no cumulative impacts with regard to man-made hazards and, consequently, no cumulative mitigation measures are required.

11. SIGNIFICANT UNAVOIDABLE IMPACTS

a. Development Property, Adobe Canyon Borrow Site, and Chiquito Canyon Grading Site

With implementation of the mitigation measures listed, and compliance with federal, state, and local regulations, any potential environmental safety impacts associated with the Landmark Village tract map site, the Adobe Canyon borrow site, and the Chiquito Canyon grading site would be reduced to below a level of significance.

b. Utility Corridor and Water Tanks

No potentially significant impacts were identified or anticipated with respect to the water tank locations and the utility corridor. Therefore, there are no significant unavoidable impacts.

c. Surrounding Property

No potentially significant impacts were identified or anticipated with respect to property surrounding the Landmark Village project site. Therefore, there are no significant unavoidable impacts.

4.22 CULTURAL/PALEONTOLOGICAL RESOURCES

1. SUMMARY

Phase I and II archaeological surveys of all cultural resources were undertaken within the Newhall Ranch Specific Plan, including the Landmark Village tract map site. The Phase I survey resulted in the discovery and recording of two prehistoric archaeological sites. Subsequently, Phase II archaeological studies were conducted at these sites. One site (CA-LAN-2233) was found to contain two components: a northern component containing a subsurface archaeological deposit and intact artifacts; and a southern component consisting solely of a surface scatter of stone artifacts. The northern component contains scientific information that may contribute to the reconstruction of local prehistory; therefore, development of this northern area has the potential to result in significant impacts to cultural resources. The second component represented lithic scatter that had been extensively disturbed and did not contribute to the knowledge of prehistoric pathways. The Phase II testing determined that the second site (CA-LAN-2234) did not represent an extant archaeological site. Inadvertent direct and/or indirect disturbance during construction to any sensitive cultural resource found on the project site would be considered a significant impact absent mitigation.

A Phase I paleontologic report was prepared to determine the likelihood of encountering paleontologic resources on the project site. This report focused on a literature and records search, as well as an extensive field survey of the area proposed for development. The proposed project would occur in geologic formations with high and moderate potential for the discovery of fossil remains. Therefore, grading activities associated with the proposed project could have significant impacts on the region's paleontological resources absent mitigation.

2. INTRODUCTION

a. Relationship of Project to Newhall Ranch Specific Plan Program EIR

Section 4.3 of the Newhall Ranch Specific Plan Program EIR identified and analyzed the existing conditions, potential impacts, and mitigation measures associated with cultural and paleontological resources for the entire Newhall Ranch Specific Plan. The Newhall Ranch Specific Plan Program EIR mitigation program was adopted by Los Angeles County (County) in findings and in the revised Mitigation Monitoring Plan for the Specific Plan. The Newhall Ranch Specific Plan Program EIR concluded that Specific Plan implementation would result in significant impacts to archaeological and paleontological resources, but that the identified mitigation measures would reduce the impacts to below levels of significance. All subsequent project-specific development plans and tentative subdivision maps must be consistent with the Newhall Ranch Specific Plan, the County of Los Angeles General Plan, and Santa Clarita Valley Areawide Plan.

This project-level EIR is tiering from the previously certified Newhall Ranch Specific Plan Program EIR. **Section 4.22** discusses, at the project-specific level, the Landmark Village project's existing conditions, the project's impacts on cultural and paleontological resources, the applicable mitigation measures from the Newhall Ranch Specific Plan Program EIR, and any mitigation measures recommended by this EIR for the Landmark Village project.

3. SUMMARY OF THE NEWHALL RANCH SPECIFIC PLAN PROGRAM EIR FINDINGS

a. Archaeological

The Newhall Ranch Specific Plan study area was found to have a very low density of archaeological remains, with site locations closely conforming to the expectations derived from the archival records search. With only two exceptions, the identified sites are concentrated along the Santa Clara River.

(1) Prehistoric Archaeological Sites

A total of eight prehistoric archaeological sites and one isolated artifact were identified during the intensive Phase I survey. Six sites were found along or near the Santa Clara River, and are referred to as CA-LAN-2133, -2241, -2235, -2234, -2233, and -2242. The other two prehistoric archaeological sites are CA-LAN-2236 and -2240.

(2) Historical Archaeological Sites

During the Phase I survey, one historical site was found on the Newhall Ranch Specific Plan site and another was found immediately off-site. Both are concentrated in the northeastern end of the property. This area includes the on-site Asistencia de San Francisco Xavier (CA-LAN-962H), and the off-site, original Newhall Ranch headquarters (CA-LAN-961H), the built structures of which were removed from this locale several years ago. Neither of the two sites is listed in the National Register for Historic Places or the California Register of Historic Resources; however, because the Rancho San Francisco is listed as a California Historical Landmark, the Asistencia is also technically listed as such.[1]

(3) Phase II Testing

Sites CA-LAN-2133 and -2235 were found to contain subsurface archaeological deposits and intact prehistoric artifacts that can contribute to the scientific reconstruction of prehistoric lifeways in the Santa Clara River Valley. Development at these locales has the potential to result in significant impacts to cultural resources. CA-LAN-2233 was found to contain two components: a northern component

1 Interview with Joe Simon, W & S Consultants, Simi Valley, California, February 21, 1996.

containing a subsurface archaeological deposit and intact artifacts; and a southern component consisting solely of a surface scatter of stone artifacts. The northern component of CA-LAN-2233 contains scientific information that may contribute to the reconstruction of local prehistory; development of this northern area, therefore, has the potential to result in significant impacts to cultural resources.

Although there is no longer an intact archaeological deposit at CA-LAN-2241, a burial of unknown origin is still present in a disturbed context within the site area. Development of this area, therefore, has the potential to result in significant impacts to archaeological remains, whether ultimately historical or prehistoric in age.

The Phase II testing determined that CA-LAN-2234 did not represent an extant archaeological site. Phase II fieldwork at CA-LAN-2236 resulted in the collection of all extant archaeological remains at that site. CA-LAN-2240 does not represent an extant cultural resource. There are no longer any extant archaeological remains at CA-LAN-2242. The final cultural resource located in the vicinity of Potrero and Chiquito Canyons was an isolated artifact that was salvaged during the Phase I survey.

The area containing the two historical sites (CA-LAN-961H and -962H) proved to fall outside of the development area and would not be significantly impacted by the Newhall Ranch Specific Plan; therefore, these two sites were excluded from Phase II fieldwork. Implementation of the Specific Plan would have no impacts on dedication of the Asistencia, and would not affect the schedule of its dedication to the Archaeological Conservancy, which would take place upon approval of the Specific Plan and related approvals, resolution of any litigation and parcelization of the Asistencia site.

b. Paleontological

The Pico Formation and Saugus Formation within the development area of the Newhall Ranch Specific Plan have a high potential to yield paleontological resources because there is potential for the exposure of significant fossils in areas of these geologic units that are proposed for grading. Where Quaternary terrace deposits and Quaternary older alluvium exist in the development area, there is a moderate potential for yielding paleontological resources because there is potential for the exposure of significant fossils in areas of these geologic units. Therefore, the Specific Plan's grading activities could have significant impacts on the site's paleontological resources. The Board of Supervisors found that adoption of the recommended mitigation measures would reduce the identified potentially significant effects to less than significant levels.[2]

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2 See Mitigation Measures 4.3-1 through 4.3-4 in both the certified Newhall Ranch Specific Plan Program EIR (March 9, 1999) and the adopted Mitigation Monitoring Plan for the Specific Plan (May 2003). In addition, please refer to the Additional CEQA Findings and Statement of Overriding Considerations, dated May 2003, at pages 62–63, for revised Mitigation Measure 4.3-4. All of these mitigation measures are reiterated in the mitigation measures portion of this EIR.

4. EXISTING CONDITIONS

Phase I and II archaeological studies of the entire Newhall Ranch Specific Plan site (including the future extension of Magic Mountain Parkway) were conducted in 1994 by W&S Consultants. A supplemental archaeological investigation was conducted in December 1995 for the proposed extension of Valencia Boulevard. RMW Paleo completed a paleontological study for the entire Newhall Ranch Specific Plan site in October 1994. Each analysis is summarized in this section, and is presented in the Newhall Ranch Specific Plan Program EIR (see Draft EIR, Appendix 4.3).

The information presented in the Newhall Ranch Specific Plan Program EIR, Section 4.3, Cultural/Paleontological Resources, assessed the existing setting of the entire Newhall Ranch Specific Plan, including the Landmark Village project site and surroundings, from an archeological and paleontological standpoint. Section 4.3 also provided detailed background information and findings regarding the archeological and paleontological analysis conducted on the Specific Plan site.

This information and the technical studies from the prior Newhall Ranch Specific Plan Program EIR (see Draft EIR, Appendix 4.3) were assessed at the project-level for the Landmark Village project to determine if there were archeological or paleontological effects, which were not examined in the prior Program EIR. It was determined that all significant archeological and paleontological effects were identified, adequately addressed and mitigated or avoided in the Newhall Ranch Specific Plan Program EIR and related environmental findings. Therefore, at the project level, this EIR will incorporate by reference the existing conditions analysis and background information relating to archeological and paleontological resources from the certified Newhall Ranch Specific Plan Program EIR (Section 4.3).

5. PROPOSED PROJECT IMPROVEMENTS

The applicant proposes to develop 1,444 residential dwelling units with a total residential population of 3,680,[3] approximately 1,033,000 square feet of commercial/mixed use space, a 9-acre elementary school, a 16-acre Community Park, four private recreational facilities, open space and river trail uses, and supporting roadway, drainage and infrastructure improvements. In addition, the applicant proposes to construct the Long Canyon Road Bridge over the Santa Clara River, and install exposed and buried bank stabilization on portions of the south and north side of the river.

The proposed project would require approximately 5.8 million cubic yards of imported fill. The needed fill would come from the Adobe Canyon borrow site, located within the boundary of the Newhall Ranch Specific Plan. The project would also require off-site grading at Chiquito Canyon, within the utility

[3] Based upon County of Los Angeles provided estimates of 3.17 persons per single-family dwelling, 2.38 persons per multi-family dwelling and per apartment.

corridor, and at water tank sites. **Figure 1.0-33, Off-Site Improvements**, in **Section 1.0**, **Project Description**, depicts the locations of the Adobe Canyon borrow site, Chiquito Canyon grading site, the utility corridor, and the water tank locations.

6. PROJECT IMPACTS

The analysis of potential impacts to cultural and paleontological resources associated with construction and operation of the proposed Landmark Village project, including the significance criteria applicable to assessing such impacts, is presented below.

a. Significance Threshold Criteria

California Environmental Quality Act (CEQA) Guidelines, Appendix G, identifies certain criteria for determining whether a project's impacts on cultural resources are significant, including, as applicable here, whether the project would:

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

Environmental impacts associated with cultural resources are specifically addressed in *CEQA Guidelines* Section 15064.5. Section 15064.5 identifies significance threshold criteria for determining impacts to archaeological and historical resources. Section 15064.5 states:

> "(b) A project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment….
>
> (c) CEQA applies to effects on archeological sites.
>
> (1) When a project will impact an archeological site, a lead agency shall first determine whether the site is an historical resource, as defined in subsection (a)…
>
> (3) If an archeological site does not meet the criteria defined in subsection (a), but does meet the definition of a unique archeological resource in Section 21083.2 of the Public Resources Code, the site shall be treated in accordance with the provisions of Section 21083.2…

(4) If an archeological resource is nether a unique archeological nor an historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment…."

Public Resources Code Section 21083.2 (g) provides:

"(g) As used in this section 'unique archeological resource' means an archeological 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 that there is a demonstrable public interest in that information.

(2) Has a special and particular quality such as being the oldest of its type or the best available example of its type.

(3) Is directly associated with a scientifically recognized important prehistoric or historic event or person."

Section 21083.2(h) defines a "nonunique archeological resource" as follows:

"(h) As used in this section, 'nonunique archeological resource' means an archeological artifact, object, or site which does not meet the criteria in subdivision (g). A nonunique archeological resource need be given no further consideration, other than the simple recording of its existence by the lead agency if it so elects."

b. Impact Analysis

(1) Archaeological

No portion of the Landmark Village tract map site would directly or indirectly impact either of the two known archeological sites in the area. However, the Chiquito Canyon grading site and the utility corridor on the south side of SR-126 pass near CA-LAN-2233 and CA-LAN-2234. CA-LAN-2233 was found to contain two components: a northern component containing a subsurface archaeological deposit and intact artifacts; and a southern component consisting solely of a surface scatter of stone artifacts. The northern component contains scientific information that may contribute to the reconstruction of local prehistory. Activity associated with grading in the Chiquito Canyon grading site may have a potentially significant indirect impact on the northern site due to its close proximity to this resource.

Phase II fieldwork in the southern portion of CA-LAN-2233 resulted in the recovery of all extant artifacts from this area of the site. This recovery fully mitigates the potentially significant impact that might occur as a result of any land disturbance required for the utility corridor.

Phase II fieldwork at CA-LAN-2234 demonstrated that no intact cultural resources were present at this locale. Accordingly, land disturbance associated with the utility corridor at this locale would not result in significant impacts to cultural resources.

(2) Paleontological

Development can have both adverse and beneficial impacts on paleontological resources. Adverse impacts may be either direct or indirect, and include the destruction of paleontological resources because of the increase in activity in the area. Direct adverse impacts occur from brushing, grading, trenching, and other earthmoving activities. Indirect adverse impacts result from increased accessibility resulting in unauthorized fossil collecting by amateur collectors, especially in open space areas. Development can have beneficial impacts on the region's paleontological resources if proper measures are implemented during development. Beneficial impacts result when a paleontologist is permitted to monitor the site and to salvage exposed fossils of possible scientific significance.

A way of determining impacts is to estimate the potential for the discovery of fossils, which is a measure of the likelihood that fossils will be discovered during excavations into a given rock unit based on the past discovery of fossils from that rock unit. Paleontological potential does not measure the significance of individual fossils present within the study area, because it is impossible to accurately predict what individual fossils will be discovered.

A five-tiered classification system of sensitivity for paleontological resources (shown in **Table 4.22-1**, **Paleontologic Sensitivity Classification**) has been developed to evaluate the paleontologic potential of rock units within the Landmark Village area.[4] Each sensitivity rating reflects the potential for the discovery of fossil resources during site development.

[4] The data used to define these potentials came from a review of pertinent paleontological information and literature both within the study site and the surrounding areas, discussion with professional paleontologists, and field experience in Southern California.

Table 4.22-1
Paleontologic Sensitivity Classification

Potential	Description
NO	This rating applies to igneous rocks whose molten origins preclude fossil remains being preserved.
LOW	Rocks that are too young geologically to contain significant fossils, are altered, or have a poor record of fossil recovery.
MODERATE	Units that fall within this rating contain sedimentary rocks with histories of producing only limited numbers of fossils at many locations.
HIGH	Units that have well-established histories of containing significant fossils and/or fossils located on the study site.
INDETERMINATE	This classification applies to rock units where there is little or no history of fossil discoveries because of a lack of systematic exploration of rock exposures.

Source: RMW (1994).

Based on the results of RMW's field survey, screen washing efforts, literature review, and records search, the Landmark Village study area is underlain by geologic units rated from high to low paleontologic potential. The potential for fossil production of the individual formations in the study area is discussed below and summarized in **Table 4.22-2**, **Paleontologic Potential by Geologic Unit**. Potential impacts on paleontological resources are directly related to the potential for the discovery of fossils in a rock unit and the amount of grading that would occur in that rock unit.

Table 4.22-2
Paleontologic Potential by Geologic Unit

Geologic Unit	Paleontological Potential[1]	Impact Potential
Pico	HIGH	high
Saugus	HIGH	high
Older Alluvium	MODERATE	moderate
Alluvium/Colluvium	LOW	low

Source: RMW (1994).
[1] *See **Table 4.22-1** for definitions.*

The Pico Formation contains numerous invertebrates within the study area and is known to contain occasional marine vertebrates in other areas. Therefore, this unit is assigned a high potential for the discovery of fossils during development. Because portions of development proposed by Landmark Village would take place on exposures of the Pico Formation, there is a relatively higher potential for significant impacts on paleontological resources that might exist in this unit.

The Saugus Formation has a record of producing important invertebrates and vertebrate remains at several localities within and near the study area; therefore, it is assigned a high paleontological potential. Because portions of development proposed by Landmark Village would take place on exposures of the Saugus Formation, there is a relatively higher potential for significant impacts on paleontological resources that might exist in this unit.

The Quaternary older alluvium is assigned a moderate potential based on its apparent relationship to the terrace deposits. These units are underlain by older, highly fossiliferous deposits, and are in areas where site grading is likely to occur. Therefore, there is a moderate potential for impacts on paleontological resources that might exist in this unit.

The Quaternary alluvium/colluvium are assigned a low potential; regardless of the amount of development in these deposits, the potential for significant impacts is low.

In conclusion, the Pico Formation and Saugus Formation within the development area of the Landmark Village project have a high potential for yielding paleontological resources, because there is potential for the exposure of significant fossils in areas of these geologic units that are proposed for grading. Where Quaternary older alluvium exists in the development area, there is a moderate potential for yielding paleontological resources because there is potential for the exposure of significant fossils in areas of these geologic units. Therefore, the Landmark Village-related grading activities could have significant impacts on paleontological resources.

7. PROJECT MITIGATION MEASURES

As discussed above, the County previously imposed mitigation measures required to be implemented as part of the Newhall Ranch Specific Plan that would reduce potential significant cultural and paleontological impacts to below a level of significance. These mitigation measures, as they relate to cultural and paleontological resources, are found in the certified Newhall Ranch Specific Plan Program EIR and the adopted Mitigation Monitoring Plan for the Specific Plan (May 2003). The mitigation measures are also reiterated below.

a. Mitigation Measures Required by the Adopted Newhall Ranch Specific Plan, as they Relate to the Landmark Village Project

The following mitigation measures were adopted by the County in connection with its approval of the Newhall Ranch Specific Plan (May 2003). All of the mitigation measures are applicable to the Landmark Village project due to its geographic location. The applicable mitigation measures will be implemented in conjunction with the proposed project to mitigate the potentially significant impacts associated with the proposed project. These measures are preceded by "SP," which stands for Specific Plan.

SP 4.3-1 Any adverse impacts to California-LAN-2133, -2235, and the northern portion of -2233 are to be mitigated by avoidance and preservation. Should preservation of these sites be infeasible, a Phase III data recovery (salvage excavation) operation is to be completed on the sites so affected, with archaeological monitoring of grading to occur during subsequent soils removals on the site. This will serve to collect and preserve the scientific information contained therein, thereby mitigating all significant impacts to the affected cultural resource.

SP 4.3-2 Any significant effects to California-LAN-2241 are to be mitigated through site avoidance and preservation. Should this prove infeasible, an effort is to be made to relocate, analyze, and re-inter the disturbed burial at some more appropriate and environmentally secure locale within the region.

SP 4.3-3 In the unlikely event that additional artifacts are found during grading within the development area or future roadway extensions, an archaeologist will be notified to stabilize, recover and evaluate such finds.

SP 4.3-4 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. Because of known presence of microvertebrates in the Saugus Formation, samples of at least 2,000 pounds of rock shall be taken from likely horizons, including localities 13, 13A, 14, and 23. These samples can be stockpiled to allow processing later to avoid delays in grading activities. The frequency of these samples will be determined based on field conditions. 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. Because of the long duration of the Specific Plan, a reassessment of the paleontological potential of each rock unit will be used to develop mitigation plans for subsequent subdivisions. The report 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 those rock units. 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.

b. Additional Mitigation Measures Proposed by this EIR

At the project-specific level, the following mitigation measures are recommended to further mitigate potentially significant cultural/paleontological impacts that may occur with implementation of the proposed Landmark Village project. This mitigation is in addition to that adopted in the certified Newhall Ranch Specific Plan Program EIR. To reflect that the mitigation relates specifically to the Landmark Village project, the following designation is used below, "LV 4.22-1."

LV 4.22-1 Although no other significant cultural resources were observed or recorded, all grading activities and surface modifications must be confined to only those areas of absolute necessity to reduce any form of impact on unrecorded (buried) cultural resources that may existing within the confines of the project area. In the event that resources are found during construction, activity shall stop and a qualified archaeologist shall be contacted to evaluate the resources. If the find is determined to be a historical or unique archaeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation should be available. 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).

LV 4.22-2 For archeological sites accidentally discovered during 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).

8. CUMULATIVE IMPACTS

Impacts upon cultural and paleontological resources tend to be site-specific and are assessed on a site-by-site basis. As discussed above, the Landmark Village study area contains cultural resources. Where these resources exist, implementation of the proposed project would represent an incremental adverse cumulative impact to cultural resources. However, provided that feasible mitigation is implemented by the proposed project, the project is not anticipated to contribute to significant cumulative impacts. Therefore, the project will have less than significant impacts on cultural resources, and such effects would not be cumulatively considerable. In fact, if mitigation is properly carried out, a positive impact on cumulative cultural resource information would occur; that is, mitigation measures would result in the acquisition of additional scientific information about the prehistory of the region, thereby serving to clarify our reconstruction of prehistoric lifeways, while the artifacts obtained from the sites during mitigation procedures would be preserved for future analysis, study, and viewing.

9. CUMULATIVE MITIGATION MEASURES

Other than complying with the same mitigation that is required of the proposed project, no further mitigation is recommended or required, because the project does not contribute to any cumulatively considerable cultural or paleontological impacts.

10. SIGNIFICANT UNAVOIDABLE IMPACTS

a. Project-Specific Impacts

Provided that proposed mitigation measures are implemented, no significant unavoidable impacts are expected to result from implementation of the proposed project.

b. Cumulative Impacts

Provided that mitigation measures are implemented, no significant unavoidable cumulative impacts are expected to result from implementation of the proposed project.

5.0 PROJECT ALTERNATIVES

1. PURPOSE

California Environmental Quality Act (CEQA) Guidelines *Section 15126.6 provides that the purpose of the alternatives section of an EIR is to assess a range of reasonable alternatives to the proposed project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project. The EIR must also include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project. The discussion of alternatives should be governed by the "rule of reason." Generally, significant effects of an alternative shall be discussed, but in less detail than the proposed project.*

2. INTRODUCTION

As stated above, the principal purpose of the alternatives analysis is to assess a range of project alternatives that would reduce the magnitude of, or eliminate, potential project-related impacts. However, the *CEQA Guidelines* place some restrictions on the range of alternatives an EIR must address. First, an EIR need only examine those alternatives that meet most basic objectives of the project. Second, the *CEQA Guidelines* stipulate that alternatives addressed in an EIR should be feasible and should not be considered remote or speculative. When addressing feasibility, the *CEQA Guidelines* state that "…among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, jurisdictional boundaries, and whether the applicant can reasonably acquire, control or otherwise have access to the alternative site." Third, where a previous EIR analyzed a range of reasonable alternative locations and environmental impacts for a project with the same basic purpose, the EIR may rely on the previous document to assess the feasibility of potential project alternatives to the extent the circumstances remain substantially the same as they relate to such alternatives.

Based on these CEQA-driven directives, alternatives to the project that would reduce significant adverse impacts without undermining basic project objectives were selected for analysis in this section.

3. NEWHALL RANCH SPECIFIC PLAN ALTERNATIVES PREVIOUSLY EVALUATED

The certified Newhall Ranch Specific Plan Program EIR evaluated six on-site alternatives to the Specific Plan, and three alternative site locations. These nine alternatives were selected based on the significant impacts of the Specific Plan, the comments received in response to the Notice of Preparation, discussions with Los Angeles County (County) staff and its Significant Ecological Area Technical Advisory

Committee, discussions at 26 Community Task Force meetings, and discussions with members of the community and community groups. The previously evaluated on-site and off-site alternatives are identified below.

a. On-Site Alternatives

- **Alternative 1, The No Project Alternative.** This alternative is required by the *CEQA Guidelines*, and it compared the impacts that might occur if the site was left in its present condition with those that would be generated by development of the Specific Plan. While many impacts associated with development of the Specific Plan would be avoided under this alternative, certain other impacts would not necessarily be precluded under this alternative;

- **Alternative 2, Site Buildout under the Santa Clarita Valley Area Plan.** The purpose of this alternative was to describe the impacts of developing the site as allowed by the Santa Clarita Valley Area Plan and to compare such impacts with those generated by development of the Specific Plan. Under this alternative, approximately 2,070 dwelling units and 47,372 square feet of commercial space would be constructed on the Specific Plan site. Given the substantial reduction in site population under this alternative, direct and indirect impacts generally would be less than those under the Specific Plan. However, certain Specific Plan project benefits, including increased public access to dedicated open space, would not be realized under this alternative;

- **Alternative 3, The Clustered Alternative (Same Amount of Development as Specific Plan, Smaller Footprint).** The primary purpose of this alternative was to minimize or avoid potentially significant biological impacts by reducing the development footprint of the Specific Plan. In doing so, many other impacts that could occur as a result of land surface disturbance (e.g., impacts to cultural resources, geotechnical resources, fugitive dust impacts generated by grading, etc.) might also be reduced in magnitude by a reduction in the development footprint of the Specific Plan;

- **Alternative 4, The 19,750-Unit Alternative (20 Percent Reduction in Development, Same Footprint).** The primary purpose of this alternative was to minimize or avoid potentially significant traffic, air quality, noise, indirect biological, utility (e.g., water demand, wastewater generation), and public service (e.g., fire department, sheriff department) impacts by generally reducing the overall amount of development on the site;

- **Alternative 5, The 15,000-Unit Alternative (39 Percent Reduction in Development, Smaller Footprint).** The primary purpose of this alternative was to avoid or minimize the potentially significant direct and indirect biological impacts created by the Specific Plan by removing commercial and residential development completely from the previous Significant Ecological Area (SEA) 23 boundary and by reducing the intensity of development and footprint upon which such development would occur. In doing so, many other impacts which could occur as a result of site development might also be reduced in magnitude; and

- **Alternative 6, The 8,000-Unit Alternative (68 Percent Reduction in Development, Smaller Footprint).** The primary purpose of this alternative was to avoid or minimize the potentially significant visual and biological impacts created by the Specific Plan. In doing so, many other impacts that could occur as a result of site development might also be reduced in magnitude.

The Specific Plan Program EIR alternatives analysis concluded that the 8,000-unit alternative was the environmentally superior alternative. However, the Board of Supervisors did not choose this alternative, and instead adopted the Newhall Ranch Specific Plan, as revised, along with the mitigation measures identified in both the Final EIR and Mitigation Monitoring Plan. The Board also found that the No Project Alternative was not feasible or acceptable because, if implemented, many of the basic objectives of the Specific Plan would not be attained. As to the other alternatives, the Board found, generally, that the alternatives were infeasible because they too narrowly limited the range of housing opportunities and did not reflect the market conditions under which the Specific Plan would be developed, and also would not achieve many of the basic objectives of the Specific Plan. Consequently, in accordance with *CEQA Guidelines* Section 15093, a Statement of Overriding Considerations was adopted to substantiate the Board's decision to reject the environmentally superior alternative, and the other identified alternatives, because the significant benefits afforded by the Specific Plan outweighed the environmental effects identified in the Newhall Ranch Specific Plan Program EIR.

b. Off-Site Alternatives

Twenty-three sites were initially considered as part of the alternative site evaluation conducted in the certified Newhall Ranch Specific Plan Program EIR. Of the 23 sites considered, three were found to be reasonably comparable to the Newhall Ranch Specific Plan site in terms of size, topography, and location in relation to the Los Angeles planning and market area. The three sites are the Hathaway Ranch, the Temescal Ranch, and The Newhall Land and Farming Company's Ventura County holdings. The Newhall Ranch Specific Plan Program EIR fully evaluated the environmental impacts of developing these alternative sites compared to developing the Newhall Ranch Specific Plan site.

The Board of Supervisors found that none of the off-site alternatives were superior from an environmental standpoint when compared to the Newhall Ranch Specific Plan site. The Board found, generally, that each of the off-site alternatives would create greater impacts than those that would result with development on the proposed Specific Plan site, that many of the objectives of the project would not be achieved with the off-site alternatives, and that several of the benefits associated with the project would not be realized with the off-site alternatives. Therefore, the Board rejected all of the off-site alternatives as neither reasonable nor feasible. No changes in the Specific Plan or its circumstances have occurred since the Newhall Ranch Specific Plan Program EIR was certified in May 2003. In light of this fact, and given that the proposed Landmark Village project is consistent with the land uses in the Specific Plan, it can be concluded that the prior Newhall Ranch Specific Plan Program EIR still adequately addresses alternative site locations. Consistent with *CEQA Guidelines* Section 15126.6(f)(2)(c), as well as Sections 15152, 15168, and 15385, because the Specific Plan Program EIR sufficiently analyzed a range of reasonable alternative locations and associated environmental impacts for the Specific Plan, and because

the circumstances remain substantially the same as they relate to off-site alternative locations, this EIR relies on the off-site alternatives previously evaluated in the Newhall Ranch Specific Plan Program EIR to assess the feasibility of potential project alternatives. Accordingly, this analysis incorporates by reference the discussions and analysis contained in that certified EIR pertaining to the off-site alternatives.

4. LANDMARK VILLAGE ALTERNATIVES

This EIR, at **Section 4.0, Environmental Impact Analysis**, determined that project implementation would result in six significant unavoidable impacts relative to biota, visual qualities, construction noise, air quality, solid waste services, and agricultural resources, and in several other potentially significant impacts prior to mitigation.

Based on considerations of avoiding or substantially lessening the significant impacts identified under the proposed project, as well as consideration of the basic objectives of the project, public comments received in response to the Notice of Preparation (NOP), discussions with County staff, the public, and other public agencies, the following four alternatives to the proposed project were selected for analysis: (1) No Project/No Development Alternative; (2) No Project/Future Development Alternative; (3) Floodplain Avoidance Alternative; and (4) Cluster Alternative. Each of these alternatives is discussed separately below. No other alternatives were identified or rejected as infeasible, during the County's EIR scoping process.

a. Alternative 1: No Project/No Development Alternative

Section 15126.6(e) of the *CEQA Guidelines* provides guidance on consideration of the No Project condition. When examining a development project on a specific piece of property, the No Project Alternative is the circumstance under which the project does not proceed. Under a No Project/No Development scenario, the discussion compares the environmental effects of the property remaining in its current state against the environmental effects that would occur if the project were approved.

Under the No Project/No Development Alternative, the project site would remain in its present condition and would be used for limited agricultural purposes. As described in **Section 2.0, Environmental and Regulatory Setting**, a portion of the site is, or has been, used for agricultural activities, water wells, and utility easements and, therefore, is either in an otherwise disturbed state (roadway rights-of-way), or is presently open space. Under the No Project/No Development Alternative, the potential project-related impacts associated with development of the project site and described in **Section 4.0, Environmental Impact Analyses**, would not occur.

However, the No Project/No Development Alternative would not result in bank stabilization along the tract map site and portions of the utility corridor and erosion protection (turf-reinforcement mats [TRMs] or similar) along other portions of the utility corridor, thereby allowing continued sedimentation/erosion to occur at these locations. Also, in its current state there is no flood protection on the tract map site, except in limited areas, such as adjacent to the Castaic Creek Bridge. Consequently, 10- through 100-year storm events experienced under the no project condition would result in flooding on portions of the tract map site. In contrast, the proposed project would elevate the tract map site out of the floodplain and construct bank protection at various locations, thereby removing the flood hazard that presently exists.

Because of ongoing agricultural cultivation, the presence of the State Route 126 (SR-126) and existing utility infrastructure, the tract map site, utility corridor, and water tank sites presently have little habitat value. The area of greatest biological value is found within the River Corridor Special Management Area (SMA), which would not be disturbed under the No Project/No Development Alternative. In relation to the proposed project, this alternative would have less demand on public services and utilities (i.e., water service, wastewater, solid waste, education, libraries, parks and recreation, fire and police protection, gas and electricity) and floodplain modifications and, correspondingly, no significant impacts. Project viewsheds would remain the same as the existing condition. The alternative would not generate the traffic, air emissions, and noise emissions associated with the proposed project. Therefore, in contrast to the proposed project, this alternative would not result in significant unavoidable impacts related to biota, visual qualities, construction noise, air quality, solid waste services, and agricultural resources.

However, because the proposed project would not be constructed under the No Project/No Development Alternative, none of the project objectives set forth in this EIR, at **Section 1.0, Project Description**, would be attained under this alternative.

b. Alternative 2: No Project/Future Development

Under *CEQA Guidelines* Section 15126.6(e)(3)(B), if disapproval of the project under consideration would result in predictable actions by others, such as the proposal of some other project, then this "no project" consequence (i.e., No Project/Future Development scenario) should be discussed.

Disapproval of the proposed Landmark Village project would not necessarily preclude future development of the property. The County Board of Supervisors adopted the Newhall Ranch Specific Plan on May 27, 2003, consistent with Title 22, Chapter 22.46 of the Los Angeles County Zoning Code. The Newhall Ranch Specific Plan implements the goals and policies of the General Plan and Santa Clarita Valley Areawide Plan on a focused, site-specific basis. The Specific Plan permits a maximum of 1,444

dwelling units and approximately 1.5 million square feet of commercial land uses within the planning areas that constitute the Landmark Village tract map site.

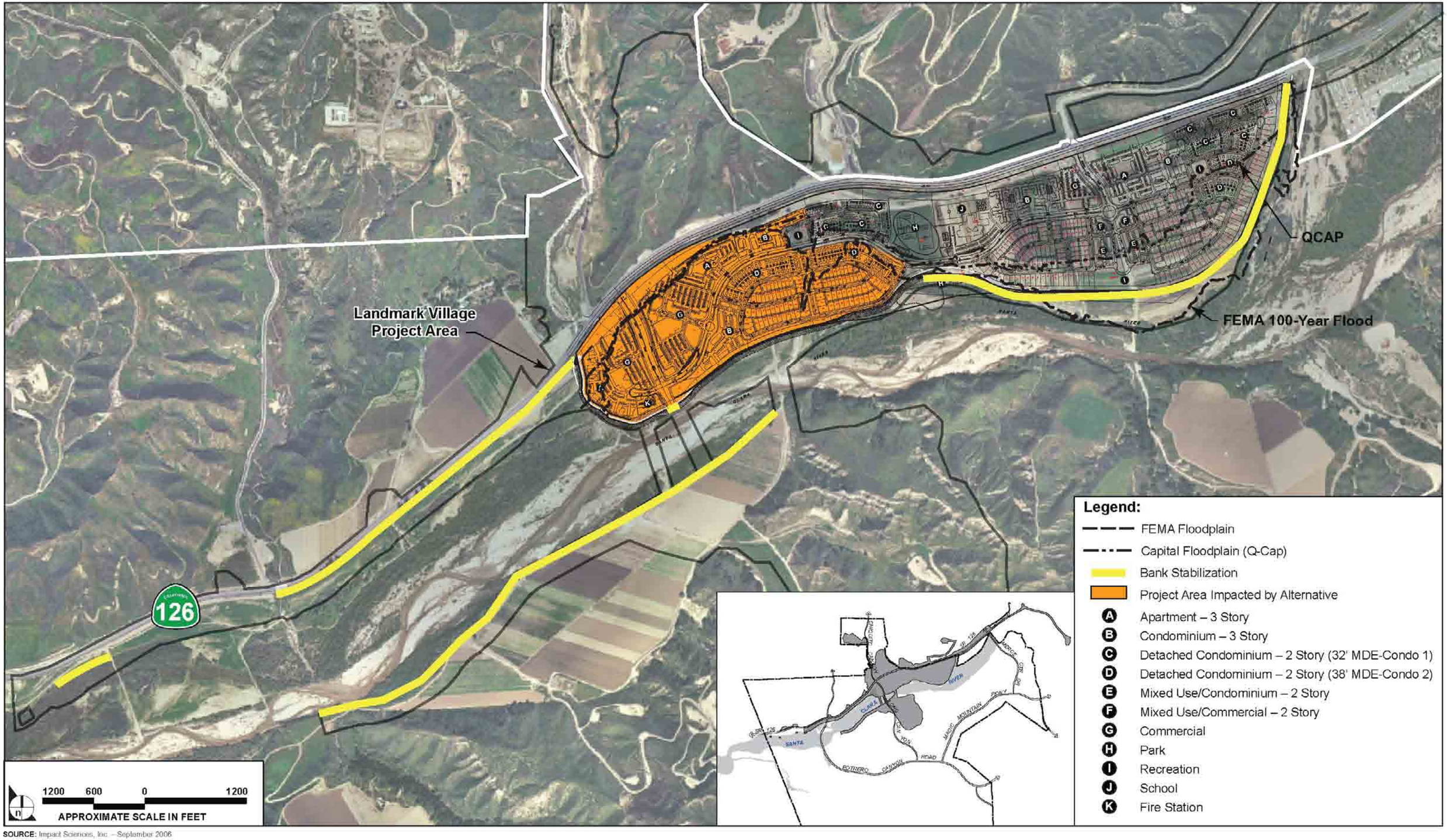
In addition to being planned for developed use, the project site is located near existing water, sewer, natural gas, telephone, and cable lines that are present within existing roadway rights-of-way. Further, the site is located within the existing service area of both sheriffs and fire department stations and all public services are readily available to serve future site development. Given that the property currently is planned for residential and commercial land uses that can be served by the existing infrastructure, it is reasonable to assume that the site will likely be developed at some time in the future if the currently proposed project is not approved. The environmental impacts associated with such a development alternative likely would be comparable to those identified for the proposed project, which is fully evaluated throughout **Section 4.0, Environmental Impact Analysis**, of this EIR. Therefore, the No Project/Future Development Alternative likely would not avoid or substantially lessen any of the proposed project's identified significant effects.

Whether or not the No Project/Future Development Alternative would attain any of the project objectives is dependent upon the specific type of development that ultimately would occur under this alternative. Therefore, any conclusion in this respect, by necessity, would be speculative.

c. Alternative 3 – Floodplain Avoidance Alternative

As shown on **Figure 5.0-1, Floodplain Avoidance Alternative**, the Floodplain Avoidance Alternative retains the overall layout of the proposed Landmark Village project, except this alternative would not place development within areas of the tract map site presently at a lower elevation than the 100-year Federal Emergency Management Agency (FEMA) elevation and, therefore, under this alternative it would not be necessary to elevate portions of the Landmark Village site out of the floodplain area. Bank stabilization would continue to be required along the perimeter of the reduced development footprint fronting the river, the base of the Long Canyon Road Bridge, and the south side of the utility corridor extending to the Newhall Ranch Water Reclamation Plant site.

This alternative would reduce development by 286 dwelling units along with a reduction of 828,000 square feet of commercial space when compared to the proposed project, for a total of 1,158 dwelling units and 205,000 commercial square feet. The Floodplain Avoidance Alternative would retain the 9-acre elementary school, 16-acre community park, and three of the four private recreation areas proposed as part of the Landmark Village project. Additionally, under this alternative, approximately 79 acres of land would remain available for agricultural production due to the reduction in residential and commercial development.



SOURCE: Impact Sciences, Inc. – September 2006

FIGURE **5.0-1**

FEMA Floodplain Avoidance Alternative

32-92•09/06

d. Potential Impacts

The following discussion compares the potential environmental impacts of this alternative to those associated with implementation of the proposed project.

(1) Geotechnical and Soil Resources

Implementation of this alternative would result in less grading because of the reduced development footprint on the tract map site. This alternative permits development of a portion of the property along with a reduction in the amount of soil imported to the site from the Adobe Canyon borrow site. However, all improvements constructed on the site would be subjected to the forces of ground movement during seismic events similar to the proposed project and would also be subject to the same construction requirements as the proposed project. Because there would be less development under this alternative than under the proposed project, geotechnical hazards would be reduced and, therefore, Alternative 3 would result in fewer impacts than the proposed project with respect to geology and soils.

(2) Hydrology

Implementation of this alternative would result in slightly less storm runoff and more infiltration than the proposed project because less area would be developed resulting in more open area. Also, it is likely the landscape irrigation needs of Alternative 3 would be less than the proposed project due to less landscaped acreage. The urban runoff that is generated under this alternative would be conveyed and discharged into the Santa Clara River in a similar manner as the proposed project. This alternative would also reduce the amount of bank stabilization needed on site, because the development footprint fronting the river would be reduced. Consequently, this alternative would result in fewer impacts from a hydrology perspective than the proposed project.

(3) Water Quality

Under either this alternative or the proposed project, Project Design Features (PDFs) incorporated into the development to address water quality and hydrologic impacts would include site design, source control, treatment control, and hydromodification control Best Management Practices (BMPs). In addition, flow control BMPs would be incorporated into the PDFs in order to comply with the Los Angeles Countywide Standard Urban Storm Water Mitigation Plan (SUSMP) and County Interim Peak Flow Standard. The flow control BMPs for either development of the proposed project or Alternative 3 would include both source control and detention. The PDFs combined with the implementation of recommended mitigation measures would reduce water quality and hydromodification impacts to less than significant levels under either development scenario. However, this alternative may result in increased erosion due to the upland relocation of bank stabilization to accommodate the reduced

development footprint and the corresponding potential for flood flows to erode this now unprotected area. For this reason, Alternative 3 would result in greater impacts than the proposed project from a water quality perspective.

(4) Biota

Under Alternative 3, development would not occur within the FEMA 100-year floodplain, there would be less land disturbance at the Adobe Canyon borrow site, less impact to resources subject to California Department of Fish and Game (CDFG) and U.S. Army Corps of Engineers (ACOE) jurisdiction, and a reduction in land disturbance on the tract map site. Consequently, Alternative 3 would reduce the direct biological impacts compared to the proposed project. Furthermore, significant indirect impacts such as increased light and glare, increased non-native plant species and increased human and domestic animal presence would also be reduced as Alternative 3 represents reduced development intensity and provides greater separation between resources in the River Corridor SMA and on-site development. For these reasons, Alternative 3 would result in fewer impacts to biota than the proposed project.

(5) Floodplain Modifications

Alternative 3 would reduce the extent of floodplain modifications compared to the proposed project by removing the need to elevate portions of the site out of the floodplain. Consequently, floodplain modifications associated with construction and operation of Alternative 3 would result in fewer impacts on sensitive aquatic/riparian resources in the Santa Clara River corridor as this alternative would create slightly less increase in flows, water velocities, water depth, changes in sediment transport and changes in flooded areas. Although the Landmark Village project creates only minor hydraulic effects, which are insufficient to alter the amount, location, and nature of aquatic and riparian habitats in the project area and downstream, as well as insufficient to impact sensitive riparian species, including the unarmored threespine stickleback, arroyo toad, California red-legged frog, southwestern pond turtle and two-striped garter snake, Alternative 3 would result in fewer impacts than the proposed project relative to floodplain modifications because it would create fewer hydraulic impacts with the elimination of the need to elevate portions of the site from the floodplain.

(6) Visual Qualities

Development of the site under Alternative 3 or the proposed project would be subject to Development Regulations and Design Guidelines contained in the Specific Plan. These regulations and guidelines address grading, lighting, fencing, landscaping, signage, architecture, and site planning for subsequent subdivisions within the Newhall Ranch Specific Plan. Despite such features, significant visual impacts would result from the change in the visual character of the site from rural to urban. As with the proposed

Landmark Village project, Alternative 3 would significantly alter the visual characteristics of the Santa Clara River/SR-126 corridor, as existing open-space views would be replaced with the images of residential development, roadways, bridges, and other human activity. However, significant impacts to views in Chiquito Canyon would be reduced under Alternative 3, as no development would occur on the western most portion of the site. While neither Alternative 3 nor the Landmark Village project is replacing prominent visual features, such as river vegetation or river bluffs, Alternative 3 would reduce disturbance at the Adobe Canyon borrow site compared to the proposed Landmark Village project.

Development under either the proposed project or Alternative 3 would introduce sources of outdoor illumination that do not presently exist. Outdoor lighting, such as streetlights and traffic signals, are essential safety features in development projects that involve new streets and intersections, and cannot be eliminated if the site is to be developed. In conclusion, Alternative 3 would result in fewer impacts than the proposed project relative to visual qualities because it would avoid the significant visual impact from Chiquito Canyon and would not require grading at the Adobe Canyon borrow site.

(7) Traffic and Access

Implementation of Alternative 3 would reduce the number of vehicle trips generated by on-site uses when compared to the proposed project. Specifically, using the Institute of Transportation Engineers (ITE) *Trip Generation Manual* factors, average daily trip generation for the proposed project is estimated at 41,900 trips. In comparison, Alternative 3 would generate 28,498 trips, resulting in a reduction of 13,402 trips when compared to the proposed project. While there would be less traffic generated with this alternative, the Landmark Village project represents a balanced land plan that contains neighborhood-serving commercial uses that are connected to the residential areas by paseos and trails, thereby promoting alternative means of travel and keeping vehicle trips internal to the project. A reduction of 828,000 square feet of commercial uses as called for under Alternative 3 would likely cause some portion of these internal trips to leave the site as people seek needed goods or services at another location. Consequently, the reduction in motor vehicle trips generated by on-site uses under Alternative 3 may not result in a proportional reduction in the number of project generated vehicle trips traveling along off-site roadway segments. Nevertheless, Alternative 3 would result in fewer impacts than the proposed project with respect to traffic, as the total number of trips would be reduced when compared to the proposed project.

(8) Noise

Under either Alternative 3 or the proposed project, development of the property would involve clearing and grading of the ground surface, installation of utility infrastructure, and the building of the proposed improvements. These activities typically involve the temporary use of heavy equipment, smaller

equipment, and motor vehicles, which generate both steady static and episodic noise. This noise would primarily affect the occupants of on-site uses constructed in the earlier phases of the development (assuming that the site is occupied in sections as other portions are still under construction) and would be audible to occupants of Travel Village Recreational Vehicle (RV) Park when construction activities would occur on the eastern portion of the site. Individuals who would have an uninterrupted line-of-sight to the construction noise sources could be exposed to noise levels which would exceed the County's Noise Ordinance standards during construction regardless of the development alternative selected. However, because Alternative 3 does reduce the importation of fill, there would be less grading activity and fewer heavy truck trips when compared to the proposed project. For this reason, Alternative 3 would result in fewer impacts than the proposed project with regard to construction noise.

With respect to operational impacts, under either Alternative 3 or the proposed project, building occupants would be subject to traffic noise along SR-126 and on internal roadways, as well as noise from day-to-day activities at the site. Traffic along SR-126 would result in significant noise impacts at the residential, school, and park uses proposed along the highway under either Alternative 3 or the proposed project. Future traffic along SR-126 would cause mobile source noise levels at Travel Village to exceed acceptable noise levels, although the project applicant is required to mitigate highway noise at Travel Village regardless of which development scenario is selected.

However, because Alternative 3 would reduce the number of vehicle trips when compared to the proposed project, there would be less off-site noise impacts, so this alternative would result in fewer impacts than the proposed project relative to noise.

(9) Air Quality

Under this alternative, short-term grading and construction-related air quality impacts would be reduced as compared to those of the proposed project, because under Alternative 3, a reduced amount of imported fill would be needed to elevate the site out of the floodplain.

As shown in **Table 5.0-1, Estimated Alternative 3 Operational Emissions**, long-term (i.e., operational) impacts for this alternative would also be reduced when compared to the proposed project as the number of operational traffic trips would be reduced because of the development of 286 fewer residential units, less commercial square footage and less private recreation areas.

Table 5.0-1
Estimated Alternative 3 Operational Emissions

Emissions Source	Emissions in Pounds per Day[1]				
	CO	VOC	NO_x	SO_x	PM_{10}
Summertime Emissions					
Mobile Sources	2,229.45	185.19	209.34	1.70	259.25
Area Sources					
Natural Gas	7.04	1.08	14.12	--	0.03
Wood Stoves	0	0	0	0	0
Fire Places	0	0	0	0	0
Landscape Maintenance	20.18	2.56	0.33	0.12	0.06
Architectural Coatings	--	32.65	--	--	--
Consumer Products	--	56.65	--	--	--
Area Source Subtotal	27.23	92.94	14.45	0.12	0.09
Alternative Mobile and Area Source Totals:	2,256.68	278.13	223.79	1.82	259.34
Project Mobile and Area Source Totals:	4,104.14	418.92	414.66	2.52	372.02
Recommended Threshold:	550.0	55.0	55.0	150.0	150.0
Alternative Exceeds Threshold?	YES	YES	YES	NO	YES
Wintertime Emissions					
Mobile Sources	2,148.96	177.11	302.21	1.37	259.25
Area Sources					
Natural Gas	7.04	1.08	14.12	--	0.03
Wood Stoves	0	0	0	0	0
Fire Places	3.41	0.47	8.00	0.05	0.65
Landscape Maintenance	0	0	0	0	0
Architectural Coatings	--	32.65	--	--	--
Consumer Products	--	56.65	--	--	--
Area Source Subtotal	10.45	90.85	22.12	0.05	0.67
Alternative Mobile and Area Source Totals:	2,159.41	267.96	324.33	1.43	259.93
Project Mobile and Area Source Totals:	5,741.55	2,023.47	605.22	4.89	244.44
Recommended Threshold:	550.0	55.0	55.0	150.0	150.0
Alternative Exceeds Threshold?	YES	YES	YES	NO	YES

Source: Impact Sciences, Inc. Emissions calculations are provided in ***Appendix 5.0****.*

[1] *Emissions assume construction of sidewalks and/or pedestrian paths; direct pedestrian connections; street lighting; pedestrian signalization and signage; bike lanes/paths connecting to the bikeway system; no wood burning stoves; and residential and commercial insulation beyond Title 24 requirements.*

Totals in table may not appear to add exactly due to rounding in the computer model calculations.

CO = carbon monoxide; VOC = volatile organic compounds; NO_x = oxides of nitrogen; SO_x = sulfur oxides; PM_{10} = fine particulate matter.

Both the proposed project and this alternative would result in South Coast Air Quality Management District (SCAQMD) air quality thresholds being exceeded in the summertime for Carbon Monoxide (CO), Volatile Organic Compounds (VOC), Oxides of Nitrogen (NO_x), and Fine Particulate Matter (PM_{10}). Wintertime emissions also would result in air quality thresholds being exceeded for CO, VOC, NO_x, and

PM_{10}. However, fewer emissions would be generated with this alternative. Consequently, based on this information, from an air quality standpoint, Alternative 3 would result in fewer impacts than the proposed project.

(10) Water Service

The Landmark Village project would generate a potable water demand of approximately 702 acre-feet per year (afy) and a non-potable demand of 336 afy. Potable water would be supplied to the project by the Valencia Water Company from local groundwater supplies. The Newhall Ranch Water Reclamation Plant (WRP), construction of which would likely begin simultaneously with the construction of the proposed project, would supply non-potable water to the project.

In comparison, the potable water demand for Alternative 3 would be 1,177 afy and the non-potable demand would be 281 afy, which represents an increase in potable water demand of 475 afy when compared to the proposed project. This increase is due to the retention of approximately 79 acres of active agricultural land combined with urban development on the balance of this site. Given that less water demand is associated with the Landmark Village project compared with Alternative 3, Alternative 3 would result in greater impacts than the proposed project with respect to water service. As discussed further below, it may be difficult to cost effectively farm the agricultural acreage proposed under this alternative. Therefore, over the long term, it is possible that agricultural production under this alternative would not prove feasible. If this were the case and agricultural uses were discontinued, the potable water demand for Alternative 3 would be reduced, and would result in lower water usage when compared to the proposed project.

(11) Wastewater Disposal

Wastewater generation for this alternative would be approximately 0.36 million gallons per day (mgd), which represents a decrease of 0.12 mgd when compared to the proposed project. As with the proposed project, this waste would be treated by the Newhall Ranch WRP. The treatment capacity of the Newhall Ranch WRP would be 6.8 mgd, with a maximum flow of 13.8 mgd. Until the development of the Newhall Ranch WRP is complete, there are two options for the temporary conveyance and treatment of wastewater generated by the proposed project. The first option is to construct an initial phase of the Newhall Ranch WRP to serve the project site, with build out of the WRP occurring over time as demand for treatment increases. As the WRP is intended to serve the Newhall Ranch Specific Plan area, the initial phase of the WRP would be designed and constructed to accommodate the predicted wastewater generation of either the proposed project or Alternative 3. The second option would temporarily direct wastewater flows to the Valencia WRP until the first phase of the Newhall Ranch WRP is complete. Based on County Sanitation Districts of Los Angeles County (CSDLAC) future wastewater generation

estimates and the planned expansion of the Saugus and Valencia WRPs, the Valencia WRP would have sufficient capacity to temporarily accommodate the project's predicted wastewater generation of 0.48 mgd, so the 0.36 mgd generated under Alternative 3 could also be accommodated. For these reasons, Alternative 3 would result in impacts similar to the proposed project with respect to wastewater generation and treatment despite the fact that Alternative 3 would generate less effluent.

(12) Solid Waste Services

The project would generate 3,807 tons of solid waste per year. In comparison, Alternative 3 would generate 2,265 tons of solid waste per year resulting in a decrease of 1,542 tons per year of solid waste generated compared to the proposed project. To the extent Alternative 3 would generate less solid waste than the proposed project, this alternative would, therefore, result in fewer impacts than the proposed project relative to solid waste services.

(13) Sheriff Services

The proposed project would result in a resident population of approximately 3,680 persons, which would increase the demand for law enforcement and traffic-related services on the project site and the local vicinity in terms of personnel and equipment. The proposed project would require the services of an additional four sworn officers. In comparison, Alternative 3 would result in a population of 3,213 persons. Given the Sheriff Department ratio of 1 officer per 1,000 persons, Alternative 3 would require the services of 3.2 officers, which is approximately one officer less than the proposed project.

The project applicant has entered into negotiations with the Sheriff's Department for the provision of a Sheriff station site within the Newhall Ranch Specific Plan boundary to serve buildout of uses within the Newhall Ranch Specific Plan. In addition, increased revenues generated by the project as it builds out (via motor vehicle registration fees paid by new on-site residents and businesses), would be available for funding additional staffing and equipment for the Sheriff and California Highway Patrol (CHP) to meet future demands. While Alternative 3 would reduce the demand for law enforcement equipment and personnel, there would be a concomitant reduction in tax revenue to fund ongoing law enforcement efforts. Overall, however, from a sheriff services standpoint, Alternative 3 would result in impacts similar to the proposed project with respect to law enforcement.

(14) Fire Protection Services

The Landmark Village project site is located in an area that has been designated as a Very High Fire Hazard Severity Zone (formerly called Fire Zone 4) by the County's Fire Department, which denotes the County Forester's highest fire hazard potential. Any land use constructed on the site would be required

to meet all County codes and requirements relative to providing adequate fire protection services to the site during both the construction and operational stages of the project.

Since the number of housing units and square footage of commercial uses would be reduced under this alternative, the number of fire protection service calls to the project site presumably would also be reduced relative to the proposed project. However, this alternative would provide less tax revenue to fund ongoing fire protection services.

The project applicant is currently in discussions with the County's Fire Department on a Memorandum of Understanding (MOU) for the entire Newhall Ranch Specific Plan. At this time, it is expected that a new, permanent fire station would be constructed west of Long Canyon Road within the Landmark Village site and that this station would provide the fire protection services for the Landmark Village project. The fire station would be constructed under Alternative 3, as well. As a result, site development under either the proposed project or Alternative 3 would not diminish the staffing or the response times of existing fire stations in the Santa Clarita Valley, nor would it create a special fire protection requirement on the site that would result in a decline in existing service levels. Based on this information, Alternative 3 would result in similar impacts to the proposed project with respect to fire protection services.

(15) Education

The Landmark Village project would generate an estimated 336 new elementary students, 100 new middle school students, and 151 new senior high school students for the two affected school districts at build out. Because Alternative 3 would reduce the number of dwelling units by 286 compared to the proposed project, fewer students would be generated by on-site uses.

Development of either the proposed project or Alternative 3 would be subject to the funding agreements established between the applicant and the affected districts. Given that all future development, including the proposed project or Alternative 3, must comply with existing school facilities funding agreements and other mechanisms (e.g., Senate Bill [SB] 50, the Valley-Wide Joint Fee Resolution, and/or new school facilities funding agreements), Alternative 3 would result in impacts similar to the proposed project with respect to education.

(16) Parks and Recreation

The proposed Landmark Village project includes a 16-acre Community Park, consistent with the Specific Plan's Land Use Overlay Community Park designation for the area, 3.13 acres of the Specific Plan's Regional River Trail, and 4.10 acres of community trails. Implementation of these project components

results in a parkland dedication equivalent to approximately 7.1 acres per 1,000 persons, which is greater than the County and Quimby Act requirements of 3.0 acres per 1,000 persons.

In comparison, development of Alternative 3 would provide a 16-acre community park, approximately 1.5 acres of Regional River Trail, and 2 acres of community trails. Implementation of these components would result in a parkland dedication equivalent to approximately 6.5 acres per 1,000 persons. While this figure would exceed the County and Quimby Act requirements of 3.0 acres per 1,000 persons, it represents less parkland per resident than would the proposed project. For this reason, Alternative 3 would result in greater impacts than the proposed project with respect to parks and recreation.

(17) Library Services

Based on the adopted County library planning standard of 0.50 square foot of library facilities per capita and the adopted County library planning standard of 2.0 library books per capita, development of the proposed project would require a total of 1,840 square feet of library facilities and 7,360 items (books, magazines, periodicals, etc.). In comparison, Alternative 3 would require a total of 1,607 square feet of library facilities with 6,427 additional volumes of books for the library system's collection. This results in a decrease in demand of 233 square feet of library facilities and 933 library books when compared to the proposed project.

As part of the County's approval of the Newhall Ranch Specific Plan, the County adopted library mitigation requiring that the developer provide funding for the construction and development of library facilities on the Specific Plan site. This requirement would apply equally to Alternative 3, as well as to the proposed project. Therefore, while Alternative 3 would result in less demand for space and items than would the proposed project, Alternative 3 would result in impacts similar to the proposed project relative to library services because the demand for space and items would be met by construction and operation of the new libraries, as required by the Specific Plan mitigation.

(18) Agricultural Resources

Development of the project site under this alternative would result in the loss of prime agricultural land and agricultural production, but less than the proposed project due to a smaller development footprint. Approximately 79 acres would remain available for farming under this alternative. From a practical standpoint it would be difficult to cost effectively manage and farm small, discontinuous agricultural areas within the project boundary. In addition, Alternative 3 would place residential uses directly adjacent to areas under agricultural cultivation, which could introduce incompatible land use and result in increased costs to farmers as they try to address residential complaints associated with the exposure to

dust, odors, and similar intrusive conditions. Consequently, Alternative 3 would result in impacts similar to the proposed project with respect to agricultural resources.

(19) Utilities

Uses proposed by both the Landmark Village project or Alternative 3 are within the maximum permitted by the Newhall Ranch Specific Plan and the demand for energy was previously analyzed in the Newhall Ranch Specific Plan Program EIR. Since less development is planned under Alternative 3, energy use associated with this alternative would be less than that identified for the proposed Landmark Village project. However, projections for energy supply and demand by Southern California Edison and the Southern California Gas Company indicate that the utilities would have sufficient electricity and natural gas supply to serve the project site regardless of the development type selected. In addition, all development on the property would be required to comply with Title 24 and Assembly Bill (AB) 970 energy conservation measures. Based on the above, Alternative 3 would result in impacts similar to the proposed project with respect to utilities.

(20) Mineral Resources

This alternative would result in a smaller development footprint and requires less off-site grading than does the proposed project. As such, the potential for disturbance or over covering of any potential mineral resource deposits during site development would be reduced when compared to the proposed project. For this reason, Alternative 3 would result in fewer impacts than the proposed Landmark Village project with respect to mineral resources.

(21) Environmental Safety

The potential environmental safety impacts relative to development of the Landmark Village project site include soil contamination attributable to past and present agricultural activities, on-site petroleum (i.e., oil) drilling and pipeline activities, and the disposal of on-site hazardous materials debris. Future residents of either the proposed project or Alternative 3 could be subjected to these potential hazards unless remediated. For these reasons, Alternative 3 would result in impacts similar to the proposed project with respect to environmental safety.

(22) Cultural/Paleontological Resources

This alternative would result in a smaller development footprint and requires less off-site grading near to known archaeological and paleontological resources than does the proposed project. As such, the potential for disturbance to known cultural/paleontological resources during construction activities would be reduced when compared to the proposed project. For this reason, Alternative 3 would result in

impacts lesser than the proposed Landmark Village project with respect to cultural/paleontological resources.

(23) Conclusion on Environmental Analyses

Generally, under Alternative 3, impacts associated with geotechnical and soil resources, hydrology, traffic/access, air quality, noise, biota, cultural/paleontological resources, visual qualities, solid waste services, mineral resources, and floodplain modifications would be reduced when compared to the proposed project. On the other hand, this alternative would have greater impacts associated with water service, water quality, and parks and recreation. However, on balance, Alternative 3 would result in fewer impacts than the proposed project. A summary comparison of impacts associated with the project alternatives is provided later in this section in **Table 5.0-3, Alternatives Impact Comparison Matrix**.

e. Analysis of Project Objectives

While Alternative 3 is considered environmentally superior to the proposed project, Alternative 3 does not meet many of the basic project objectives, which are set forth in this EIR, at **Section 1.0, Project Description**. Project objectives not fully met or impeded by Alternative 3 are listed below.

(1) Land Use Planning Objectives

Land Use Planning Objective No. 2 states, "Consistent with the Specific Plan, accommodate projected regional growth in a location that is adjacent to existing and planned infrastructure, urban services, transportation corridors, and major employment centers and that avoids leapfrog development."

Because Alternative 3 would significantly reduce housing and commercial uses, and, therefore, reduce accommodations for projected regional growth, this alternative is not consistent with this project objective.

Land Use Planning Objective No. 4 states, "Provide development and transitional land use patterns that do not conflict with surrounding communities and land uses."

Alternative 3 would create a fragmented area of agricultural property adjacent to residential and commercial uses and, therefore, does not meet this project objective.

Land Use Planning Objective No. 5 states, "Establish land uses that permit a wide range of housing densities, types, styles, prices, and tenancy (for sale and rental)."

Alternative 3 is inconsistent with this project objective, as it would result in a substantial reduction in residential units (approximately 20 percent reduction), thereby reducing housing options for the site.

Land Use Planning Objective No. 7 states: "Create a highly livable, pedestrian-friendly environment that encourages alternative means of transportation to the automobile by incorporating unique site designs and enhanced pedestrian access between land uses, trails, paseos, and streets."

Alternative 3 is inconsistent with this project objective because it would eliminate the majority of the commercial floor area on site, commercial uses that are necessary to promote livability of the project and the creation of a pedestrian friendly environment and enhanced pedestrian access between land uses.

(2) Economic Objectives

Economic Objective No. 1 states, "Provide a variety of residential homes, which would respond and adjust to changing economic and market conditions."

Alternative 3 does not meet this project objective as the alternative results in a substantial reduction in residential units, thereby accommodating less housing for regional growth projections.

Economic Objective No. 2 states, "Provide a tax base to support public services and facilities."

Alternative 3 is inconsistent with this project objective as it would cause a substantial reduction in residential and commercial land use on site, resulting in a substantial reduction in tax base to support the public facilities and services within the project area.

(3) Mobility Objectives

Mobility Objective No. 1 states, "Implement the Specific Plan's Mobility Plan, as it relates to the Landmark Village project, including the design of a circulation/mobility system that encourages alternatives to automobile use."

Alternative 3 does not meet this project objective because it is inconsistent with the Specific Plan's Mobility Plan and the circulation/mobility system within the Specific Plan. This alternative eliminates the majority of the commercial floor area on site, commercial uses that are necessary to promote livability of the project and the creation of a pedestrian friendly environment and enhanced pedestrian access between land uses.

(4) Parks, Recreation, and Open Area Objectives

Parks, Recreation, and Open Area Objective No. 2 states, "Provide a range of recreational opportunities, including parks, trails and paseos, which are convenient and accessible."

Alternative 3 is inconsistent with this project objective because it would result in a substantial reduction in trails and paseos on the project site.

Parks, Recreation, and Open Area Objective No. 3 states, "Provide pedestrian, bicycle, and hiking trails that are consistent with the Specific Plan's Parks, Recreation, and Open Area Plan."

Alternative 3 does not meet this project objective because it would result in a design that is inconsistent with the Specific Plan's Park, Recreation, and Open Area Plan.

f. Previous Findings Related to this Alternative

As noted above, the County's Board of Supervisors already considered Specific Plan alternatives, two of which eliminated development within the Santa Clara River, including the 100-year floodplain (e.g., Alternatives 5 and 6). The Board rejected both alternatives as infeasible, in part, because such alternatives did not achieve many of the basic objectives of the Specific Plan, including the significant public benefits associated with implementation of such a plan. In addition, the Board of Supervisors considered the issue of the loss of portions of the 100-year floodplain due to Specific Plan development, and found that the bulk of the impacted floodplain acreage (approximately 121 acres) is non-sensitive biota habitat primarily within agricultural lands and other disturbed habitat.

g. Alternative 4 – Cluster Alternative

As shown on **Figure 5.0-2, Cluster Alternative**, the Cluster Alternative retains the overall layout of the proposed Landmark Village project, except this alternative would not result in the development of the westernmost 106 acres of the property, which would remain available for agricultural production. This alternative would reduce development by 507 dwelling units along with 828,000 square feet of commercial space when compared to the proposed project, for a total of 937 dwelling units and 205,000 square feet of commercial space. The Cluster Alternative would retain the 9-acre elementary school, 16-acre community park, and two of the four private recreation areas proposed as part of the Landmark Village project. Bank stabilization would continue to be required along the perimeter of the reduced development footprint fronting the river, the base of the Long Canyon Bridge, and the south side of the utility corridor extending to the Newhall Ranch Water Reclamation Plant site.

(1) Potential Impacts

The following discussion compares the potential environmental impacts of this alternative to those associated with implementation of the proposed project.

(a) Geotechnical and Soil Resources

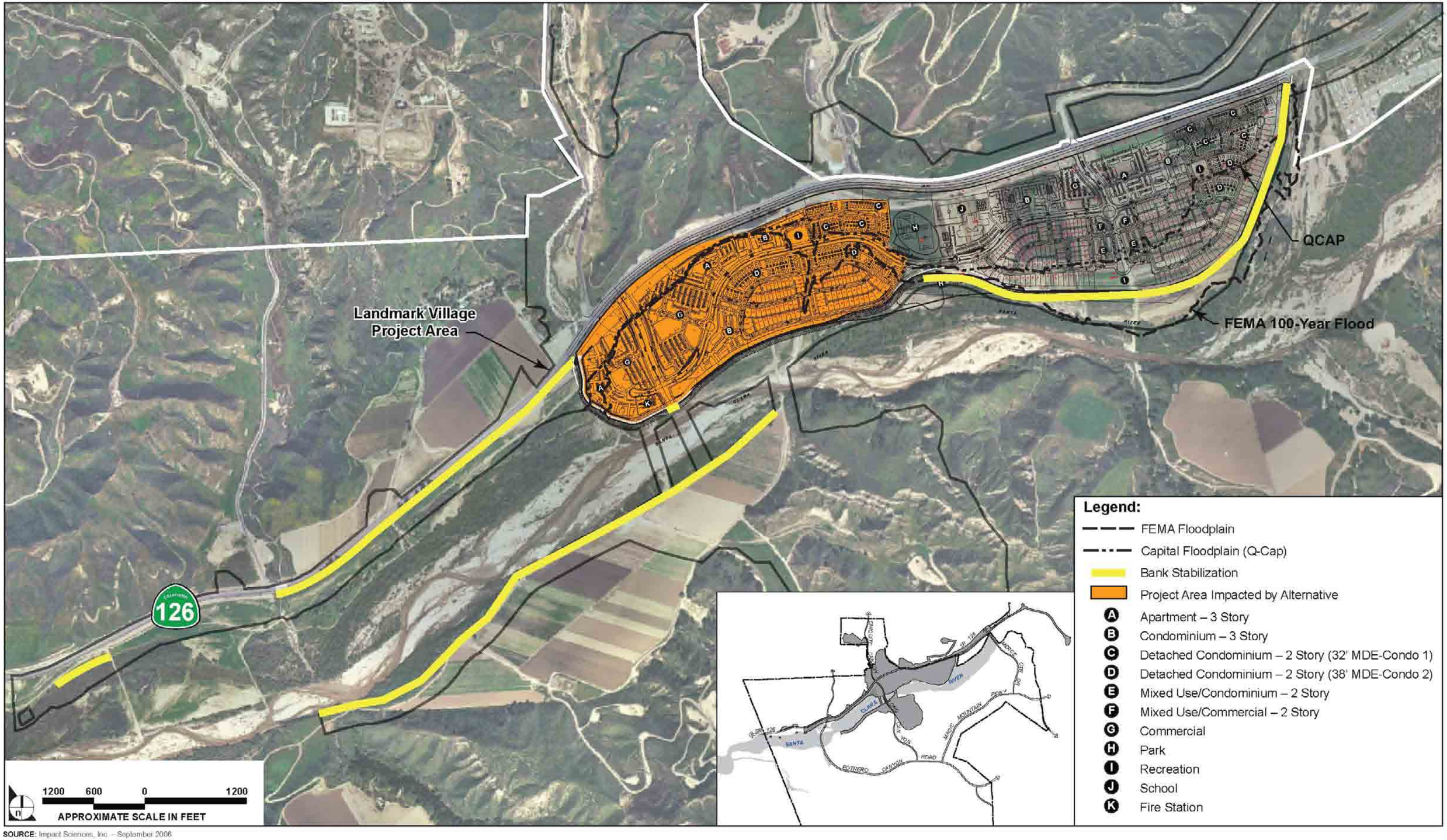
Implementation of this alternative would result in less grading because of the reduced development footprint on the tract map site. This alternative would also reduce the amount of imported fill needed to develop the property. However, all improvements constructed on the site would be subjected to the forces of ground movement during seismic events similar to the proposed project and would also be subject to the same construction requirements as the proposed project. Because there would be less development under this alternative than under the proposed project, geotechnical hazards would be reduced, and, therefore, Alternative 4 would result in fewer impacts than the proposed project with respect to geology and soils.

(b) Hydrology

Implementation of this alternative would result in slightly less storm runoff and more infiltration than the proposed project because less area would be developed resulting in more open area. Also, it is likely the landscape irrigation needs of Alternative 4 would be less than the proposed project due to less landscaped acreage. The urban runoff that is generated under this alternative would be conveyed and discharged into the Santa Clara River in a similar manner as the proposed project. This alternative would also reduce the amount of bank stabilization needed on site, because the development footprint fronting the river would be reduced. Consequently, this alternative would result in fewer impacts from a hydrology perspective than the proposed project.

(c) Water Quality

Under either this alternative or the proposed project, PDFs incorporated into the development to address water quality and hydrologic impacts would include site design, source control, treatment control, and hydromodification control BMPs. In addition, flow control BMPs would be incorporated into the PDFs in order to comply with the Los Angeles Countywide SUSMP and County Interim Peak Flow Standard. The flow control BMPs for either development of the proposed project or Alternative 4 would include both source control and detention. The PDFs combined with the implementation of recommended mitigation measures would reduce water quality and hydromodification impacts to less than significant levels under either development scenario. However, this alternative could result in increased erosion due to the upland relocation of bank stabilization to accommodate the reduced development footprint and the associated potential for flood flows to erode the now unprotected area. For this reason, Alternative 4 would result in greater impacts than the proposed project from a water quality perspective.



SOURCE: Impact Sciences, Inc. – September 2006

FIGURE **5.0-2**

Cluster Alternative

(d) Biota

Alternative 4 would result in less land disturbance at the Adobe Canyon borrow site, less impact to resources subject to CDFG and ACOE jurisdiction, and a reduction in land disturbance on the tract map site. Consequently, Alternative 4 would reduce the direct biological impacts compared to the proposed project. Furthermore, significant indirect impacts such as increased light and glare, increased non-native plant species and increased human and domestic animal presence would also be reduced as Alternative 4 represents a reduced development intensity and provides greater separation between resources in the River Corridor SMA and on-site development. For these reasons, Alternative 4 would result in fewer impacts than the proposed project relative to biota.

(e) Floodplain Modifications

Alternative 4 would reduce the extent of floodplain modifications compared to the proposed project by removing the need to elevate portions of the site out of the floodplain. Consequently, floodplain modifications associated with construction and operation of Alternative 4 would result in fewer impacts on sensitive aquatic/riparian resources in the Santa Clara River corridor as this alternative would create slightly less increase in flows, water velocities, water depth, changes in sediment transport and changes in flooded areas. Although the Landmark Village project creates only minor hydraulic effects, which are insufficient to alter the amount, location, and nature of aquatic and riparian habitats in the project area and downstream, as well as insufficient to impact sensitive riparian species, including the unarmored threespine stickleback, arroyo toad, California red-legged frog, southwestern pond turtle and two-striped garter snake, Alternative 4 would result in fewer impacts than the proposed project relative to floodplain modifications because it would create fewer hydraulic impacts due to the elimination of the need to elevate portions of the site from the floodplain.

(f) Visual Qualities

Development of the site under Alternative 4 or the proposed project would be subject to Development Regulations and Design Guidelines contained in the Specific Plan. These regulations and guidelines address grading, lighting, fencing, landscaping, signage, architecture, and site planning for subsequent subdivisions within the Newhall Ranch Specific Plan. Despite such features, significant visual impacts would result from the change in the visual character of the site from rural to urban. As with the proposed Landmark Village project, Alternative 4 would significantly alter the visual characteristics of the Santa Clara River/SR-126 corridor, as existing open space views would be replaced with the images of residential development, roadways, and other human activity. However, significant impacts to views in Chiquito Canyon would be reduced under Alternative 4, as no development would occur on the western

most portion of the site. While neither Alternative 4 nor the Landmark Village project is replacing prominent visual features, such as river vegetation or river bluffs, Alternative 4 would reduce disturbance at the Adobe Canyon borrow site compared to the proposed Landmark Village project.

Development under either the proposed project or Alternative 4 would introduce sources of outdoor illumination that do not presently exist. Outdoor lighting, such as streetlights and traffic signals, are essential safety features in development projects that involve new streets and intersections, and cannot be eliminated if the site is to be developed. In conclusion, Alternative 4 would result in fewer impacts than the proposed project relative to visual qualities because it would reduce views of development as observed from Chiquito Canyon and would reduce the grading at the Adobe Canyon borrow site.

(g) Traffic and Access

Implementation of Alternative 4 would reduce the number of vehicle trips generated by on-site uses when compared to the proposed project. Specifically, using ITE *Trip Generation Manual* factors, average daily trip generation for the proposed project is estimated at 41,900 trips. In comparison, Alternative 4 would generate 28,498 trips, resulting in a reduction of 13,402 trips when compared to the proposed project. While there would be less traffic generated with this alternative, the Landmark Village project represents a balanced land plan that contains neighborhood-serving commercial uses that are connected to the residential areas by paseos and trails, thereby promoting alternative means of travel and keeping vehicle trips internal to the project. A reduction of 828,000 square feet of commercial uses as called for under Alternative 4 would likely cause some portion of these internal trips to leave the site as people seek needed goods or services at another location. Consequently, the reduction in motor vehicle trips generated by on-site uses under Alternative 4 may not result in a proportional reduction in the number of project generated vehicle trips traveling along off-site roadway segments. Nevertheless, Alternative 4 would result in fewer impacts than the proposed project with respect to traffic, as the total number of trips would be reduced when compared to the proposed project.

(h) Noise

Under either Alternative 4 or the proposed project, development of the property would involve clearing and grading of the ground surface, installation of utility infrastructure, and the building of the proposed improvements. These activities typically involve the temporary use of heavy equipment, smaller equipment, and motor vehicles, which generate both steady static and episodic noise. This noise would primarily affect the occupants of on-site uses constructed in the earlier phases of the development (assuming that the site is occupied in sections as other portions are still under construction) and would be audible to occupants of Travel Village RV Park. Individuals who would have an uninterrupted line-of-

sight to the construction noise sources could be exposed to noise levels which would exceed the County's Noise Ordinance standards during construction regardless of the development alternative selected. However, because Alternative 4 reduces the amount of imported fill required, there would be less grading activity and fewer heavy-truck trips when compared to the proposed project. For this reason, Alternative 4 would result in fewer impacts than the proposed project with regard to construction noise.

With respect to operational impacts, under either Alternative 4 or the proposed project, building occupants would be subject to traffic noise along SR-126 and on internal roadways, as well as noise from day-to-day activities at the site. Traffic along SR-126 would result in significant noise impacts at the residential, school, and park uses proposed along the highway under either Alternative 4 or the proposed project. Future traffic along SR-126 would cause mobile source noise levels at Travel Village to exceed acceptable noise levels, although the project applicant is required to mitigate highway noise at Travel Village regardless of which development scenario is selected.

However, because Alternative 4 would reduce the number of vehicle trips when compared to the proposed project, there would be less off-site noise impacts, so this alternative would result in fewer impacts overall than the proposed project relative to noise.

(i) Air Quality

Under this alternative, short-term grading and construction-related air quality impacts would be reduced as compared to those of the proposed project, because under Alternative 4 a reduced amount of imported fill would be needed to construct the proposed project.

As shown in **Table 5.0-2, Estimated Alternative 4 Operational Emissions**, long-term (i.e., operational) impacts for this alternative would also be reduced when compared to the proposed project as the number of operational traffic trips would be reduced because of the development of 507 fewer residential units, less commercial square footage and less private recreation areas.

Both the proposed project and this alternative would result in SCAQMD air quality thresholds being exceeded in the summertime for CO, VOC, NO_x and PM_{10}. Wintertime emissions also would result in air quality thresholds being exceeded for CO, VOC, NO_x and PM_{10}. However, fewer emissions would be associated with this alternative. Consequently, based on this information, from an air quality standpoint, Alternative 4 would result in fewer impacts than the proposed project.

Table 5.0-2
Estimated Alternative 4 Operational Emissions

Emissions Source	Emissions in Pounds per Day[1]				
	CO	VOC	NO_x	SO_x	PM_{10}
Summertime Emissions					
Mobile Sources	2,063.86	170.54	194.35	1.58	240.44
Area Sources					
Natural Gas	6.10	0.91	11.90	--	0.02
Wood Stoves	0	0	0	0	0
Fire Places	0	0	0	0	0
Landscape Maintenance	16.83	2.14	0.27	0.09	0.05
Architectural Coatings	--	27.12	--	--	--
Consumer Products	--	45.84	--	--	--
Area Source Subtotal	22.93	76.01	12.17	0.09	0.07
Alternative Mobile and Area Source Totals:	2,086.79	246.55	206.52	1.67	240.51
Project Mobile and Area Source Totals:	4,104.14	418.92	414.66	2.52	372.02
Recommended Threshold:	550.0	55.0	55.0	150.0	150.0
Alternative Exceeds Threshold?	YES	YES	YES	NO	YES
Wintertime Emissions					
Mobile Sources	1,992.16	164.01	280.52	1.27	240.44
Area Sources					
Natural Gas	6.10	0.91	11.90	--	0.02
Wood Stoves	0	0	0	0	0
Fire Places	2.76	0.38	6.48	0.04	0.52
Landscape Maintenance	0	0	0	0	0
Architectural Coatings	--	27.12	--	--	--
Consumer Products	--	45.84	--	--	--
Area Source Subtotal	8.86	74.25	18.38	0.04	0.55
Alternative Mobile and Area Source Totals:	2,001.02	238.26	298.90	1.31	240.98
Project Mobile and Area Source Totals:	5,741.55	2,023.47	605.22	4.89	244.44
Recommended Threshold:	550.0	55.0	55.0	150.0	150.0
Alternative Exceeds Threshold?	YES	YES	YES	NO	YES

Source: Impact Sciences, Inc. Emissions calculations are provided in ***Appendix 5.0****.*

[1] *Emissions assume construction of sidewalks and/or pedestrian paths; direct pedestrian connections; street lighting; pedestrian signalization and signage; bike lanes/paths connecting to the bikeway system; no wood burning stoves; and residential and commercial insulation beyond Title 24 requirements.*

Totals in table may not appear to add exactly due to rounding in the computer model calculations.

(j) Water Service

The Landmark Village project would generate a potable water demand of approximately 702 afy and a non-potable demand of 336 afy. Potable water would be supplied to the project by the Valencia Water Company from local groundwater supplies. The Newhall Ranch WRP, construction of which would

likely begin simultaneously with the construction of the proposed project, would supply non-potable water to the project.

In comparison, the potable water demand for Alternative 4 would be 1,320 afy and the non-potable water demand would be 248 afy. This represents an increase in potable water demand of 618 afy when compared to the proposed project. This increase is due to the retention of approximately 106 acres of active agricultural land combined with urban development on the balance of this site. Given that less water demand is associated with the Landmark Village project compared with Alternative 4, Alternative 4 would result in greater impacts than the proposed project with respect to water service. As discussed further below, it may be difficult to cost effectively farm the agricultural acreage proposed under this alternative. Therefore, over the long term, it is possible that agricultural production under this alternative would not prove feasible. If this were the case and agricultural uses were discontinued, the potable water demand for Alternative 4 would be reduced; and, if reduced, would result in lower water usage when compared to the proposed project.

(k) Wastewater Disposal

Wastewater generation for this alternative would be approximately 0.31 mgd, which represents a decrease of 0.17 mgd when compared to the proposed project. As with the proposed project, this waste would be treated by the Newhall Ranch WRP. The treatment capacity of the Newhall Ranch WRP would be 6.8 mgd, with a maximum flow of 13.8 mgd. Until the development of the Newhall Ranch WRP is complete, there are two options for the temporary conveyance and treatment of wastewater generated by the proposed project. The first option is to construct an initial phase of the Newhall Ranch WRP to serve the project site, with build out of the WRP occurring over time as demand for treatment increases. As the WRP is intended to serve the Newhall Ranch Specific Plan area, the initial phase of the WRP would be designed and constructed to accommodate the predicted wastewater generation of either the proposed project or Alternative 4. The second option would temporarily direct wastewater flows to the Valencia WRP until the first phase of the Newhall Ranch WRP is complete. Based on CSDLAC future wastewater generation estimates and the planned expansion of the Saugus and Valencia WRPs, the Valencia WRP would have sufficient capacity to temporarily accommodate the project's predicted wastewater generation of 0.48 mgd, so the 0.31 mgd generated under Alternative 4 could also be accommodated. For these reasons, Alternative 4 would result in impacts similar to the proposed project with respect to wastewater generation and treatment despite the fact that Alternative 4 would generate less effluent.

(l) Solid Waste Services

The project would generate 3,807 tons of solid waste per year. In comparison, Alternative 4 would generate 1,911 tons of solid waste per year resulting in a decrease of 1,896 tons per year of solid waste generated compared to the proposed project. To the extent Alternative 4 would generate less solid waste than the proposed project, this alternative would, therefore, result in fewer impacts than the proposed project relative to solid waste services.

(m) Sheriff Services

The proposed project would result in a resident population of approximately 3,680 persons, which would increase the demand for law enforcement and traffic-related services on the project site and the local vicinity in terms of personnel and equipment. The proposed project would require the services of an additional four sworn officers. In comparison, Alternative 4 would result in a population of 2,601 persons. Given the Sheriff Department ratio of 1 officer per 1,000 persons, Alternative 4 would require the services of 2.6 officers, which is approximately one officer less than the proposed project.

The project applicant has entered into negotiations with the Sheriff's Department for the provision of a Sheriff station site within the Newhall Ranch Specific Plan boundary to serve the buildout of uses within the Newhall Ranch Specific Plan. In addition, increased revenues generated by the project as it builds out (via motor vehicle registration fees paid by new on-site residents and businesses), would be available for funding for additional staffing and equipment for the Sheriff and CHP to meet future demands. While Alternative 4 would reduce the demand for law enforcement equipment and personnel, there would be a concomitant reduction in tax revenue to fund ongoing law enforcement efforts. Overall, however, from a sheriff services standpoint, Alternative 4 would result in impacts similar to the proposed project with respect to law enforcement.

(n) Fire Protection Services

The Landmark Village project site is located in an area that has been designated as a Very High Fire Hazard Severity Zone (formerly called Fire Zone 4) by the County's Fire Department, which denotes the County Forester's highest fire hazard potential. Any land use constructed on the site would be required to meet all County codes and requirements relative to providing adequate fire protection services to the site during both the construction and operational stages of the project.

Since the number of housing units and square footage of commercial uses would be reduced under this alternative, the number of fire protection service calls to the project site presumably would also be

reduced relative to the proposed project. However, this alternative would provide less tax revenue to fund ongoing fire protection services.

The project applicant is currently in discussions with the County's Fire Department on an MOU for the entire Newhall Ranch Specific Plan. At this time, it is expected that a new, permanent station would be located on the Landmark Village site west of Long Canyon Road and it would provide the fire protection services for the Landmark Village project. The fire station would be constructed under Alternative 4, as well. As a result, site development under either the proposed project or Alternative 4 would not diminish the staffing or the response times of existing fire stations in the Santa Clarita Valley, nor would it create a special fire protection requirement on the site that would result in a decline in existing service levels. Based on this information, Alternative 4 would result in impacts similar to the proposed project with respect to fire protection services.

(o) Education

The Landmark Village project would generate an estimated 336 new elementary students, 100 new middle school students, and 151 new senior high school students for the two affected school districts at build out. Because Alternative 4 would reduce the number of dwelling units by 507 compared to the proposed project, fewer students would be generated by on-site uses.

Development of either the proposed project or Alternative 4 would be subject to the funding agreements established between the applicant and the affected districts. Given that all future development, including the proposed project or Alternative 4, must comply with existing school facilities funding agreements and other mechanisms (e.g., SB 50, the Valley-Wide Joint Fee Resolution, and/or new school facilities funding agreements), Alternative 4 would result in impacts similar to the proposed project with respect to education.

(p) Parks and Recreation

The proposed Landmark Village project includes a 16-acre Community Park, consistent with the Specific Plan's Land Use Overlay Community Park designation for the area, 3.13 acres of the Specific Plan's Regional River Trail, and 4.10 acres of community trails. Implementation of these project components results in a parkland dedication equivalent to approximately 7.1 acres per 1,000 persons, which is greater than the County and Quimby Act requirements of 3.0 acres per 1,000 persons.

In comparison, development of Alternative 4 would provide a 16-acre community park, approximately 1.5 acres of Regional River Trail, and 2 acres of community trails. Implementation of these components would result in a parkland dedication equivalent to approximately 8.3 acres per 1,000 persons. Not only

would this figure exceed the County and Quimby Act requirements of 3.0 acres per 1,000 persons, it also represents more parkland per resident than would the proposed project. For this reason, Alternative 4 would result in fewer impacts than the proposed project with respect to parks and recreation.

(q) Library Services

Based on the adopted County library planning standard of 0.50 square feet of library facilities per capita and the adopted County library planning standard of 2.0 library books per capita, development of the proposed project would require a total of 1,840 square feet of library facilities and 7,360 items (books, magazines, periodicals, etc.). In comparison, Alternative 4 would require a total of 1,300 square feet of library facilities with 5,201 additional volumes of books for the library system's collection. This results in a decrease in demand of 540 square feet of library facilities and 2,159 library books when compared to the proposed project.

As part of the County's approval of the Newhall Ranch Specific Plan, the County adopted library mitigation requiring that the developer provide funding for the construction and development of library facilities on the Specific Plan site. This requirement would apply equally to Alternative 4, as well as to the proposed project. Therefore, while Alternative 4 would result in less demand for space and items than would the proposed project, Alternative 4 would result in impacts similar to the proposed project because, under either the proposed project or Alternative 4, the demand for space and items would be met by construction and operation of the new libraries, as required by the Specific Plan mitigation.

(r) Agricultural Resources

Development of the project site under this alternative would result in the loss of prime agricultural land and agricultural production, but less than the proposed project due to a smaller development footprint. Approximately 106 acres would remain available for farming under this alternative. From a practical standpoint, it would be difficult to cost effectively manage and farm a small, discontinuous agricultural area within the project boundary. In addition, Alternative 4 would place residential uses directly adjacent to areas under agricultural cultivation, which could introduce incompatible land use and result in increased costs to farmers as they try to address residential complaints associated with the exposure to dust, odors, and similar intrusive conditions. Consequently, Alternative 4 would result in impacts similar to the proposed project with respect to agricultural resources.

(s) Utilities

Uses proposed by both the Landmark Village project or Alternative 4 are within the maximum permitted by the Newhall Ranch Specific Plan and the demand for energy was previously analyzed in the Newhall

Ranch Specific Plan Program EIR. Since less development is planned under Alternative 4, energy use associated with this alternative would be less than that identified for the proposed Landmark Village project. However, projections for energy supply and demand by Southern California Edison and the Southern California Gas Company indicate that the utilities would have sufficient electricity and natural gas supply to serve the project site regardless of the development type selected. In addition, all development on the property would be required to comply with Title 24 and AB 970 energy conservation measures. Based on the above, Alternative 4 would result in impacts similar to the proposed project with respect to utilities.

(t) Mineral Resources

This alternative would result in a smaller development footprint and requires less off-site grading than does the proposed project. As such, the potential for disturbance or over covering of any potential mineral resource deposits during site development would be reduced when compared to the proposed project. For this reason, Alternative 4 would result in fewer impacts than the proposed Landmark Village project with respect to mineral resources.

(u) Environmental Safety

The potential environmental safety impacts relative to development of the Landmark Village project site include soil contamination attributable to past and present agricultural activities, on-site petroleum (i.e., oil) drilling and pipeline activities, and the disposal of on-site hazardous materials debris. Future residents of either the proposed project or Alternative 4 could be subjected to these potential hazards unless remediated. For these reasons, Alternative 4 would result in impacts similar to the proposed project with respect to environmental safety.

(v) Cultural/Paleontological Resources

This alternative would result in a smaller development footprint and requires less off-site grading than does the proposed project. As such, the potential for disturbance to known archaeological and paleontologic resources during construction activities would be reduced when compared to the proposed project. For this reason, Alternative 4 would result in fewer impacts than the proposed Landmark Village project with respect to cultural/paleontological resources.

(w) Conclusion on Environmental Analyses

Generally, under Alternative 4, impacts associated with geotechnical and soil resources, hydrology, traffic/access, air quality, noise, biota, cultural/paleontological resources, visual qualities, solid waste

services, parks and recreation, mineral resources, and floodplain modifications would be reduced when compared to the proposed project. On the other hand, this alternative would have greater impacts associated with water service and water quality. However, on balance, Alternative 4 would result in fewer impacts than the proposed project. A summary comparison of impacts associated with the project alternatives is provided in **Table 5.0-3**, **Alternatives Impact Comparison Matrix**.

Table 5.0-3
Alternatives Impact Comparison Matrix

Environmental Topic	Alternative 1 No Project/No Development	Alternative 2 No Project/Future Development	Alternative 3 FEMA Floodplain Avoidance	Alternative 4 Cluster
Geotechnical and Soil Resources	L	S	L	L
Hydrology	L	S	L	L
Traffic/Access	L	S	L	L
Air Quality	L	S	L	L
Noise	L	S	L	L
Biota	L	S	L	L
Cultural/Paleontological Resources	L	S	L	L
Visual Qualities	L	S	L	L
Water Service	L	S	G[1]	G[1]
Wastewater Disposal	L	S	S	S
Solid Waste Services	L	S	L	L
Education	L	S	S	S
Library Services	L	S	S	S
Fire Protection Services	L	S	S	S
Parks and Recreation	L	S	G	L
Water Quality	S	S	G	G
Agricultural Resources	L	S	S	S
Sheriff Services	L	S	S	S
Environmental Safety	L	S	S	S
Mineral Resources	L	S	L	L
Floodplain Modifications	L	S	L	L
Utilities	L	S	S	S

KEY (Level of Impact in Comparison to the Proposed Project):
G = Alternative Produces Greater Level of Impact.
S = Alternative Produces Similar Level of Impact.
L = Alternative Produces Lesser Level of Impact.
[1] *If long-term agricultural uses in conjunction with the project's urban uses are not feasible, water usage would be less than the proposed project.*

(2) Analysis of Project Objectives

While Alternative 4 is considered environmentally superior to the proposed project, Alternative 4 does not meet many of the basic project objectives, which are set forth in this EIR, at **Section 1.0, Project Description**. Project objectives not fully met or impeded by Alternative 4 are listed below.

(a) Land Use Planning Objectives

Land Use Planning Objective No. 2 states, "Consistent with the Specific Plan, accommodate projected regional growth in a location that is adjacent to existing and planned infrastructure, urban services, transportation corridors, and major employment centers and that avoids leapfrog development."

Because Alternative 4 would significantly reduce housing and commercial uses, and, therefore, reduce accommodations for projected regional growth, this alternative is not consistent with this project objective.

Land Use Planning Objective No. 4 states, "Provide development and transitional land use patterns that do not conflict with surrounding communities and land uses."

Alternative 4 would create a fragmented area of agricultural property adjacent to residential and commercial uses and, therefore, does not meet this project objective.

Land Use Planning Objective No. 5 states, "Establish land uses that permit a wide range of housing densities, types, styles, prices, and tenancy (for sale and rental)."

Alternative 4 is inconsistent with this project objective because it would result in a substantial reduction in residential units (approximately 35 percent reduction), thereby reducing the housing options for the site.

Land Use Planning Objective No. 7 states: "Create a highly livable, pedestrian-friendly environment that encourages alternative means of transportation to the automobile by incorporating unique site designs and enhanced pedestrian access between land uses, trails, paseos, and streets."

Alternative 4 is inconsistent with this project objective because it would eliminate the majority of the commercial floor area on site, commercial uses that are necessary to promote livability of the project and the creation of a pedestrian friendly environment and enhanced pedestrian access between land uses.

(b) Economic Objectives

Economic Objective No. 1 states, "Provide a variety of residential homes, which would respond and adjust to changing economic and market conditions."

Alternative 4 does not meet this project objective as the alternative results in a substantial reduction in residential units, thereby accommodating less housing for regional growth projections.

Economic Objective No. 2 states, "Provide a tax base to support public services and facilities."

Alternative 4 is inconsistent with this project objective because it would cause a substantial reduction in residential and commercial land use on site, resulting in a substantial reduction in tax base to support the public facilities and services within the project area.

(c) Mobility Objectives

Mobility Objective No. 1 states, "Implement the Specific Plan's Mobility Plan, as it relates to the Landmark Village project, including the design of a circulation/mobility system that encourages alternatives to automobile use."

Alternative 4 does not meet this project objective because it is inconsistent with the Specific Plan's Mobility Plan and the circulation/mobility system within the Specific Plan. This alternative eliminates the majority of the commercial floor area on site, commercial uses that are necessary to promote livability of the project and the creation of a pedestrian friendly environment and enhanced pedestrian access between land uses.

(d) Parks, Recreation, and Open Area Objectives

Parks, Recreation, and Open Space Objective No. 2 states, "Provide a range of recreational opportunities, including parks, trails and paseos, which are convenient and accessible."

Alternative 4 is inconsistent with this project objective because it would result in a substantial reduction in trails and paseos on the project site.

Parks, Recreation, and Open Space Objective No. 3 states, "Provide pedestrian, bicycle, and hiking trails that are consistent with the Specific Plan's Parks, Recreation, and Open Area Plan."

Alternative 4 is inconsistent with this project objective because it would result in a design that is inconsistent with the Specific Plan's Park, Recreation, and Open Area plan.

(3) Previous Findings Related to this Alternative

As noted above, the County's Board of Supervisors already considered Specific Plan alternatives, one of which clustered development, creating higher housing concentrations in the Low–Medium and other land use designations (e.g., Alternative 3). The Board rejected this alternative as infeasible, in part, because it did not achieve many of the basic objectives of the Specific Plan, including the significant public benefits associated with implementation of such a plan. In addition, the Board of Supervisors rejected this alternative because it too narrowly limited the range of housing opportunities provided and did not reflect market conditions and growth in the region.

5. ENVIRONMENTALLY SUPERIOR ALTERNATIVE

Table 5.0-3, provides a summary comparison of the alternatives discussed in this section in relation to environmental impacts. Based on the information in this section, the No Project/No Development Alternative would not result in adverse (or beneficial) effects and, therefore, the No Project/No Development Alternative is the environmentally superior alternative. However, the No Project/No Development Alternative is not consistent with the policies and goals of the Specific Plan and fails to meet any of the basic project objectives.

As specified in the *CEQA Guidelines* (Section 15126(d)(2)), if the No Project/No Development Alternative is the environmentally superior alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives. Of the other alternatives considered, Alternative 4, the Cluster Alternative, would be the environmentally superior alternative because this alternative entails the least amount of development and, correspondingly, the least amount of developmental impacts.

6.0 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

1. PURPOSE

Uses of nonrenewable resources during the initial and continued phases of a proposed project may be irreversible if a large commitment of these resources makes their restoration thereafter unlikely. According to Section 15126(c) of the California Environmental Quality Act (CEQA) Guidelines, *the irretrievable commitment of such resources is to be evaluated to ensure that their consumption by a proposed project is justified. In addition, this section also must identify any irreversible damage that can result from environmental accidents associated with the proposed project.*

2. DISCUSSION

The certified Newhall Ranch Specific Plan Program EIR fully evaluated the significant irreversible environmental changes that would be involved with buildout of the entire Specific Plan. The certified EIR concluded that buildout of the Specific Plan would commit presently undeveloped lands to urbanized uses and contribute to the incremental depletion of resources, including renewable as well as slowly renewable or non-renewable resources. The certified EIR also concluded that no unique hazards are found on either Newhall Ranch or the Water Reclamation Plant (WRP) site and that neither site contains any uniquely hazardous uses. No changes in the Specific Plan or its circumstances have occurred since the Newhall Ranch Specific Plan Program EIR was certified in May 2003. In light of this fact, and given that the proposed Landmark Village project is consistent with the land uses in the Specific Plan, the prior Newhall Ranch Specific Plan Program EIR adequately addresses the significant irreversible environmental changes associated with the Newhall Ranch Specific Plan, including the Landmark Village project, and the Landmark Village project would not have any effects that were not previously examined in that certified EIR. Consistent with *CEQA Guidelines* Sections 15152, 15168, and 15385, this analysis incorporates by reference the discussions and analysis contained in the certified Newhall Ranch Specific Plan Program EIR, and no further evaluation is required.

7.0 GROWTH-INDUCING IMPACTS

1. PURPOSE

The California Environmental Quality Act (CEQA) requires a discussion of the ways in which a project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this discussion are projects, which would remove obstacles to population growth. Such discussion also should include the characteristics of a project, which may encourage and/or facilitate other activities that, either individually or cumulatively, could significantly affect the environment. CEQA emphasizes that growth in an area should not be considered beneficial, detrimental, or of little significance. The purpose of this section is to evaluate the growth-inducing potential of the proposed Landmark Village project.

2. GROWTH-INDUCEMENT POTENTIAL

The certified Newhall Ranch Specific Plan Program EIR fully evaluated the growth-inducing impacts of buildout of the entire Newhall Ranch Specific Plan. The analysis concluded that the Specific Plan could potentially induce growth within Ventura County, the Santa Clara River Valley, and the Santa Clarita Valley due to the construction of supporting infrastructure and increased demand for goods and services. No changes in the Specific Plan or its circumstances have occurred since the Newhall Ranch Specific Plan Program EIR was certified in May 2003. In light of this fact, and given that the proposed Landmark Village project is consistent with the land uses in the Specific Plan, the prior Newhall Ranch Specific Plan Program EIR adequately addresses the growth-inducing impacts of the Newhall Ranch Specific Plan, including the Landmark Village project, and the Landmark Village project would not have any growth inducing impacts that were not previously examined in that certified EIR. Consistent with *CEQA Guidelines* Sections 15152, 15168, and 15385, this analysis incorporates by reference the discussions and analysis contained in the certified Newhall Ranch Specific Plan Program EIR pertaining to the growth-inducing potential of the Specific Plan, and no further evaluation is required.

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.1 GEOTECHNICAL AND SOIL RESOURCES			
SP 4.1-1. The standard building setbacks from ascending and descending man-made slopes are to be followed in accordance with Section 1806.4 of the Los Angeles County Building Code, unless superseded by specific geologic and/or soils engineering evaluations. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 44)	Applicant (Civil Engineer, Geotechnical Engineer, Engineering Geologist)	Building and Grading Plan Check	1. Los Angeles County Department of Public Works (LACDPW), Geology/Soils Section, and Building and Safety 2. LACDPW, Building and Safety and Geology/Soils Section 3. Prior to Issuance of Building Permits
SP 4.1-2. The existing Grading Ordinance for planting and irrigation of cut-slopes and fill slopes is to be adhered to for grading operations within the project site. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 44)	Applicant (Civil Engineer)	Field Verification	1. LACDPW, Building and Safety 2. LACDPW, Building and Safety 3. Prior to Issuance of Occupancy Permits
SP 4.1-3. In order to safeguard against major seismic-related structural failures, all buildings within the project boundaries are to be constructed in conformance with the Los Angeles County Uniform Building Code, as applicable.	Applicant (Project Structural Engineer)	Building Plan Check	1. LACDPW, Building and Safety 2. LACDPW, Building and Safety 3. Prior to Issuance of Building Permits
SP 4.1-4. The location and dimensions of the exploratory trenches and borings undertaken by Allan E. Seward Engineering Geology, Inc. and R.T. Frankian & Associates are to be noted on all grading plans relative to future building plans, unless the trenches and/or borings are removed by future grading operations. If future foundations traverse the trenches or borings, they are to be reviewed and approved by the project Geotechnical Engineer. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 45)	Applicant (Geotechnical Engineer)	Grading Plan Check Field Verification	1. LACDPW, Geology/Soils Section 2. LACDPW, Geology/Soils Section 3. Prior to Approval of Final Grading Plans; grading

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.1 GEOTECHNICAL AND SOIL RESOURCES (cont.)			
SP 4.1-5. Wherever the Pacoima Formation is exposed, it may be potentially expansive; therefore, it is to be tested by the project Soils Engineer at the grading plan stage to determine its engineering characteristics and mitigation requirements, as necessary.	Applicant (Geotechnical Engineer)	Grading Plan Check	1. LACDPW, Geology/Soils Section 2. LACDPW, Geology/Soils Section 3. Prior to Approval of Final Grading Plans
SP 4.1-6. Should any expansive soils be encountered during grading operations, they are not to be placed nearer the finished surface than 8 feet below the bottom of the subgrade elevation. This depth is subject to revision depending upon the expansive potential measured during grading. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	Applicant (Geotechnical Engineer) Grading Contractor	Field Investigation	1. LACDPW, Geology/Soils Section 2. LACDPW, Geology/Soils Section 3. During Grading
SP 4.1-7. If expansive materials are encountered at subgrade elevation in cut areas, the soils are to be removed to a depth of 8 feet below the "finished" or "subgrade" surface and the excavated area backfilled with nonexpansive, properly compacted soils. This depth is subject to revision depending upon the expansive potential measured during grading. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	Applicant (Geotechnical Engineer)	Field Investigation	1. LACDPW, Geology/Soils Section 2. LACDPW, Geology/Soils Section 3. During Grading
SP 4.1-8. At the time of subdivision, which allows construction, areas subject to liquefaction are to be mitigated to the satisfaction of the project Geotechnical Engineer prior to site development. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	Applicant (Geotechnical Engineer)	Grading Plan Check Field Verification	1. LACDPW, Geology/Soils Section 2. LACDPW, Geology/Soils Section 3. Prior to Issuance of Grading Permit(s)

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.1 GEOTECHNICAL AND SOIL RESOURCES (cont.)			
SP 4.1-9. Subdrains are to be placed in areas of high ground water conditions (Potrero Canyon, in particular) or wherever extensive irrigation is planned. The systems are to be designed to the specifications of the Newhall Ranch Specific Plan Geotechnical Engineer.	Applicant (Geotechnical Engineer and Engineering Geologist)	Grading Plan Check Field Verification	1. LACDPW, Geology/Soils Section 2. LACDPW, Geology/Soils Section 3. Prior to Issuance of Grading Permit and Verify During Grading
SP 4.1-10. Subdrains are to be placed in the major and minor canyon fills, behind stabilization blankets, buttress fills, and retaining walls, and as required by the Geotechnical Engineer during grading operations. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	Applicant (Geotechnical Engineer and Engineering Geologist)	Grading Plan Check Field Verification	1. LACDPW, Geology/Soils Section 2. LACDPW, Geology/Soils Section 3. Prior to Issuance of Grading Permit and Verify During Grading
SP 4.1-12. The vertical spacing of subdrains behind buttress fills, stabilization blankets, etc., are to be a maximum of 15 feet. The gradient is to be at least 2 percent to the discharge end. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	Applicant (Geotechnical Engineer)	Grading Plan Check Field Verification	1. LACDPW, Geology/Soils Section 2. LACDPW, Geology/Soils Section 3. Prior to Issuance of Grading Permit and Verify During Grading
SP 4.1-13. Geological materials subject to hydroconsolidation (containing significant void space) are to be removed prior to the placement of fill. Specific recommendations relative to hydroconsolidation are to be provided by the project Geotechnical Engineer at the subdivision stage. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 44)	Applicant (Geotechnical Engineer and Engineering Geologist)	Receipt of Specific Hydro-consolidation Recommend-ations Field Verification	1. LACDPW, Geology/Soils Section 2. LACDPW, Geology/Soils Section 3. Prior to Approval of Final Grading Plans and Verify During Grading

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.1 GEOTECHNICAL AND SOIL RESOURCES (cont.)			
SP 4.1-15. Subsurface exploration is required to delineate the depth and lateral extent of the landslides shown on the geologic map. This work shall be undertaken at the subdivision stage. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 15) Landslides must be mitigated through stabilization, removal, and/or building setbacks as determined by the Newhall Ranch Specific Plan Geotechnical Engineer, and to the satisfaction of the Los Angeles County Department of Public Works.	Applicant (Geotechnical Engineer and Engineering Geologist)	Receipt of Exploratory Data and Mitigation Field Verification	1. LACDPW, Geology/Soils Section 2. LACDPW, Geology/Soils Section 3. Prior to Approval of Final Grading Plan and Verify During Grading
SP 4.1-19. Remove debris from surficial failures during grading operations prior to the placement of fill. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 16)	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section 2. LACDPW, Geology/Soils Section 3. During Grading Operations
SP 4.1-20. All soils and/or unconsolidated slopewash and landslide debris is to be removed prior to the placement of compacted fills. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 45)	Applicant (Geotechnical Engineer and Engineering Geologist)	Grading Plan Check Field Verification	1. LACDPW, Geology/Soils Section 2. LACDPW, Geology/Soils Section 3. Prior to approval of Final Grading Plan and During Grading
SP 4.1-29. Orientations of the bedrock attitudes are to be evaluated by the Newhall Ranch Specific Plan Engineering Geologist to identify locations of required buttress fills. Buttress fill design and recommendations, if necessary, are to be presented as mitigation during the grading plan stage. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	Applicant (Geotechnical Engineer and Engineering Geologist)	Grading Plan Check Field Verification	1. LACDPW, Geology/Soils Section 2. LACDPW, Geology/Soils Section 3. Prior to Approval of Final Grading Plans

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.1 GEOTECHNICAL AND SOIL RESOURCES (cont.)			
SP 4.1-30. All fills, unless otherwise specifically designed, are to be compacted to at least 90 percent of the maximum dry unit weight as determined by ASTM Designation D 1557-91 Method of Soil Compaction. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section 2. LACDPW, Geology/Soils Section 3. During Grading
SP 4.1-31. No fill is to be placed until the area to receive the fill has been adequately prepared and approved by the Geotechnical Engineer. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
SP 4.1-32. Fill soils are to be kept free of all debris and organic material. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
SP 4.1-33. Rocks or hard fragments larger than 8 inches are not to be placed in the fill without approval of the Geotechnical Engineer, and in a manner specified for each occurrence. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
SP 4.1-34. Rock fragments larger than 8 inches are not to be placed within 10 feet of finished pad grade or the subgrade of roadways or within 15 feet of a slope face. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.1 GEOTECHNICAL AND SOIL RESOURCES (cont.)			
SP 4.1-35. Rock fragments larger than 8 inches may be placed in windrows, below the limits given above, provided the windrows are spaced at least 5 feet vertically and 15 feet horizontally. Granular soil must be flooded around windrows to fill voids between the rock fragments. The granular soil is to be wheel rolled to assure compaction. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
SP 4.1-36. The fill material is to be placed in layers which, when compacted, is not to exceed 8 inches per layer. Each layer is to be spread evenly and is to be thoroughly mixed during the spreading to insure uniformity of material and moisture. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
SP 4.1-37. When moisture content of the fill material is too low to obtain adequate compaction, water is to be added and thoroughly dispersed until the soil is approximately 2 percent over optimum moisture content. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
SP 4.1-38. When the moisture content of the fill material is too high to obtain adequate compaction, the fill material is to be aerated by blading or other satisfactory methods until the soil is approximately two percent over optimum moisture content. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
SP 4.1-39. Where fills toe out on a natural slope or surface, a keyway, with a minimum width of 16 feet and extending at least 3 feet into firm, natural soil, is to be cut at the toe of the fill. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.1 GEOTECHNICAL AND SOIL RESOURCES (cont.)			
SP 4.1-40. Where the fills toe out on a natural or cut slope and the natural or cut slope is steeper than 5 horizontal to 1 vertical, a drainage bench with a width of at least 8 feet is to be established at the toe of the fill. Fills may be placed over cut slopes if the visible contact between the fill and cut is steeper than 45 degrees. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
SP 4.1-41. When placing fills over slopes, sidewall benching is to extend into competent material, approved by the Geotechnical Engineer, with vertical benches not less than 4 feet. (R.T. Frankian & Associates, 19 September 1994, Appendix I) Competent material is defined as being free of loose soil, heavy fracturing or compressive soils.	Applicant (Geotechnical Engineer and Engineering Geologist)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
SP 4.1-42. When constructing fill slopes, the grading contractor is to avoid spillage of loose material down the face of the slope during the dumping and compacting operations. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
SP 4.1-43. The outer faces of fill slopes are to be compacted by backing a sheepsfoot compactor over the top of the slope, and thoroughly covering all of the slope surface with overlapping passes of the compactor. Compaction of the slope is to be repeated after each 4 feet of fill has been placed. The required compaction must be obtained prior to placement of additional fill. As an alternate, the slope can be overbuilt and cut back to expose a compacted core. (R.T. Frankian & Associates, 19 September 1994, Appendix I)	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.1 GEOTECHNICAL AND SOIL RESOURCES (cont.)			
SP 4.1-44. All artificial fill associated with past petroleum activities as well as other existing artificial fill, are to be evaluated by the Newhall Ranch Specific Plan Geotechnical Engineer at the subdivision and/or Grading Plan Stage. (Allan E. Seward Engineering Geology, 19 September 1994, Inc., p. 45) Unstable fills are to be mitigated through removal, stabilization, or other means as determined by the Newhall Ranch Specific Plan Geotechnical Engineer.	Applicant (Geotechnical Engineer and Engineering Geologist)	Receipt of Geotechnical Evaluation Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. Prior to Approval of Final Subdivision Maps or Grading Plans, and Verify During Grading
SP 4.1-45. Surface runoff from the future graded areas is not to run over any natural, cut, or fill slopes. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 20)	Applicant (Civil Engineer and Construction Superintendent)	Include this Measure in Specifications Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
SP 4.1-46. Runoff from future pads and structures is to be collected and channeled to the street and/or natural drainage courses via non-erosive drainage devices. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 20)	Applicant (Civil Engineer and Construction Superintendent)	Include this Measure in Specifications Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
SP 4.1-47. Water is not to stand or pond anywhere on the graded pads. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 20)	Applicant (Civil Engineer and Construction Superintendent)	Include this Measure in Specifications Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.1 GEOTECHNICAL AND SOIL RESOURCES (cont.)			
SP 4.1-48. Oil and water wells that might occur on site are to be abandoned in accordance with state and local regulations. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 45)	Applicant (Well abandonment Specialist)	Receipt of Confirmation of Abandonment	1. California Department of Conservation, Division of Oil and Gas, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. Prior to Issuance of Grading Permits
SP 4.1-49. If any leaking or undocumented oil wells are encountered during grading operations, their locations are to be surveyed and the current well conditions evaluated immediately. (Allan E. Seward Engineering Geology, Inc., 19 September 1994, p. 21) Measures are to be taken to document the wells, abandonment, and remediate the well sites (if necessary) in accordance with state and local regulations.)	Applicant (Civil Engineer and Well Abandonment Specialist)	Include Measure in Specifications Field Documentation	1. California Department of Conservation, Division of Oil and Gas, Building and Safety 2. California Department of Conservation, Division of Oil and Gas, Building and Safety 3. During Grading
SP 4.1-50. The exact status and location of the Exxon (Newhall Land & Farming) oil well #31 will be evaluated at the subdivision stage. If necessary, the well will be abandoned in accordance with state and local regulations. (Allan E. Seward Engineering Geology, Inc., 13 December 1995, p. 12)	Applicant (Civil Engineer and Well Abandonment Specialist)	Locate Well #31 on Tract Map Documentation of Abandonment, if applicable	1. California Department of Conservation, Division of Oil and Gas, Building and Safety 2. California Department of Conservation, Division of Oil and Gas, Building and Safety 3. Prior to Issuance of Grading Permit
LV 4.1-1. Prior to placing compacted fill, the ground surface shall be prepared by removing non-compacted artificial fill (af), disturbed compacted fill soils (Caf), loose alluvium, and other unsuitable materials. The geotechnical engineer and/or his representatives shall observe the excavated areas prior to placing compacted fill.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.1 GEOTECHNICAL AND SOIL RESOURCES (cont.)			
LV 4.1-2. After the ground surface to receive fill has been exposed, it shall be ripped to a minimum depth of 6 inches, brought to optimum moisture content or above and thoroughly mixed to obtain a near uniform moisture condition and uniform blend of materials, and then compacted to 90 percent per the latest American Society for Testing and Materials (ASTM) D1557 laboratory maximum density.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
LV 4.1-3. Removal depths for alluvium, older alluvium, and overlying soil/plow pan materials range from 4 to 16 feet and shall be as indicated on the approved Geologic/Geotechnical Map.	Applicant (Geotechnical Engineer)	Receipt and Review of Geologic/ Geotechnical Map Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
LV 4.1-4. Soil removals on the southwestern portion of the site shall be scheduled if possible during the summer or fall months, to minimize impacts to Grading from shallow groundwater. The contractor shall be prepared to implement dewatering systems, if necessary.	Applicant (Geotechnical Engineer)	Grading Plan Check	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. Prior to Issuance of Grading Permit
LV 4.1-5. Pico and Saugus Formation bedrock shall be over-excavated 5 feet below proposed grade to eliminate cut-fill or bedrock-alluvium transitions in building pads. Expansive materials in the bedrock shall be over excavated 8 feet in building pad areas.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.1 GEOTECHNICAL AND SOIL RESOURCES (cont.)			
LV 4.1-6. Slopewash that is locally present on the site adjacent to slope areas on the northern margin of the site shall be removed and recompacted prior to the placement of compacted fill.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
LV 4.1-7. Compacted artificial fill along the northern margin of the site shall be assessed for building suitability at the grading plan stage.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. Prior to Issuance of Grading Permit
LV 4.1-8. Concrete, asphalt concrete and other debris stockpiled on the site shall be removed, and either ground up for use as sub-base material, or reduced into fragments small enough to be buried in the deeper portions of the fill.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
LV 4.1-9. Where recommended removals encounter ground water, water levels shall be controlled by providing an adequate excavation bottom/slope and sumps for pumping water out as the excavation proceeds, or ground water may be lowered by installing shallow dewatering well points prior to grading. Partial removals of soils above the water table and soil improvement below the water table may be another option. Dewatering may be needed depending on the season when the removals are performed and the actual removal depths are determined. Contractors shall use piezometric data for planning dewatering measures.	Applicant (Geotechnical Engineer and Civil Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.1 GEOTECHNICAL AND SOIL RESOURCES (cont.)			
LV 4.1-10. On-site soils, except any debris or organic matter, may be used as sources for compacted fills. Rock or similar irreducible material with a maximum dimension greater than 8 inches shall not be placed in the fill without approval of the geotechnical engineer. Rocks or hard fragments larger than 4 inches shall not compose more than 25 percent of the fill and/or lift. Any large rock fragments over 8 inches in size may be incorporated into the fill as rockfill in windrows after being reduced to the specific maximum rock fill size. Where fill depths are too shallow to allow large rock disposal, special handling or removal may be required. Much of the on-site alluvium and older alluvium is coarse-grained and lacks sufficient cohesion for surficial stability in fill slopes. Selective grading of fill materials with sufficient cohesion derived from on site or imported fill shall be necessary for use in fill slopes.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
LV 4.1-11. The engineering characteristics of imported fill material shall be evaluated when the source area has been identified.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.1 GEOTECHNICAL AND SOIL RESOURCES (cont.)			
LV 4.1-12. Most of the slopes proposed on the site are fill slopes. Stability fills are recommended for all of the cut-slopes on the site; therefore, no cut-slopes will remain after the completion of grading. All fill slopes shall be constructed on firm material where the slope receiving fill exceeds a ratio of 5 to 1 horizontal to vertical (h:v). Fill slope inclination shall not be steeper than 2:1 (h:v). The fill material within approximately one equipment width (typically 15 feet) of the slope face shall be constructed with cohesive material selectively graded from on-site or import fills. Stability fills are recommended where cut-slope faces will expose fill-over-bedrock or alluvium-over-bedrock conditions. These fills shall be constructed with a keyway at the toe of the fill slope with a minimum equipment width but not less than 15 feet, and a minimum depth of 3 feet into the firm undisturbed earth. Following completion of the keyway excavations, backfilling with certified engineered fill shall not proceed prior to the approval of the keyway by the project engineering geologist.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
LV 4.1-13. Backcut slopes for Stability fills shall be no steeper than the final face of the proposed fill.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
LV 4.1-14. Areas that are to receive compacted fill shall be observed by the geotechnical engineer prior to the placement of fill.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
LV 4.1-15. All drainage devices shall be properly installed and observed by the geotechnical engineer and/or owner's representative(s) prior to placement of backfill.	Applicant (Geotechnical Engineer and Construction Superintendent)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.1 GEOTECHNICAL AND SOIL RESOURCES (cont.)			
LV 4.1-16. Fill soils shall consist of imported soils or on-site soils free of organics, cobbles, and deleterious material, provided each material is approved by the geotechnical engineer. The geotechnical engineer shall evaluate and/or test the import material for its conformance with the report recommendations prior to its delivery to the site. The contractor shall notify the geotechnical engineer 72 hours prior to importing material to the site.	Applicant (Geotechnical Engineer and Construction Superintendent)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
LV 4.1-17. Fill shall be placed in controlled layers (lifts), the thickness of which is compatible with the type of compaction equipment used. The fill materials shall be brought to optimum moisture content or above, thoroughly mixed during spreading to obtain a near uniform moisture condition and uniform blend of materials, and then placed in layers with a thickness (loose) not exceeding 8 inches. Each layer shall be compacted to a minimum compaction of 90 percent relative to the maximum dry density determined per the latest ASTM D1557 test. Density testing shall be performed by the geotechnical engineer to verify relative compaction. The contractor shall provide proper access and level areas for testing.	Applicant (Geotechnical Engineer and Construction Superintendent)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
LV 4.1-18. Rocks or rock fragments less than 8 inches in the largest dimension may be utilized in the fill, provided they are not placed in concentrated pockets. However, rocks larger than 4 inches shall not be placed within 3 feet of finish grade.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
LV 4.1-19. Rocks greater than 8 inches in largest dimension shall be taken off site, or placed in accordance with the recommendation of the soils engineer in areas designated as suitable for rock disposal.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.1 GEOTECHNICAL AND SOIL RESOURCES (cont.)			
LV 4.1-20. Where space limitations do not allow for conventional fill compaction operations, special backfill materials and procedures may be required. Pea gravel or other select fill can be used in areas of limited space. A sand and portland cement slurry (two sacks per cubic-yard mix) shall be used in limited space areas for shallow backfill near final pad grade, and pea gravel shall be placed in deeper backfill near drainage systems.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
LV 4.1-21. The geotechnical engineer shall observe the placement of fill and conduct in-place field density tests on the compacted fill to check for adequate moisture content and the required relative compaction. Where less than specified relative compaction is indicated, additional compacting effort shall be applied and the soil moisture conditioned as necessary until adequate relative compaction is attained.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
LV 4.1-22. The Contractor shall comply with the minimum relative compaction out to the finish slope face of fill slopes, buttresses, and stabilization fills as set forth in the specifications for compacted fill. This may be achieved by either overbuilding the slope and cutting back as necessary, or by direct compaction of the slope face with suitable equipment, or by any other procedure that produces the required result.	Applicant (Construction Superintendent)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
LV 4.1-23. Any abandoned underground structures, such as cesspools, cisterns, mining shafts, tunnels, septic tanks, wells, pipelines or other structures not discovered prior to grading shall be removed or treated to the satisfaction of the soils engineer and/or the controlling agency for the project.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
LV 4.1-24. The Contractor shall have suitable and sufficient equipment during a particular operation to handle the volume of fill being placed. When necessary, fill placement equipment shall be shut down temporarily in order to permit proper compaction of fills, correction of deficient areas, or to facilitate required field testing.	Applicant (Construction Superintendent)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.1 GEOTECHNICAL AND SOIL RESOURCES (cont.)			
LV 4.1-25. The Contractor shall be responsible for the satisfactory completion of all earthwork in accordance with the project plans and specifications.	Applicant (Construction Superintendent)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
LV 4.1-26. Trench excavations to receive backfill shall be free of trash, debris or other unsatisfactory materials prior to backfill placement, and shall be observed by the geotechnical engineer.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
LV 4.1-27. Except as stipulated herein, soils obtained from the trench excavation may be used as backfill if they are essentially free of organics and deleterious materials.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
LV 4.1-28. Rocks generated from the trench excavation not exceeding 3 inches in largest dimension may be used as backfill material. However, such material shall not be placed within 12 inches of the top of the pipeline. No more than 30 percent of the backfill volume shall contain particles larger than 1 inch in diameter, and rocks shall be well mixed with finer soil.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
LV 4.1-29. Soils (other than aggregates) with a Sand Equivalent (SE) greater than or equal to 30, as determined by ASTM D 2419 Standard Test Method or at the discretion of the engineer or representative in the field, may be used for bedding and shading material in the pipe zone areas. These soils are considered satisfactory for compaction by jetting procedures.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.1 GEOTECHNICAL AND SOIL RESOURCES (cont.)			
LV 4.1-30. No jetting shall occur in utility trenches within the top 2 feet of the subgrade of concrete slabs-on-grade.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
LV 4.1-31. Trench backfill other than bedding and shading shall be compacted by mechanical methods such as tamping sheepsfoot, vibrating or pneumatic rollers or other mechanical tampers to achieve the density specified herein. The backfill materials shall be brought to optimum moisture content or above, thoroughly mixed during spreading to obtain a near uniform moisture condition and uniform blend of materials, and then placed in horizontal layers with a thickness (loose) not exceeding 8 inches. Trench backfills shall be compacted to a minimum compaction of 90 percent relative to the maximum dry density determined per the latest ASTM D1557 test.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
LV 4.1-32. The contractor shall select the equipment and process to be used to achieve the specified density within a trench without damage to the pipeline, the adjacent ground, existing improvements, or completed work.	Applicant (Construction Superintendent)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
LV 4.1-33. Observations and field tests shall be carried on during construction by the geotechnical engineer to confirm that the required degree of compaction within a trench has been obtained. Where compaction within a trench is less than that specified, additional compaction effort shall be made with adjustment of the moisture content as necessary until the specified compaction is obtained. Field density tests may be omitted at the discretion of the engineer or his representative in the field.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.1 GEOTECHNICAL AND SOIL RESOURCES (cont.)			
LV 4.1-34. Whenever, in the opinion of the geotechnical engineer, an unstable condition is being created within a trench, either by cutting or filling, the work shall not proceed until an investigation has been made and the excavation plan revised, if deemed necessary.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
LV 4.1-35. Fill material within a trench shall not be placed, spread, or rolled during unfavorable weather conditions. When the work is interrupted by heavy rain, fill operations shall not be resumed until field tests by the geotechnical engineer indicate the moisture content and density of the fill are as specified.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
LV 4.1-36. Water shall never be allowed to stand or pond on building pads, nor should it be allowed to run over constructed slopes, but is to be conducted to the driveways or natural waterways via non-erodible drainage devices. In addition, it is recommended that all drainage devices be inspected periodically and be kept clear of all debris. Drainage and erosion control shall be in accordance with the standards set forth in Sections 7018 and 7019 of the 1997 Los Angeles County Uniform Building Code.	Applicant (Civil Engineer and Construction Superintendent)	Include this Measure in Specifications Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
LV 4.1-37. Modification of the existing pad grades after approval of Fine Grading by the project supervising civil engineer can adversely affect the drainage of the lots. Lot drainage shall not be modified by future landscaping, construction of pools, spas, walkways, garden walls, etc., unless additional remedial measures (area drains, additional grading, etc.) are in compliance with Los Angeles County Codes.	Applicant (Civil Engineer and Construction Superintendent)	Include this Measure in Specifications Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. After Approval of Fine Grading
LV 4.1-38. Positive surface drainage shall be maintained away from buildings. The recommended drainage patterns shall be established at the time of Fine Grading. Roof drainage shall be collected in gutters and downspouts, which terminate at approved discharge points.	Applicant (Civil Engineer and Construction Superintendent)	Include this Measure in Specifications Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.1 GEOTECHNICAL AND SOIL RESOURCES (cont.)			
LV 4.1-39. Permanent erosion control measures shall be initiated immediately following completion of grading.	Applicant (Civil Engineer and Construction Superintendent)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. Immediately Following Completion of Grading
LV 4.1-40. All interceptor ditches, drainage terraces, down-drains and any other drainage devices shall be maintained and kept clear of debris. A qualified engineer shall review any proposed additions or revisions to these systems, to evaluate their impact on slope erosion.	Applicant (Civil Engineer and Construction Superintendent)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. Immediately Following Completion of Grading
LV 4.1-41. Retaining walls shall have adequate freeboard to provide a catchment area for minor slope erosion. Periodic inspection, and if necessary, cleanout of deposited soil and debris shall be performed, particularly during and after periods of rainfall.	Applicant (Civil Engineer and Construction Superintendent)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. Immediately Following Completion of Grading
LV 4.1-42. The future developers shall be made aware of the potential problems, which may develop when drainage is altered through landscaping and/or construction of retaining walls, and paved walkways. Ponded water, water directed over slope faces, leaking irrigation systems, over-watering or other conditions that could lead to excessive soil moisture, shall be avoided.	Applicant (Civil Engineer and Construction Superintendent)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. Immediately Following Completion of Grading

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.1 GEOTECHNICAL AND SOIL RESOURCES (cont.)			
LV 4.1-43. Slope surficial soils may be subject to water-induced mass erosion. Therefore, a suitable proportion of slope planting shall have root systems, which will develop well below 3 feet. Drought-resistant shrubs and low trees for this purpose shall be considered. Intervening areas can then be planted with lightweight surface plants with shallower root systems. All plants shall be lightweight and require low moisture. Any loose slough generated during the process of planting shall be properly removed from the slope face(s).	Applicant (Landscape Architect)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. Prior to Issuance of Occupancy Permits
LV 4.1-44. Short-term, non-plant erosion control measures shall be implemented during construction delays, adverse climate/weather conditions, and when plant growth rates do not permit rapid vegetation of graded areas. Examples of short-term, non-plant erosion control measures include matting, netting, plastic sheets, deep (5 feet) staking, etc.	Applicant (Civil Engineer and Construction Superintendent)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Delays in All Construction Phases
LV 4.1-45. All possible precautions shall be taken to maintain a moderate and uniform soil moisture to avoid high and/or fluctuating water content in slope materials. Slope irrigation systems shall be properly operated and maintained and system controls shall be placed under strict control.	Applicant (Landscape Architect)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. Prior to Issuance of Occupancy Permits
LV 4.1-46. A program of aggressive rodent control shall be implemented to control burrowing on slope areas.	Applicant (Civil Engineer and Construction Superintendent)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During All Construction Phases

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.1 GEOTECHNICAL AND SOIL RESOURCES (cont.)			
LV 4.1-47. Bank protection is proposed to consist of a soil cement, gunite or rip-rap liner, which is buried/concealed behind a 4:1 (h:v) fill slope. Construction of the liner will involve the excavation of a 20-foot-deep slot as shown in the details on the tentative map. Where the toe of the 4:1 slope extends beyond the removals for the slot, the alluvium shall be overexcavated 3 feet prior to placement of overlying fill.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Slope Protection Activities
LV 4.1-48. Ground water will likely be encountered between a depth of 5 and 10 feet; therefore dewatering shall be undertaken to complete the lower 10 to 15 feet of the proposed slot excavation.	Applicant (Civil Engineer and Construction Superintendent)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Slope Protection Activities
LV 4.1-49. All final grades shall be sloped away from the building foundations to allow rapid removal of surface water runoff. No ponding of water shall be allowed adjacent to the foundations. Plants and other landscape vegetation requiring excessive watering shall be avoided adjacent to the building foundations. Should landscaping be constructed, an effective water-tight barrier shall be provided to prevent water from affecting the building foundations.	Applicant (Civil Engineer, Construction Superintendent and Landscape Architect)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading and Landscape Installation
LV 4.1-50. Future structures shall be designed according to standards applicable to Seismic Zone 4 of the Uniform Building Code.	Applicant	Building Plan Check	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. Prior to Issuance of Building Permits

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.1 GEOTECHNICAL AND SOIL RESOURCES (cont.)			
LV 4.1-51. Lots underlain by transitions between different material types (e.g., bedrock to fill, bedrock to alluvium, etc.) shall be over-excavated 5 feet to minimize potential adverse impacts associated with differential materials response.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
LV 4.1-52. Over-excavation of clay-rich bedding planes of the Saugus Formation or Pico Formation and subsequent placement of a certified fill cap is recommended to mitigate potential hazards from expansive material, and to reduce potential hazards from potential secondary seismogenic movement along bedding planes.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
LV 4.1-53. Stability Fills shall be analyzed at the grading plan stage based on testing of the actual materials proposed for the fill.	Applicant (Geotechnical Engineer)	Grading Plan Check	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. Prior to Issuance of Grading Permit
LV 4.1-54. Most of the alluvium and older Alluvium on the site are coarse-grained and have low cohesion. These materials shall not be used within the outer 4 feet of fill slopes and Stability Fills.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.1 GEOTECHNICAL AND SOIL RESOURCES (cont.)			
LV 4.1-55. Excavations deeper than 3 feet shall conform to safety requirements for excavations as set forth in the State Construction Safety Orders enforced by the State Division of Industrial Safety, California occupational Safety and Health Administration (CAL OSHA). Temporary excavations no higher than 12 feet shall be no steeper than 1:1 (h:v). For excavations to 20 feet in height, the bottom 3.5 feet may be vertical and the upper portion between 3.5 and 20 feet shall be no steeper than 1.5:1 (h:v). Excavations not complying with these requirements shall be shored. It is strongly recommended that excavation walls in sands and dry soils be kept moist, but not saturated at all times.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
LV 4.1-56. Parameters for design of cantilever and braced shoring shall be provided at the grading plan stage.	Applicant (Geotechnical Engineer)	Grading Plan Check	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. Prior to Issuance of Grading Permit
LV 4.1-57. The bases of excavations or trenches shall be firm and unyielding prior to foundations or utility construction. On-site materials other than topsoil or soils with roots or deleterious materials may be used for backfilling excavations. Densification (compaction) by jetting may be used for on-site clean sands or imported equivalent of coarser sand provided they have a Sand Equivalent greater than or equal to 30 as determined by ASTM D2419 test method. Recommended specifications for placement of trench backfill are presented in Appendix C of the September 27, 2000 geologic and geotechnical report.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.1 GEOTECHNICAL AND SOIL RESOURCES (cont.)			
LV 4.1-58. The structural design shall include seismic geotechnical parameters in accordance with Uniform Building Code (UBC) requirements for Seismic Zone 4. These parameters shall be provided at the grading plan stage.	Applicant	Building Plan Check	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. Prior to Issuance of Grading Permit
LV 4.1-59. Shallow spread footings for foundation support of up to three-story residential, commercial or light industrial developments can adequately be derived from non-organic native soils, processed as necessary, and bedrock or engineered fill compacted as previously recommended. The composition of footings for heavier structures, if applicable, shall be addressed at the grading plan stage. Tentatively, an allowable bearing capacity of 2,500 pounds per square foot can be used for shallow foundations constructed in certified compacted fill originated from existing, near-surface soils (except vegetative soils). Lateral resistance of footing walls shall be provided at the grading plan stage.	Applicant	Building Plan Check	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. Prior to Issuance of Grading Permit
LV 4.1-60. Figure C4 (Appendix C), "Cut Lot (Transitional)" and "Cut-Fill Lot (Transitional") of the September 27, 2000 geologic and geotechnical report provides a foundation grading detail for locations where foundations will straddle transition zones between cut and fill materials. If the remaining cut-fill transition is steep at depth below the building area, the geometry of the transition shall be reviewed during grading operations by the soils engineer on a site-specific basis to evaluate the need for additional over-excavation removals and/or additional foundation reinforcement. Based on this review, appropriate action shall be taken as deemed necessary by the engineer. As a general guideline, steep cut/fill transitions would include slope gradients steeper than 4:1 (h:v) and overall variations in fill thickness of greater than 15 feet, which occur within 20 feet of final pad grade. Transitions between differing material types, such as bedrock and alluvium, also shall be overexcavated 5 feet as recommended in Section 1.2 of Appendix E of the September 27, 2000, Geologic and Geotechnical Report.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.1 GEOTECHNICAL AND SOIL RESOURCES (cont.)			
LV 4.1-61. To minimize significant settlements, upper soils in areas to receive fills shall be removed and recompacted to competent materials. Specific foundation design loads shall be provided at the grading plan stage.	Applicant (Geotechnical Engineer)	Grading Plan Check Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. Prior to Issuance of Grading Permit and During Grading
LV 4.1-62. Whenever seepage of groundwater is observed, the condition shall be evaluated by the engineering geologist and geotechnical engineer prior to covering with fill material.	Applicant (Engineering Geologist and Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading
LV 4.1-63. Surface drainage control design shall include provisions for positive surface gradients to ensure that surface runoff is not permitted to pond, particularly above slopes or adjacent to building foundations or slabs. Surface runoff shall be directed away from slopes and foundations and collected in lined ditches or drainage swales, via non-erodible drainage devices, which is to discharge to paved roadways, or existing watercourses. If these facilities discharge onto natural ground, means shall be provided to control erosion and to create sheet flow.	Applicant (Civil Engineer and Construction Superintendent)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. Prior to Issuance of Occupancy Permit
LV 4.1-64. Fill slopes and stability fills, as applicable, shall be provided with subsurface drainage as necessary for stability.	Applicant (Geotechnical Engineer)	Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. During Grading

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.1 GEOTECHNICAL AND SOIL RESOURCES (cont.)			
LV 4.1-65. Additional testing for expansive soils shall be performed at the grading plan stage and during finish grading so that appropriate foundation design recommendations for expansive soils, if applicable, can be made.	Applicant (Geotechnical Engineer)	Grading Plan Check Field Verification	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. Prior to Issuance of Grading Permit and During Grading
LV 4.1-66. Testing for soil corrosivity shall be undertaken at additional locations within the project site at the grading plan stage. Final recommendations for concrete shall be in accordance with the latest UBC requirements, and a corrosion specialist shall provide mitigating recommendations for potential corrosion of metals.	Applicant (Geotechnical Engineer)	Receipt of Test Results	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. Prior to Issuance of Grading Permit
LV 4.1-67. Retaining wall geotechnical design parameters and pavement design(s) shall be provided at the grading plan stage.	Applicant (Geotechnical Engineer)	Grading Plan Check	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. Prior to Issuance of Grading Permit
LV 4.1-68. If the proposed fills over alluvium and slopewash at either the Adobe Canyon or Chiquito Canyon sites are to be considered "structural fill," subsurface studies shall be performed to determine actual liquefaction potential of these soils. If this potential exists, it shall be addressed by removal and recompaction of the alluvium above groundwater, in order to provide a cap to bridge effects.	Applicant (Geotechnical Engineer)	Receipt and Review of Subsurface Study Report	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. Prior to Issuance of Grading Permit

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.1 GEOTECHNICAL AND SOIL RESOURCES (cont.)			
LV 4.1-69. Where possible, removals that impact the mapped landslides shall be completed so as to not remove the existing landslide stability. If this is not possible, the conditions shall be geotechnically evaluated on a case-by-case basis at the Grading Plan stage in order to safely complete the necessary removals.	Applicant (Geotechnical Engineer)	Grading Plan Check	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. Prior to Issuance of Grading Permit
LV 4.1-70. Slope stability analysis shall be performed for the 186-foot-high cut slope along the base of the existing Edison tower within the Chiquito Canyon grading site. Corrective measures, such as construction of a buttress or stability fills, shall be implemented if the proposed cut slope does not comply with the required minimum factor of safety.	Applicant (Geotechnical Engineer)	Grading Plan Check	1. LACDPW, Geology/Soils Section, Building and Safety 2. LACDPW, Geology/Soils Section, Building and Safety 3. Prior to Issuance of Grading Permit
4.2 HYDROLOGY			
Please refer to **Section 4.3, Water Quality**, of this Mitigation Monitoring Program (MMP) for a listing of Program Environmental Impact Report (EIR) mitigation measures pertaining to hydrology.			
LV 4.2-1. The on-site storm drains (pipes and reinforced concrete boxes) and open channels shall be designed and constructed for either the 25-year or 50-year capital storm.	Applicant (Civil Engineer)	Approval of Drainage Plans Field Verification	1. LACDPW, Flood Control District (FCD) 2. LACDPW, FCD 3. Prior to Issuance of Occupancy Permit(s)
LV 4.2-2. Debris basins shall be constructed pursuant to LACDPW requirements to intercept flows from undeveloped areas entering into the developed portions of the site.	Applicant (Civil Engineer)	Approval of Drainage Plans Field Verification	1. LACDPW, FCD 2. LACDPW, FCD 3. Prior to Issuance of Occupancy Permit(s)

Mitigation Measures/Conditions of Approval		Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.2 HYDROLOGY (cont.)				
LV 4.2-3.	Energy dissipaters consisting of either rip-rap or larger standard impact-type energy dissipaters shall be installed as required by LACDPW at outlet locations to reduce velocities of runoff into the channel where necessary to prevent erosion.	Applicant (Civil Engineer)	Approval of Drainage Plans Field Verification	1. LACDPW, FCD 2. LACDPW, FCD 3. Prior to Issuance of Occupancy Permit(s)
LV 4.2-4.	The project is required to comply with the Regional Water Quality Control Board (RWQCB) Municipal Permit (General MS4 Permit) Order No. 01-182, National Pollutant Discharge Elimination System (NPDES) No. CAS004001 (adopted December 13, 2001), and with the state's General Construction Activity Storm Water Permit, California State Water Resources Control Board Order No. 99-08-DWQ, National Pollutant Discharge Elimination System (NPDES) No. CAS000002, reissued on April 17, 1997, as amended.	Applicant (Construction Superintendent)	Submittal of Urban Storm Water management Plan (USWMP) and Storm Water Pollution Prevention Plan (SWPPP) to Regional Water Quality Control Board for the Los Angeles Region (RWQCBLAR) Field Verification	1. RWQCBLAR 2. LACDPW, Building and Safety 3. Prior to Grading and During Grading Operations

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.2 HYDROLOGY (cont.)			
LV 4.2-5. During all construction phases, temporary erosion control shall be implemented to retain soil and sediment on the tract map site, within the Adobe Canyon borrow site, the Chiquito Canyon grading site, the utility corridor right-of-way, and the bank stabilization areas, as follows: • Re-vegetate exposed areas as quickly as possible; • Minimize disturbed areas; • Divert runoff from downstream drainages with earth dikes, temporary drains, slope drains, etc.; • Reduce velocity through outlet protection, check dams, and slope roughening/terracing; • Implement dust control measures, such as sand fences, watering, etc.; • Stabilize all disturbed areas with blankets, reinforced channel liners, soil cement, fiber matrices, geotextiles, and/or other erosion resistant soil coverings or treatments; • Stabilize construction entrances/exits with aggregate underdrain with filter cloth or other comparable method; • Place sediment control BMPs at appropriate locations along the site perimeter and at all operational internal inlets to the storm drain system at all times during the rainy season (sediment control BMPs may include filtration devices and barriers, such as fiber rolls, silt fence, straw bale barriers, and gravel inlet filters, and/or with settling devices, such as sediment traps or basins); and/or • Eliminate or reduce, to the extent feasible, non-stormwater discharges (e.g., pipe flushing, and fire hydrant flushing, over-watering during dust control, vehicle and equipment wash down) from the construction site through the use of appropriate sediment control BMPs.	Applicant (Construction Superintendent)	Field Verification	1. LACDPW, FCD 2. LACDPW, FCD 3. During All Construction Phases
LV 4.2-6. All necessary permits, agreements, letters of exemption from the Army Corps of Engineers (ACOE) and/or the California Department of Fish and Game (CDFG) for project-related development within their respective jurisdictions must be obtained prior to the issuance of grading permits.	Applicant	Receipt of Necessary Documents	1. Los Angeles County Department of Regional Planning (LACDRP) 2. LACDRP 3. Prior to Issuance of Grading Permits

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.2 HYDROLOGY (cont.)			
LV 4.2-7. By October 1st of each year, a separate erosion control plan for construction activities shall be submitted to the local municipality describing the erosion control measures that will be implemented during the rainy season (October 1 through April 15).	Applicant (Construction Superintendent)	Receipt and Review of Annual Erosion Control Plan	1. LACDPW, FCD 2. LACDPW, FCD 3. By October 1 of Each Year During Construction Activities
LV 4.2-8. A final developed condition hydrology analysis shall be prepared in conjunction with final project design when precise engineering occurs. This final analysis will be done to confirm that the final project design is consistent with this analysis. Those final calculations shall establish design features for the project that satisfy the criterion that post-development peak stormwater runoff discharge rates, velocities, and duration in natural drainage systems mimic pre-development conditions. All elements of the storm drain system shall conform to the policies and standards of the LACDPW, Flood Control Division, as applicable.	Applicant (Project Hydrologist)	Receipt and Review of Final Hydrology Analysis	1. LACDPW, FCD 2. LACDPW, FCD 3. Prior to Approval of Final Design Plans
LV 4.2-9. Ultimate project hydrology and debris production calculations shall be prepared by a project engineer to verify the requirements for debris basins and/or desilting inlets.	Applicant (Civil Engineer)	Review of Calculations	1. LACDPW, FCD 2. LACDPW, FCD 3. Prior to Approval of Final Design Plans
LV 4.2-10. To reduce debris being discharged from the site, debris basins shall be designed and constructed pursuant to LACDPW Flood Control to intercept flows from undeveloped areas entering into the developed portions of the site.	Applicant (Civil Engineer)	Approval of Drainage Plans Field Verification	1. LACDPW, FCD 2. LACDPW, FCD 3. Prior to Issuance of Occupancy Permit(s)

Mitigation Measures/Conditions of Approval		Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.3 WATER QUALITY				
SP 4.2-1.	All on- and off-site flood control improvements necessary to serve the Newhall Ranch Specific Plan are to be constructed to the satisfaction of the County of Los Angeles Department of Public Works Flood Control Division.	Applicant (Civil Engineer)	Approval of Drainage Plans Field Verification	1. LACDPW, FCD 2. LACDPW, FCD 3. Prior to Issuance of Occupancy Permit(s)
SP 4.2-2.	All necessary permits or letters of exemption from the U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, California Department of Fish and Game, and the Regional Water Quality Control Board for Specific Plan-related development are to be obtained prior to construction of drainage improvements. The performance criteria to be used in conjunction with 1603 agreements and/or 404 permits are described in Section 4.6, Biological Resources, Mitigation Measures 4.6-1 through 4.6-10 (restoration) and 4.6-11 through 4.6-16 (enhancement).	Applicant	Receipt of all Necessary Permit(s)	1. ACOE, US Fish and Wildlife Service (USFWS), CDFG, RWQCBLAR 2. ACOE, USFWS, CDFG, RWQCBLAR 3. Prior to Grading
SP 4.2-3.	All necessary streambed agreement(s) are to be obtained from the California Department of Fish and Game wherever grading activities alter the flow of streams under CDFG jurisdiction. The performance criteria to be used in conjunction with 1603 agreements and/or 404 permits are described in Section 4.6, Biological Resources, Mitigation Measures 4.6-1 through 4.6-10 (restoration) and 4.6-11 through 4.6-16 (enhancement).	Applicant	Receipt of Streambed Agreements	1. CDFG 2. LACDPW, FCD 3. Prior to Grading
SP 4.2-4.	Conditional Letters of Map Revision (CLOMR) relative to adjustments to the 100-year Federal Insurance Administration (FIA) flood plain are to be obtained by the applicant after the proposed drainage facilities are constructed.	Applicant (Civil Engineer)	Receipt of CLOMR(s)	1. Federal Insurance Administration 2. LACDPW 3. Upon Completion of Facilities

Mitigation Measures/Conditions of Approval		Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.3 WATER QUALITY (cont.)				
SP 4.2-5.	Prior to the approval and recordation of each subdivision map, a Hydrology Plan, Drainage Plan, and Grading Plan (including an Erosion Control Plan if required) for each subdivision must be prepared by the applicant of the subdivision map to ensure that no significant erosion, sedimentation, or flooding impacts would occur during or after site development. These plans shall be prepared to the satisfaction of the County of Los Angeles Department of Public Works.	Applicant (Project Engineer)	Approval of Final Hydrology Plan, Final Drainage Plan, and Final Grading Plan	1. LACDPW, FCD and Geology/Soils Section 2. LACDPW, FCD and Geology/Soils Section 3. Prior to Recording of Each Subdivision Map
SP 4.2-6.	Install permanent erosion control measures, such as desilting and debris basins, drainage swales, slope drains, storm drain inlet/outlet protection, and sediment traps in order to prevent sediment and debris from the upper reaches of the drainage areas which occur on the Newhall Ranch site from entering storm drainage improvements. These erosion control measures shall be installed to the satisfaction of the County of Los Angeles Department of Public Works.	Applicant (Project Engineer)	Field Verification	1. LACDPW, FCD 2. LACDPW, FCD 3. Prior to Issuance of Occupancy Permits
SP 4.2-7.	The applicant for any subdivision map permitting construction shall satisfy all applicable requirements of the NPDES Program in effect in Los Angeles County to the satisfaction of the County of Los Angeles Department of Public Works. These requirements currently include preparation of an USWMP containing design features and Best Management Practices (BMPs) appropriate and applicable to the subdivision. In addition, the requirements currently include preparation of a Storm Water Management Pollution Prevention Plan (SWPPP) containing design features and BMPs appropriate and applicable to the subdivision. The County of Los Angeles Department of Public Works shall monitor compliance with those NPDES requirements.	Applicant (Construction Superintendent)	Submittal of USWMP and SWPPP to RWQCBLAR Field Verification	1. RWQCBLAR 2. LACDPW, Building and Safety 3. Prior to Grading and During Grading Operations

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.3 WATER QUALITY (cont.)			
SP 4.2-8. The applicant for any subdivision map permitting construction shall comply with all appropriate requirements of the County of Los Angeles Standard Urban Stormwater Mitigation Plan (SUSMP) requirements, and comply with the State Water Resources Control Board (SWRCB) issued General Permit for Construction Activity Storm Water (SWRCB Order 99-08-DWQ), as it may be amended from time to time or replaced by other applicable stormwater permits.	Applicant (Construction Superintendent)	Submittal of SUSMP to LACDPW Field Verification	1. LACDPW, FCD 2. LACDPW, FCD 3. Prior to Issuance of Occupancy Permits
LV 4.3-1. Prior to issuance of a building permit, and as a part of the design level hydrology study and facilities plan, the project applicant shall submit to planning staff for review drainage plans showing the incorporation into the project of those water quality and hydrologic control project design features (i.e., the post-development water quality and hydrologic control BMPs)(the "PDFs"), identified in this **Section 4.3**, which PDFs shall be designed to meet the standards set forth in this **Section 4.3**, including the sizing, capacity, and volume reduction performance standards set forth herein, all as summarized in **Table 4.3-17**.	Applicant	Review of Drainage Plans	1. LACDRP 2. LACDRP 3. Prior to Issuance of Building Permits
4.4 BIOTA			
SP 4.6-1. The restoration mitigation areas located within the River Corridor Special Management Area (SMA) shall be in areas that have been disturbed by previous uses or activities. Mitigation shall be conducted only on sites where soils, hydrology, and microclimate conditions are suitable for riparian habitat. First priority will be given to those restorable areas that occur adjacent to existing patches (areas) of native habitat that support sensitive species, particularly endangered or threatened species. The goal is to increase habitat patch size and connectivity with other existing habitat patches while restoring habitat values that will benefit sensitive species.	Applicant (Project Biologist)	Field Verification	1. ACOE, CDFG 2. ACOE, CDFG 3. Prior to Approval of Revegetation Plans

Mitigation Measures/Conditions of Approval		Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.4 BIOTA (cont.)				
SP 4.6-2.	A qualified biologist shall prepare or review revegetation plans. The biologist shall also monitor the restoration effort from its inception through the establishment phase.	Applicant (Project Biologist)	Revegetation Plan Comments and Documentation of Restoration Monitoring from Qualified Biologist Field Verification	1. ACOE, CDFG 2. ACOE, CDFG 3. Prior to Approval of Revegetation Plans and Monitor During Restoration Effort
SP 4.6-3.	Revegetation Plans may be prepared as part of a California Department of Fish and Game 1603 Streambed Alteration Agreement and/or an U.S. Army Corps of Engineers Section 404 Permit, and shall include: • Input from both the Project proponent and resource agencies to assure that the Project objectives applicable to the River Corridor SMA and the criteria of this RMP are met; and • The identification of restoration/mitigation sites to be used. This effort shall involve an analysis of the suitability of potential sites to support the desired habitat, including a description of the existing conditions at the site(s) and such base line data information deemed necessary by the permitting agency.	Applicant (Project Biologist)	Revegetation Plan Review	1. ACOE, CDFG 2. ACOE, CDFG 3. Prior to Approval of Revegetation Plan
SP 4.6-4.	The revegetation effort shall involve an analysis of the site conditions such as soils and hydrology so that site preparation needs can be evaluated. The revegetation plan shall include the details and procedures required to prepare the restoration site for planting (i.e., grading, soil preparation, soil stockpiling, soil amendments, etc.), including the need for a supplemental irrigation system, if any.	Applicant (Project Biologist)	Revegetation Plan Review	1. ACOE, CDFG 2. ACOE, CDFG 3. Prior to Approval of Revegetation Plan

Mitigation Measures/Conditions of Approval		Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.4 BIOTA (cont.)				
SP 4.6-5.	Restoration of riparian habitats within the River Corridor SMA shall use plant species native to the Santa Clara River. Cuttings or seeds of native plants shall be gathered within the River Corridor SMA or purchased from nurseries with local supplies to provide good genetic stock for the replacement habitats. Plant species used in the restoration of riparian habitat shall be listed on the approved project plant palette (Specific Plan Table 2.6-1, Recommended Plant Species for Habitat Restoration in the River Corridor SMA) or as approved by the permitting state and federal agencies.	Applicant (Project Biologist)	Revegetation Plan Review Field Verification	1. ACOE, CDFG 2. ACOE, CDFG 3. Prior to Approval of Revegetation Plan and Monitor During Restoration Effort
SP 4.6-6.	The final revegetation plans shall include notes that outline the methods and procedures for the installation of the plant materials. Plant protection measures identified by the project biologist shall be incorporated into the planting design/layout.	Applicant (Project Biologist)	Revegetation Plan Review	1. ACOE, CDFG 2. ACOE, CDFG 3. Prior to Approval of Revegetation Plan
SP 4.6-7.	The revegetation plan shall include guidelines for the maintenance of the mitigation site during the establishment phase of the plantings. The maintenance program shall contain guidelines for the control of non-native plant species, the maintenance of the irrigation system, and the replacement of plant species.	Applicant (Project Biologist)	Revegetation Plan Review	1. ACOE, CDFG 2. ACOE, CDFG 3. Prior to Approval of Revegetation Plan
SP 4.6-8.	The revegetation plan shall provide for monitoring to evaluate the growth of the developing habitat. Specific performance goals for the restored habitat shall be defined by qualitative and quantitative characteristics of similar habitats on the river (e.g., density, cover, species composition, structural development). The monitoring effort shall include an evaluation of not only the plant material installed, but the use of the site by wildlife. The length of the monitoring period shall be determined by the permitting state and/or federal agency.	Applicant (Project Biologist)	Revegetation Plan Review	1. ACOE, CDFG 2. ACOE, CDFG 3. Prior to Approval of Revegetation Plan
SP 4.6-9.	Monitoring reports for the mitigation site shall be reviewed by the permitting state and/or federal agency.	Applicant (Project Biologist)	Review of Monitoring Reports	1. ACOE and CDFG 2. ACOE and CDFG 3. During Revegetation Activities

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.4 BIOTA (cont.)			
SP 4.6-10. Contingency plans and appropriate remedial measures shall also be outlined in the revegetation plan.	Applicant (Project Biologist)	Revegetation Plan Review	1. ACOE, CDFG 2. ACOE, CDFG 3. Prior to Approval of Revegetation Plan
SP 4.6-11. Habitat enhancement as referred to in this document means the rehabilitation of areas of native habitat that have been moderately disturbed by past activities (e.g., grazing, roads, oil and natural gas operations, etc.) or have been invaded by non-native plant species such as giant cane (*Arundo donax*) and tamarisk (*Tamarix* sp.).	Applicant (Project Biologist)	Revegetation Plan Review	1. ACOE, CDFG 2. ACOE, CDFG 3. Prior to Approval of Revegetation Plan
SP 4.6-12. Removal of grazing is an important means of enhancement of habitat values. Without ongoing disturbance from cattle, many riparian areas will recover naturally. Grazing except as permitted as a long-term resource management activity will be removed from the River Corridor SMA pursuant to the Long-Term Management Plan set forth in Section 4.6 of the Specific Plan EIR.	Land Owner/SMA Manager	Mitigation Monitoring Reports	1. LACDRP 2. LACDRP 3. Mitigation Monitoring Reports under Conditional Use Permit (CUP) Condition No. 8
SP 4.6-13. To provide guidelines for the installation of supplemental plantings of native species within enhancement areas, a revegetation plan shall be prepared prior to implementation of mitigation (see guidelines for revegetation plans above). These supplemental plantings will be composed of plant species similar to those growing in the existing habitat patch (see Specific Plan Table 2.6-1).	Applicant (Project Biologist)	Revegetation Plan Review	1. ACOE, CDFG 2. ACOE, CDFG 3. Prior to Approval of Revegetation Plan
SP 4.6-14. Not all enhancement areas will necessarily require supplemental plantings of native species. Some areas may support conditions conducive for rapid "natural" re-establishment of native species. The revegetation plan may incorporate means of enhancement to areas of compacted soils, poor soil fertility, trash or flood debris, and roads as a way of enhancing riparian habitat values.	Applicant (Project Biologist)	Revegetation Plan Review	1. ACOE, CDFG 2. ACOE, CDFG 3. Prior to Approval of Revegetation Plan

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.4 BIOTA (cont.)			
SP 4.6-15. Removal of non-native species such as giant cane (*Arundo donax*), salt cedar or tamarisk (*Tamarix* sp.), tree tobacco (*Nicotiana glauca*), castor bean (*Ricans communis*), if included in a revegetation plan to mitigate impacts, shall be subject to the following standards: • First priority shall be given to those habitat patches that support or have a high potential for supporting sensitive species, particularly endangered or threatened species; • All non-native species removals shall be conducted according to a resource agency approved exotics removal program; and • Removal of non-native species in patches of native habitat shall be conducted in such a way as to minimize impacts to the existing native riparian plant species.	Applicant (Project Biologist)	Revegetation Plan Review	1. ACOE, CDFG 2. ACOE, CDFG 3. Prior to Approval of Revegetation Plan
SP 4.6-16. Mitigation banking activities for riparian habitats will be subject to state and federal regulations and permits. Mitigation banking for oak resources shall be conducted pursuant to the Oak Resources Replacement Program. Mitigation banking for elderberry scrub shall be subject to approval of plans by the County Forester.	Applicant (Project Biologist)	State and Federal Permits; Submittal of Permits	1. ACOE, CDFG 2. ACOE, CDFG, 3. Prior to Approval of Mitigation Banking Program
		Oak Resources; Review of Oak Tree Permit	1. LACDRP 2. LACDRP 3. Approval of Oak Tree Permit
		Elderberry Scrub; Review of Initial Study	1. LACDRP 2. LACDRP 3. Prior to Grading

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.4 BIOTA (cont.)			
SP 4.6-17. Access to the River Corridor SMA for hiking and biking shall be limited to the river trail system (including the Regional River Trail and various Local Trails) as set forth in this Specific Plan. • The River trail system shall be designed to avoid impacts to existing native riparian habitat, especially habitat areas known to support sensitive species. Where impacts to riparian habitat are unavoidable, disturbance shall be minimized and mitigated as outlined above under Mitigation Measures 4.6-1 through 4.6-8.	Applicant (Design)	Review of Trails Plans, Tract Maps, and/or Site Plans (Design)	1. LA County Department of Parks and Recreation 2. LA County Department of Parks and Recreation 3. Prior to Approval of Trails Plans, Tract Maps, and/or Site Plans, as applicable.
• Access to the River Corridor SMA will be limited to daytime use of the designated trail system. • Signs indicating that no pets of any kind will be allowed within the River Corridor SMA, with the exception that equestrian use is permitted on established trails, shall be posted along the River Corridor SMA. • No hunting, fishing, or motor or off-trail bike riding shall be permitted. • The trail system shall be designed and constructed to minimize impacts on native habitats.	SMA Manager (Access)	Field Verification (Access)	1. LACDRP 2. LACDRP 3. Upon Complaint
SP 4.6-18. Where development lies adjacent to the boundary of the River Corridor SMA a transition area shall be designed to lessen the impact of the development on the conserved area. Transition areas may be comprised of Open Area, natural or revegetated manufactured slopes, other planted areas, bank areas, and trails. Exhibits 2.6-4, 2.6-5, and 2.6-6 indicate the relationship between the River Corridor SMA and the development (disturbed) areas of the Specific Plan. The SMAs and the Open Area as well as the undisturbed portions of the development areas are shown in green. As indicated on the exhibits, on the south side of the River Corridor SMA is separated from development by the river bluffs, except in one location. The Regional River Trail will serve as transition area on the north side of the river where development areas adjoin the River Corridor SMA (excluding Travel Village).	Applicant	Review of Trails Plans, Tract Maps, and/or Site Plans	1. LACDRP 2. LACDRP 3. Prior to Approval of Trails Plans, Tract Maps, and/or Site Plans, as applicable.

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.4 BIOTA (cont.)			
SP 4.6-19. The following are the standards for design of transition areas: • In all locations where there is no steep grade separation between the River Corridor and development, a trail shall be provided along this edge; • Native riparian plants shall be incorporated into the landscaping of the transition areas between the River Corridor SMA and adjacent development areas where feasible for their long-term survival. Plants used in these areas shall be those listed on the approved plant palette (Specific Plan Table 2.6-2 of the Resource Management Plan [Recommended Plants for Transition Areas Adjacent to the River Corridor SMA]); • Roads and bridges that cross the River Corridor SMA shall have adequate barriers at their perimeters to discourage access to the River Corridor SMA adjacent to the structures; • Where bank stabilization is required to protect development areas, it shall be composed of ungrouted rock, or buried bank stabilization as described in subsection 2.5.2.a., except at bridge crossings and other locations where public health and safety requirements necessitate concrete or other bank protection; and • A minimum 100-foot-wide buffer adjacent to the Santa Clara River should be required between the top river side of bank stabilization and development within the Land Use Designations Residential Low Medium, Residential Medium, Mixed-Use and Business Park unless, through Planning Director review in consultation with the staff biologist, it is determined that a lesser buffer would adequately protect the riparian resources within the River Corridor or that a 100-foot-wide buffer is infeasible for physical infrastructure planning. The buffer area may be used for public infrastructure, such as flood control access; sewer, water and utility easements; abutments; trails and parks, subject to findings of consistency with the Specific Plan and applicable County policies.	Applicant	Review of Trails Plans, Tract Maps, and/or Site Plans	1. LACDRP and LACDPW for Bank Stabilization 2. LACDRP and LACDPW for Bank Stabilization 3. Prior to Approval of Trails Plans, Tract Maps, and/or Site Plans, as applicable

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.4 BIOTA (cont.)			
SP 4.6-20. The following guidelines shall be followed during any grading activities that take place within the River Corridor SMA: • Grading perimeters shall be clearly marked and inspected by the project biologist prior to grading occurring within or immediately adjacent to the River Corridor SMA. • The project biologist shall work with the grading contractor to avoid inadvertent impacts to riparian resources.	Applicant (Project Biologist)	Field Verification	1. LACDPW 2. LACDPW 3. Prior to and During Grading Activities
SP 4.6-21. Upon final approval of the Newhall Ranch Specific Plan, the Special Management Area designation for the River Corridor SMA shall become effective. The permitted uses and development standards for the SMA are governed by the Development Regulations, Chapter 3 of the Specific Plan.	Los Angeles County	None Required	1. Los Angeles County 2. Los Angeles County 3. Upon Effective Date of Zoning Ordinance
SP 4.6-22. Upon completion of development of all land uses, utilities, roads, flood control improvements, bridges, trails, and other improvements necessary for implementation of the Specific Plan within the River Corridor in each subdivision allowing construction within or adjacent to the River Corridor, a permanent, non-revocable *conservation and public access easement* shall be offered to the County of Los Angeles pursuant to Mitigation Measure 4.6-23 below over the portion of the River Corridor SMA within that subdivision.	Land Owner	Offer of Dedication of Easement	1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. Submittal of Monitoring Report(s) Under CUP Condition No. 8
SP 4.6-23. The River Corridor SMA *Conservation and Public Access Easement* shall be offered to the County of Los Angeles prior to the transfer of the River Corridor SMA ownership, or portion thereof to the management entity described in Mitigation Measure 4.6-26 below.	Land Owner	Offer of Dedication of Easement	1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. Prior to Transfer of River Corridor Ownership Under 4.6-26

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.4 BIOTA (cont.)			
SP 4.6-24. The River Corridor SMA *Conservation and Public Access Easement* shall prohibit grazing, except as a long-term resource management activity, and agriculture within the River Corridor and shall restrict recreation use to the established trail system. Agricultural land uses and grazing for purposes other than long-term resource management activities within the River Corridor shall be extended in the event of the filing of any legal action against Los Angeles County challenging final approval of the Newhall Ranch Specific Plan and any related project approvals or certification of the Final EIR for Newhall Ranch. Agricultural land uses and grazing for purposes other than long-term resource management activities within the River Corridor shall be extended by the time period between the filing of any such legal action and the entry of a final judgment by a court with appropriate jurisdiction, after exhausting all rights of appeal, or execution of a final settlement agreement between all parties to the legal action, whichever occurs first.	Land Owner	Review of Easement Document	1. LACDRP 2. LACDRP 3. Prior to Acceptance of Easement by County
SP 4.6-25. The River Corridor SMA conservation and public access easement shall be consistent in its provisions with any other conservation easements to state or federal resource agencies which may have been granted as part of mitigation or mitigation banking activities.	Land Owner	Review of Conservation Easement /and Resource Permits	1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. Prior to Recordation of River Corridor SMA Conservation Easement

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.4 BIOTA (cont.)			
SP 4.6-26. Prior to the recordation of the River Corridor SMA *Conservation and Public Access Easement* as specified in Mitigation Measure 4.6-23 above, the land owner shall provide a plan to the County for the permanent ownership and management of the River Corridor SMA, including any necessary financing. This plan shall include the transfer of ownership of the River Corridor SMA to the Center for Natural Lands Management, or if the Center for Natural Lands Management is declared bankrupt or dissolved, ownership will transfer or revert to a *joint powers authority* consisting of Los Angeles County (4 members), the City of Santa Clarita (2 members), and the Santa Monica Mountains Conservancy (2 members).	Land Owner	Approval of Management Plan by County	1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. Prior to Recordation of River Corridor SMA Conservation Easement
SP 4.6-26a. Two types of habitat restoration may occur in the High Country SMA: 1) riparian revegetation activities principally in Salt Creek Canyon and 2) oak tree replacement in, or adjacent to, existing oak woodlands and savannahs. • Mitigation requirements for riparian revegetation activities within the High Country SMA are the same as those for the River Corridor SMA and are set forth in Mitigation Measures 4.6-1 through 4.6-11 and 4.6-13 through 4.6-16 above. • Mitigation requirements for oak tree replacement are set forth in Mitigation Measure 4.6-48 below.	Land Owner (Project Biologist)	Field Verification	1. ACOE, CDFG (Riparian) 2. ACOE, CDFG (Riparian) 3. Approval of Revegetation Plans
SP 4.6-27. Removal of grazing from the High Country SMA except for those grazing activities associated with long-term resource management programs, is a principal means of enhancing habitat values in the creeks, brushland and woodland areas of the SMA. The removal of grazing in the High Country SMA is discussed below under (b) 4. Long Term Management. All enhancement activities for riparian habitat within the High Country SMA shall be governed by the same provisions as set forth for enhancement in the River Corridor SMA. Specific Plan Table 2.6-3 of the Resource Management Plan provides a list of appropriate plant species for use in enhancement areas in the High Country SMA.	Land Owner/Center for Natural land Management (CNLM)	Enhancement Plans and Field Verification	1. LACDRP 2. CNLM 3. During Enhancement Activities

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.4 BIOTA (cont.)			
SP 4.6-29. Access to the High Country SMA will be limited to daytime use of the designated trail system.	Manager of High Country SMA	Field Verification	1. JPA as described in 4.6-41 2. JPA 3. In Perpetuity
SP 4.6-30. No pets of any kind will be allowed within the High Country SMA, with the exception that equestrian use is permitted on established trails.	Manager of High Country SMA	Field Verification	1. JPA 2. JPA 3. In Perpetuity
SP 4.6-31. No hunting, fishing, or motor or trail bike riding shall be permitted.	Manager of High Country SMA	Field Verification	1. JPA 2. JPA 3. In Perpetuity
SP 4.6-34. Grading perimeters shall be clearly marked and inspected by the project biologist prior to impacts occurring within or adjacent to the High Country SMA.	Applicant (Project Biologist)	Field Verification	1. LACDPW 2. LACDPW 3. Prior To and During Grading
SP 4.6-35. The project biologist shall work with the grading contractor to avoid inadvertent impacts to biological resources outside of the grading area.	Applicant (Project Biologist)	Field Verification	1. LACDPW 2. LACDPW 3. During Grading
SP 4.6-37. The High Country SMA shall be offered for dedication in three approximately equal phases of approximately 1,400 acres each proceeding from north to south, as follows: 1) The first offer of dedication will take place with the issuance of the 2,000th residential building permit of Newhall Ranch; 2) The second offer of dedication will take place with the issuance of the 6,000th residential building permit of Newhall Ranch; 3) The remaining offer of dedication will be completed by the 11,000th residential building permit of Newhall Ranch; and 4) The Specific Plan applicant shall provide a quarterly report to the Departments of Public Works and Regional Planning which indicates the number of residential building permits issued in the Specific Plan area by subdivision map number.	Land Owner	Offer of Dedication	1. LA County Department of Regional Planning 2. LA County Department of Building and Safety 3. Upon Issuance of Building Permits

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.4 BIOTA (cont.)			
SP 4.6-38. Prior to dedication of the High Country SMA, a *conservation and public access easement* shall be offered to the County of Los Angeles and a conservation and management easement offered to the Center for Natural Lands Management. The High Country SMA *Conservation and Public Access Easement* shall be consistent in its provisions with any other *conservation easement*s to state or federal resource agencies which may have been granted as part of mitigation or mitigation banking activities.	Land Owner	Review of Easement Document	1. LA County Department of Regional Planning 2. LA County Department of Building and Safety 3. Upon Issuance of Building Permits
SP 4.6-39. The High Country SMA conservation and public access easement shall prohibit grazing within the High Country, except for those grazing activities associated with the long-term resource management programs, and shall restrict recreation to the established trail system.	Land Owner	Review of Easement Document	1. LACDRP 2. LACDRP 3. Prior to Acceptance of Easement by Los Angeles County
SP 4.6-40. The High Country SMA conservation and public access easement shall be consistent in its provisions with any other conservation easements to state or federal resource agencies which may have been granted as part of mitigation or mitigation banking activities.	Land Owner	Review of Conservation Easement and Resource Permits	1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. Prior to Recordation of High Country SMA Conservation Easement
SP 4.6-41. The High Country SMA shall be offered for dedication in fee to a *joint powers authority* consisting of Los Angeles County (4 members), the City of Santa Clarita (2 members), and the Santa Monica Mountains Conservancy (2 members). The *joint powers authority* will have overall responsibility for recreation within and conservation of the High Country.	Land Owner	Offer of Dedication	1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. Prior to Issuance of Building Permits

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.4 BIOTA (cont.)			
SP 4.6-42. An appropriate type of service or assessment district shall be formed under the authority of the Los Angeles County Board of Supervisors for the collection of up to $24 per single family detached dwelling unit per year and $15 per single family attached dwelling unit per year, excluding any units designated as Low and Very Low affordable housing units pursuant to Section 3.10, Affordable Housing Program of the Specific Plan. This revenue would be assessed to the homeowner beginning with the occupancy of each dwelling unit and distributed to the *joint powers authority* for the purposes of recreation, maintenance, construction, conservation and related activities within the *High Country Special Management Area*.	Land Owner	Approval of Assessment District Report by County	1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. Prior to Issuance of First Residential Occupancy Permit
SP 4.6-43. Suitable portions of *Open Area* may be used for mitigation of riparian, *oak resources*, or elderberry scrub. Mitigation activities within *Open Area* shall be subject to the following requirements, as applicable: • River Corridor SMA Mitigation Requirements, including: Mitigation Measures 4.6-1 through 4.6-11 and 4.6-13 through 4.6-16; and • High Country SMA Mitigation Requirements, including: Mitigation Measures 4.6-27, 4.6-29 through 4.6-42; and • Mitigation Banking – Mitigation Measure 4.6-16.	Manager of Open Area	Review of Mitigation Plans/Field Verification	1. ACOE; CDFG or Los Angeles County as applicable 2. ACOE; CDFG or Los Angeles County as applicable 3. During Mitigation
SP 4.6-47a. Mitigation Banking will be permitted within the River Corridor SMA, the High Country SMA, and the *Open Area land use designations*, subject to the following requirements: • Mitigation banking activities for riparian habitats will be subject to state and federal regulations, and shall be conducted pursuant to the mitigation requirements set forth in Mitigation Measure 4.6-1 through 4.6-15 above; • Mitigation banking for oak resources shall be conducted pursuant to 4.6-48 below; and • Mitigation banking for elderberry scrub shall be subject to approval of plans by the County Forester.	Applicant (Project Biologist)	State and Federal Permits; Submittal of Permits Oak Resources; Review of Oak Tree Permit Elderberry Scrub; Review of Initial Study	1. ACOE, CDFG 2. ACOE, CDFG 3. Prior to Approval of Mitigation Banking Program 1. LACDRP 2. LACDRP 3. Approval of Oak Tree Permit 1. LACDRP 2. LACDRP 3. Prior to Grading

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.4 BIOTA (cont.)			
SP 4.6-48. Standards for the restoration and enhancement of oak resources within the High Country SMA and the Open Area include the following (oak resources include oak trees of the sizes regulated under the County Oak Tree Ordinance, southern California black walnut trees, Mainland cherry trees, and Mainland cherry shrubs): • To mitigate the impacts to oak resources which may be removed as development occurs in the Specific Plan Area, replacement trees shall be planted in conformance with the oak tree ordinance in effect at that time; • Oak resource species obtained from the local gene pool shall be used in restoration or enhancement; • Prior to recordation of construction-level final subdivision maps, an oak resource replacement plan shall be prepared that provides the guidelines for the oak tree planting and/or replanting. The Plan shall be reviewed by the Los Angeles Department of Regional Planning and the County Forester and shall include the following: site selection and preparation, selection of proper species including sizes and planting densities, protection from herbivores, site maintenance, performance standards, remedial actions, and a monitoring program; and • All plans and specifications shall follow County oak tree guidelines, as specified in the County Oak Tree Ordinance.	Applicant (Project Biologist)	Oak Tree Permit(s)	1. LA County Forester 2. LA County Forester 3. Prior to Final Subdivision Map Recordation
SP 4.6-49. To minimize the potential exposure of the development areas, Open Area, and the SMAs to fire hazards, the Specific Plan is subject to the requirements of the Los Angeles County Fire Protection District (LACFPD), which provides fire protection for the area. At the time of final subdivision maps permitting construction in development areas that are adjacent to Open Area and the High Country SMA, a wildfire fuel modification plan shall be prepared in accordance with the fuel modification ordinance standards in effect at that time and shall be submitted for approval to the County Fire Department.	Applicant	Review of Wildfire Fuel Modification Plan	1. LA County Forester 2. LA County Forester 3. Prior to Recordation of Final Subdivision Maps

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.4 BIOTA (cont.)			
SP 4.6-50. The wildfire fuel modification plan shall depict a fuel modification zone the size of which shall be consistent with the County fuel modification ordinance requirements. Within the zone, tree pruning, removal of dead plant material and weed and grass cutting shall take place as required by the fuel modification ordinance.	Applicant (Project Biologist)	Review of Wildfire Fuel Modification Plan	1. LA County Forester 2. LA County Forester 3. Prior to Recordation of Final Subdivision Maps
SP 4.6-51. In order to enhance the habitat value of plant communities which require fuel modification, fire retardant plant species containing habitat value may be planted within the fuel modification zone. Typical plant species suitable for Fuel Modification Zones are indicated in Specific Plan Table 2. 6-5 of the Resource Management Plan. Fuel modification zones adjacent to SMAs and Open Areas containing habitat of high value such as oak woodland and savannas shall utilize a more restrictive plant list which shall be reviewed by the County Forester.	Applicant (Project Biologist)	Review of Wildfire Fuel Modification Plan	1. LA County Forester 2. LA County Forester 3. Prior to Recordation of Final Subdivision Maps
SP 4.6-52. The wildfire fuel modification plan shall include the following construction period requirements: (a) a fire watch during welding operations; (b) spark arresters on all equipment or vehicles operating in a high fire hazard area; (c) designated smoking and non-smoking areas; and (d) water availability pursuant to the County Fire Department requirements.	Applicant (Project Biologist)	Review of Wildfire Fuel Modification Plan	1. LA County Forester 2. LA County Forester 3. Prior to Recordation of Final Subdivision Maps

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.4 BIOTA (cont.)			
SP 4.6-53. If, at the time any subdivision map proposing construction is submitted, the County determines through an Initial Study, or otherwise, that there may be rare, threatened or endangered, plant or animal species on the property to be subdivided, then, in addition to the prior surveys conducted on the Specific Plan site to define the presence or absence of sensitive habitat and associated species, current, updated site-specific surveys for all such animal or plant species shall be conducted in accordance with the consultation requirements set forth in Mitigation Measure 4.6-59 within those areas of the Specific Plan where such animal or plant species occur or are likely to occur. The site-specific surveys shall include the unarmored three-spine stickleback, the arroyo toad, the Southwestern pond turtle, the California red-legged frog, the southwestern willow flycatcher, the least Bell's vireo, the San Fernando Valley spineflower and any other rare, sensitive, threatened, or endangered plant or animal species occurring, or likely to occur, on the property to be subdivided. All site-specific surveys shall be conducted during appropriate seasons by qualified botanists or qualified wildlife biologists in a manner that will locate any rare, sensitive, threatened, or endangered animal or plant species that may be present. To the extent there are applicable protocols published by either the United States Fish and Wildlife Service or the California Department of Fish and Game, all such protocols shall be followed in preparing the updated site-specific surveys.	Applicant (Project Biologist)	Review of Initial Study	1. LACDRP 2. LACDRP 3. Prior to Approval of Subdivision Maps

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.4 BIOTA (cont.)			
SP 4.6-53. (cont.) All site-specific survey work shall be documented in a separate report containing at least the following information: (a) project description, including a detailed map of the project location and study area; (b) a description of the biological setting, including references to the nomenclature used and updated vegetation mapping; (c) detailed description of survey methodologies; (d) dates of field surveys and total person-hours spent on the field surveys; (e) results of field surveys, including detailed maps and location data; (f) an assessment of potential impacts; (g) discussion of the significance of the rare, threatened or endangered animal or plant populations found in the project area, with consideration given to nearby populations and species distribution; (h) mitigation measures, including avoiding impacts altogether, minimizing or reducing impacts, rectifying or reducing impacts through habitat restoration, replacement or enhancement, or compensating for impacts by replacing or providing substitute resources or environments, consistent with *California Environmental Quality Act* (*CEQA*) *Guidelines* §15370); (i) references cited and persons contacted; and (j) other pertinent information, which is designed to disclose impacts and mitigate for such impacts.			
SP 4.6-54. Prior to development within or disturbance to occupied Unarmored threespine stickleback habitat, a formal consultation with the USFWS shall occur.	Applicant (Project Biologist)	Section 7 Consultation	1. USFWS 2. USFWS 3. Prior to Grading
SP 4.6-55. Prior to development or disturbance within wetlands or other sensitive habitats, permits shall be obtained from pertinent federal and state agencies and the Specific Plan shall conform with the specific provisions of said permits. Performance criteria shall include that described in Mitigation Measures 4.6-1 through 4.6-16 and 4.6-42 through 4.6-47 for wetlands, and Mitigation Measures 4.6-27, 4.6-28, and 4.6-42 through 4.6-48 for other sensitive habitats.	Applicant (Project Biologist)	Receipt of Appropriate Permit applications	1. ACOE, CDFG 2. ACOE, CDFG 3. Prior to Grading

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.4 BIOTA (cont.)			
SP 4.6-56. All lighting along the perimeter of natural areas shall be downcast luminaries with light patterns directed away from natural areas.	Applicant	Building Permit Plot Plan Review	1. LACDRP 2. LACDRP 3. Prior to Issuance of Building Permits
SP 4.6-57. Where bridge construction is proposed and water flow would be diverted, blocking nets and seines shall be used to control and remove fish from the area of activity. All fish captured during this operation would be stored in tubs and returned unharmed back to the river after construction activities were complete.	Applicant (Project Biologist)	Field Verification	1. ACOE, CDFG 2. ACOE, CDFG 3. Prior to Construction
SP 4.6-58. To limit impacts to water quality the Specific Plan shall conform with all provisions of required NPDES permits and water quality permits that would be required by the California Regional Water Quality Control Board.	Project Engineer	Approval of a Storm Water Management Plan (SWMP	1. LACDPW 2. LACDPW 3. Prior to Issuance of Grading Permit(s)

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.4 BIOTA (cont.)			
SP 4.6-59. Consultation shall occur with the County of Los Angeles (County) and California Department of Fish and Game (CDFG) at each of the following milestones: 1) Before Surveys. Prior to conducting sensitive plant or animal surveys at the Newhall Ranch subdivision map level, the applicant, or its designee, shall consult with the County and CDFG for purposes of establishing and/or confirming the appropriate survey methodology to be used; 2) After Surveys. After completion of sensitive plant or animal surveys at the subdivision map level, draft survey results shall be made available to the County and CDFG within 60 calendar days after completion of the field survey work; 3) Subdivision Map Submittal. Within 30 calendar days after the applicant, or its designee, submits its application to the County for processing of a subdivision map in the Mesas Village or Riverwood Village, a copy of the submittal shall be provided to CDFG. In addition, the applicant, or its designee, shall schedule a consultation meeting with the County and CDFG for purposes of obtaining comments and input on the proposed subdivision map submittal. The consultation meeting shall take place at least thirty (30) days prior to the submittal of the proposed subdivision map to the County; and	Applicant (Project Biologist)	Section 2081 Permit	1. USFWS and CDFG 2. USFWS and CDFG 3. Prior to Grading

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.4 BIOTA (cont.)			
SP 4.6-59. (cont.) 4) Development/Disturbance and Further Mitigation. Prior to any development within, or disturbance to, habitat occupied by rare, threatened, or endangered plant or animal species, or to any portion of the Spineflower Mitigation Area Overlay, as defined below, all required permits shall be obtained from both USFWS and CDFG, as applicable. It is further anticipated that the federal and state permits will impose conditions and mitigation measures required by federal and state law that are beyond those identified in the Newhall Ranch Final EIR (March 1999), the Newhall Ranch DAA (April 2001) and the Newhall Ranch Revised DAA (2002). It is also anticipated that conditions and mitigation measures required by federal and state law for project-related impacts on endangered, rare or threatened species and their habitat will likely require changes and revisions to Specific Plan development footprints, roadway alignments, and the limits, patterns and techniques associated with project-specific grading at the subdivision map level. Indirect impacts associated with the interface between the preserved spineflower populations and planned development within the Newhall Ranch Specific Plan shall be avoided or minimized by establishing open space connections with Open Area, River Corridor, or High Country land use designations. In addition, buffers (i.e., setbacks from developed, landscaped or other use areas) shall be established around portions of the delineated preserve(s) not connected to Open Area, the River Corridor or the High Country land use designations. The open space connections and buffer configurations shall take into account local hydrology, soils, existing and proposed adjacent land uses, the presence of non-native invasive plant species, and seed dispersal vectors.			

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.4 BIOTA (cont.)			
SP 4.6-67. Open space connections shall be configured such that the spineflower preserves are connected to Open Area, River Corridor, or High Country land use designations to the extent practicable. Open space connections shall be of adequate size and configuration to achieve a moderate to high likelihood of effectiveness in avoiding or minimizing indirect impacts (e.g., invasive plants, increased fire frequency, trampling, chemicals, etc.) to the spineflower preserve(s). Open space connections for the spineflower preserve(s) shall be configured in consultation with the County and CDFG. Open space connections for the spineflower preserve(s) shall be established for the entire Specific Plan area in conjunction with approval of the first Newhall Ranch subdivision map filed in either the Mesa Village, or that portion of the Riverwood Village in which the San Martinez spineflower location occurs. For preserves and/or those portions of preserves not connected to Open Area, River Corridor, or High Country land use designations, buffers shall be established at variable distances of between 80 and 200 feet from the edge of development to achieve a moderate to high likelihood of effectiveness in avoiding or minimizing indirect impacts (e.g., invasive plants, increased fire frequency, trampling, chemicals, etc.) to the spineflower preserve(s). The buffer size/configuration shall be guided by the analysis set forth in the "*Review of Potential Edge Effects on the San Fernando Valley Spineflower*," prepared by Conservation Biology Institute, January 19, 2000, and other sources of scientific information and analysis, which are available at the time the preserve(s) and buffers are established. Buffers for the spineflower preserve(s) shall be configured in consultation with the County and CDFG for the entire Specific Plan area. Buffers for the spineflower preserve(s) shall be established in conjunction with approval of the first Newhall Ranch subdivision map filed in either the Mesa Village, or that portion of the Riverwood Village in which the San Martinez spineflower location occurs.	Applicant	Review of Initial Study and Subdivision	1. LACDRP/CDFG 2. LACDRP/CDFG 3. Prior to Approval of Subdivision Maps

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.4 BIOTA (cont.)			
SP 4.6-67. (cont.) Roadways and road rights-of-way shall not be constructed in any spineflower preserve(s) and buffer locations on Newhall Ranch unless constructing the road(s) in such location is found to be the environmentally superior alternative in subsequently required tiered EIRs in connection with the Newhall Ranch subdivision map(s) process. No other development or disturbance of native habitat shall be allowed within the spineflower preserve(s) or buffer(s).	Applicant	Review of Initial Study and subdivision	1. LACDRP/CDFG 2. LACDRP/CDFG 3. Prior to Approval of Subdivision Maps
The project applicant, or its designee, shall be responsible for revegetating open space connections and buffer areas of the Newhall Ranch spineflower preserve(s) to mitigate temporary impacts due to grading that will occur within portions of those open space connections and buffer areas. The impacted areas shall be reseeded with a native seed mix to prevent erosion, reduce the potential for invasive non-native plants, and maintain functioning habitat areas within the buffer area. Revegetation seed mix shall be reviewed and approved by the County and CDFG.	Applicant	Review of Initial Study and subdivision	1. LACDRP/CDFG 2. LACDRP/CDFG 3. Prior to Approval of Subdivision Maps

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.4 BIOTA (cont.)			
SP 4.6-68. To protect the preserved Newhall Ranch spineflower populations, and to further reduce potential direct impacts to such populations due to unrestricted access, the project applicant, or its designee, shall erect and maintain temporary orange fencing and prohibitive signage around the Newhall Ranch preserve(s), open space connections and buffer areas, which are adjacent to areas impacted by proposed development prior to and during all phases of construction. The areas behind the temporary fencing shall not be used for the storage of any equipment, materials, construction debris or anything associated with construction activities. Following the final phase of construction of any Newhall Ranch subdivision map adjacent to the Newhall Ranch spineflower preserve(s), the project applicant, or its designee, shall install and maintain permanent fencing along the subdivision tract bordering the preserve(s). Permanent signage shall be installed on the fencing along the preservation boundary to indicate that the fenced area is a biological preserve, which contains protected species and habitat, that access is restricted, and that trespassing and fuel modification are prohibited within the area. The permanent fencing shall be designed to allow wildlife movement. The plans and specifications for the permanent fencing and signage shall be approved by the County and CDFG prior to the final phase of construction of any Newhall Ranch subdivision map adjacent to a Newhall Ranch spineflower preserve(s).	Applicant (Project Biologist)	Review of Initial Study, subdivision, and grading permit application	1. LACDRP/CDFG 2. LACDRP/CDFG 3. Prior to Grading and Occupancy

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.4 BIOTA (cont.)			
SP 4.6-69. Indirect impacts resulting from changes to hydrology (i.e., increased water runoff from surrounding development) at the interface between spineflower preserve(s) and planned development within the Newhall Ranch Specific Plan shall be avoided or mitigated to below a level of significance. Achievement of this standard will be met through the documented demonstration by the project applicant, or its designee, that the storm drain system achieves pre-development hydrological conditions for the Newhall Ranch spineflower preserve(s). To document such a condition, the project applicant, or its designee, shall prepare a study of the pre- and post-development hydrology, in conjunction with Newhall Ranch subdivision maps adjacent to spineflower preserve(s). The study shall be used in the design and engineering of a storm drain system that achieves pre-development hydrological conditions. The study must conclude that proposed grade changes in development areas beyond the buffers will maintain pre-development hydrology conditions within the preserve(s). The study shall be approved by the Planning Director of the County and the resulting conditions confirmed by CDFG. The storm drain system for Newhall Ranch subdivision maps adjacent to any spineflower preserves must be approved by the County prior to the initiation of any grading activities.	Applicant (Project Biologist)	Review of map subdivision	1. LACDPW 2. LACDPW/CDFG 3. Prior to Approval of Subdivision Maps

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.4 BIOTA (cont.)			
LV 4.4-1. Construction activities in the riverbed shall be restricted to the following areas of temporary disturbance: (1) an 85-foot-wide zone that extends into the river from the base of the rip-rap gunite or soil cement bank protection from where it intercepts the river bottom; (2) 100 feet on either side of the outer edge of a new bridge or bridge to be modified; (3) 50-foot-wide corridor for all utility lines; and (4) 20-foot-wide temporary access ramps and roads to reach construction sites. The locations of these temporary construction sites and the routes of all access roads shall be shown on maps submitted with the Verification Request Letter submitted to the ACOE and CDFG for individual project approval. The construction plans should indicate what type of vegetation, if any, would be temporarily disturbed and the post-construction activities to facilitate natural revegetation of the temporarily disturbed areas.	Applicant (Construction Superintendent)	ACOE and CDFG Approval	1. LACDPW 2. LACDPW/CDFG 3. Prior to Issuance of Grading Plans
LV 4.4-2. Prior to initiating construction for the installation of bridges, storm drain outlets, utility lines, and/or bank protection, all construction sites and access roads within the riverbed, as well as all riverbed areas within 300 feet of the construction site and access road, shall be inspected by a qualified biologist for the presence of arroyo toad, southwestern pond turtle, two-striped garter snake, unarmored threespine stickleback, Santa Ana sucker and arroyo chub. The ACOE, USFWS and the CDFG shall be notified of the inspection and shall have the option of attending. If any of the above agencies is not represented, the biologist shall file a written report of the inspection with the agency not in attendance within 14 days of the survey and no sooner than 30 days prior to any construction work in the riverbed.	Applicant (Project Biologist)	Receipt and Review of Inspection Report	1. LACDPW 2. LACDPW/CDFG/ACOE/ USFWS 3. Prior to Initializing Relevant Construction Activities

Mitigation Measures/Conditions of Approval		Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.4 BIOTA (cont.)				
LV 4.4-3.	Construction work areas and access roads shall be cleared of arroyo toad, southwestern pond turtle, two-striped garter snake, unarmored threespine stickleback, Santa Ana sucker and arroyo chub immediately before the prescribed work is to be carried out, immediately before any equipment is moved into or through the stream or habitat areas, and immediately before diverting any stream water. The removal of such species shall be conducted by a qualified biologist using procedures approved by the ACOE, USFWS, and CDFG, and with the appropriate collection and handling permits. Species shall be relocated to nearby suitable habitat areas. A plan to relocate these species shall be submitted to the ACOE, USFWS and CDFG for review and approval no later than 30 days prior to construction. Under no circumstances shall the unarmored threespine stickleback or arroyo toad be collected or relocated, unless USFWS personnel or their agents implement this measure.	Applicant (Project Biologist)	Receipt and Review of Removal Plans	1. LACDPW 2. LACDPW/CDFG/ACOE/ USFWS 3. Immediately Prior to Relevant Construction Activities
LV 4.4-4.	A qualified biologist shall be present when any stream/river diversion takes place, or when blocking nets and seines are used (see also EIR **Mitigation Measure 4.6-57**), and shall patrol the areas both within, upstream and downstream of the work area to rescue any species stranded by the diversion of the stream water or trapped by the nets/seines. Species that are collected shall be relocated to suitable locations downstream of the work area. Under no circumstances shall the unarmored threespine stickleback or arroyo toad be collected or relocated, unless USFWS personnel or their agents implement this measure.	Applicant (Project Biologist)	Field Verification	1. LACDPW 2. LACDPW/USFWS 3. While Any Stream/River Diversion Takes Place, or When Blocking Nets and Seines Are Used
LV 4.4-5.	Blocking nets, or fences with 0.25-inch-square mesh, 18 inches high and buried 6 inches, shall be placed downstream of the work area to assure that none of the species move into the construction area.	Applicant (Construction Superintendent and Project Biologist)	Field Verification	1. LACDPW 2. LACDPW 3. During All Phases of Construction

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.4 BIOTA (cont.)			
LV 4.4-6. Installation of bridges, culverts or other structures shall not impair movement of fish and aquatic life. Bottoms of temporary culverts shall be placed at or below channel grade. Bottoms of permanent culverts shall be placed below channel grade.	Applicant (Civil Engineer)	Review of Design Plans Field Verification	1. LACDPW 2. LACDPW 3. During Relevant Phases of Construction
LV 4.4-7. The riparian revegetation plan to be developed by the applicant shall demonstrate the feasibility of creating the required mitigation acreage (see **Mitigation Measure 4.6-63**). The plan shall specify, at a minimum, the following: (1) the location of mitigation sites; (2) the quantity and species of plants to be planted; (3) procedures for creating additional habitat; (4) methods for the removal of non-native plants; (5) a schedule and action plan to maintain and monitor the enhancement/restoration area; (6) a list of criteria and performance standards by which to measure success of the mitigation sites; (7) measures to exclude unauthorized entry into the riparian creation/enhancement areas; and (8) contingency measures in the event that mitigation efforts are not successful. The plan shall be subject to the approval of CDFG, ACOE, and the County, and approved prior to issuance of the grading permit.	Applicant (Project Biologist)	Receipt and Review of Riparian Revegetation Plan	1. LACDPW/CDFG/ACOE 2. LACDPW/CDFG/ACOE 3. Prior to the Issuance of a Grading Permits

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.4 BIOTA (cont.)			
LV 4.4-8. Within 30 days of ground disturbance activities associated with construction or grading that would occur during the nesting/breeding season of native bird species potentially nesting on the site (typically March through August in the project region, or as determined by a qualified biologist), the applicant shall have weekly surveys conducted by a qualified biologist to determine if active nests of bird species protected by the Migratory Bird Treaty Act and/or the California Fish and Game Code are present in the disturbance zone or within 300 feet (500 feet for raptors) of the disturbance zone. The surveys shall continue on a weekly basis with the last survey being conducted no more than seven days prior to initiation of disturbance work. If ground disturbance activities are delayed, then additional pre-disturbance surveys shall be conducted such that no more than seven days will have elapsed between the survey and ground disturbance activities. If active nests are found, clearing and construction within 300 feet of the nest (500 feet for raptors) shall be postponed or halted, at the discretion of the biologist, until the nest is vacated and juveniles have fledged, as determined by the biologist, and there is no evidence of a second attempt at nesting. Limits of construction to avoid an active nest shall be established in the field with flagging, fencing or other appropriate barriers, and construction personnel shall be instructed on the sensitivity of nest areas. The biologist shall serve as a construction monitor during those periods when construction activities will occur near active nest areas to ensure that no inadvertent impacts on these nests occur. The results of the surveys, and any avoidance measures taken, shall be submitted to the County of Los Angeles within 30 days of completion of the pre-construction surveys and/or construction monitoring to document compliance with applicable state and federal laws pertaining to the protection of native birds.	Applicant (Project Biologist)	Receipt and Review of Survey Report	1. LACDRP 2. LACDRP 3. Within 30 days of Ground Disturbance Activities

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.4 BIOTA (cont.)			
LV 4.4-9. A pre-ground disturbance survey shall be conducted by a qualified biologist (subject to approval by the County) within 14 days or any disturbance activities in all areas on the project site containing suitable habitat for coast horned lizard, silvery legless lizard, coastal western whiptail, rosy boa, San Bernardino ringneck snake, coast patch-nosed snake, southwestern pond turtle, two-striped garter snake, American badger, San Diego black-tailed jackrabbit and San Diego desert woodrat. If any of these species are observed within the disturbance zone, they shall be relocated to a suitable area outside of the disturbance zone. Results of the surveys and relocation efforts shall be provided to CDFG. Collection and relocation of animals shall only occur with the proper scientific collection and handling permits. If active San Diego desert woodrat nests (stick houses) with young are identified within the disturbance zone or within 100 feet of the disturbance zone, a fence shall be erected around the nest site with a 100-foot minimum buffer from construction activities. This buffer may be greater, if determined to be appropriate by the biologist. At the discretion of the biologist, clearing and construction within the fenced area would be postponed or halted until young have left the nest. The biologist shall serve as a construction monitor during those periods when disturbance activities will occur near active nest areas to ensure that no inadvertent impacts on these nests will occur. If San Diego desert woodrats are observed within the grading footprint outside of the breeding period, individuals shall be relocated to a suitable location on or in proximity to the project site by a qualified biologist in possession of a scientific collecting permit.	Applicant (Project Biologist)	Receipt and Review of Survey and Relocation Reports	1. LACDPW/CDFG 2. LACDPW/CDFG 3. Within 14 days of Ground Disturbance Activities

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.4 BIOTA (cont.)			
LV 4.4-10. No earlier than 20 days prior to any grading activity that would occur during the breeding season of native bat species potentially utilizing the site (April 1 through August 31), a field survey shall be conducted by a qualified biologist (retained by the applicant, with selection reviewed by the County) to determine if active roosts of special-status bats such as western mastiff bat, fringed myotis and yuma myotis are present in areas of the project site containing suitable roosting habitat, such as woodlands and buildings. If active roosts are found, construction within 200 feet shall be postponed or halted, at the discretion of the biological monitor, until the roost is vacated and juveniles have fledged, as determined by the biologist. Implementation of this measure would ensure that no loss of active roost colonies of either species will occur and, therefore, will reduce impacts on bat species to a less than significant level.	Applicant (Project Biologist)	Receipt and Review of Survey Report	1. LACDPW/CDFG 2. LACDPW/CDFG 3. No earlier than 20 Days Prior to Grading Activities Occurring from April 1 through August 31
LV 4.4-11. Prior to the issuance of a grading permit, the applicant shall prepare a landscaping plan. This plan will be subject to review and approval by the County and CDFG and will include a plant palette composed of non-invasive species that are adapted to the conditions found on the Landmark Village site, without requiring high irrigation rates. The landscaping plan will also include a list of invasive plant species prohibited from being planted on the project site. This list of prohibited plants will be compiled in cooperation with a qualified restoration specialist and will be distributed to future occupants of the Landmark Village site.	Applicant (Project Landscape Architect)	Receipt and Review of Landscaping Plan	1. LACDRP/CDFG 2. LACDRP/CDFG 3. Prior to Issuance of Grading Permits
LV 4.4-12. Waste and recycling receptacles that discourage foraging by wildlife species adapted to urban environments shall be installed in common areas and parks throughout the Landmark Village site.	Applicant (Landmark Village Homeowners Association)	Field Verification	1. LACDRP 2. LACDRP 3. Prior to Issuance of Occupancy Permits

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.4 BIOTA (cont.)			
LV 4.4-13. The Landmark Village Home Owners Association shall supply educational information to future residents of the Landmark Village site regarding the importance of not feeding wildlife, ensuring that trash (containing food) is not accessible to wildlife, keeping the ground free of fallen fruit from trees and not leaving pet food outside.	Applicant (Landmark Village Homeowners Association)	Field Verification	1. LACDRP 2. LACDRP 3. During Occupancy
LV 4.4-14. All oaks with driplines within 50 feet of land clearing (including brush clearing) or areas to be graded shall be enclosed in a temporary fenced zone for the duration of the clearing or grading activities. Fencing shall extend to the root protection zone (i.e., the area at least 15 feet from the trunk or half again as large as the distance from the trunk to the drip line, whichever distance is greater). No parking or storage of equipment, solvents or chemicals that could adversely affect the trees shall be allowed within 25 feet of the trunk at any time. Removal of the fence shall occur only after the project biologist confirms the health of preserved trees.	Applicant (Construction Superintendent)	Field Verification	1. LACDRP 2. LACDRP 3. During Grading and All Phases of Construction
LV 4.4-15. Prior to use and placement on the Landmark Village site, all landscaping materials (including organic mulches) shall be inspected and certified "free" of Argentine ants.	Applicant (Project Landscape Architect)	Field Verification	1. LACDRP 2. LACDRP 3. Prior to Use and Placement on the Landmark Village Site
LV 4.4-16. A mitigation plan for elderberry scrub shall be developed and implemented by the applicant. The plan shall demonstrate the feasibility of replacing the acreage of this plant community to be removed at a 1:1 ratio. The plan shall specify, at a minimum, the following: (1) the location of mitigation sites; (2) the quantity and species of plants to be planted; (3) procedures for creating additional habitat; (4) methods for the removal of non-native plants; (5) a schedule and action plan to maintain and monitor the mitigation area; (6) a list of criteria and performance standards by which to measure success of the mitigation sites; (7) measures to exclude unauthorized entry into the mitigation areas; and (8) contingency measures in the event that mitigation efforts are not successful. The plan shall be subject to the approval of the County prior to the issuance of grading permits.	Applicant (Project Biologist)	Receipt and Review of Mitigation Plan	1. LACDRP 2. LACDRP 3. Prior to Issuance of Grading Permits

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.4 BIOTA (cont.)			
LV 4.4-17. Prior to the issuance of a grading permit for ground disturbance, construction or site preparation activities, the applicant shall retain the services of a qualified biologist, approved by the CDFG and Los Angeles County, to conduct appropriately timed focused surveys for spadefoot toad within all portions of the project site containing suitable breeding habitat. If western spadefoot are not identified on the project site, no further measures would be required. Should western spadefoot be identified on the project site, the following measures would be implemented: (a) Under the direct supervision of the qualified biologist, western spadefoot toad habitat shall be created within suitable natural sites on the Newhall Ranch Specific Plan area, outside of the proposed development envelope. The amount of occupied breeding habitat to be impacted by the Landmark Village project shall be replaced at a 2:1 ratio. The actual relocation site design and location shall be approved by CDFG and consist of a shallow excavated pond(s) utilizing an artificial rubber pond liner as a base. The location shall be as far away as possible from any of the homes and roads to be built. The relocation pond(s) shall be designed such that it only supports standing water for several weeks following seasonal rains in order that aquatic predators (i.e., fish, bullfrogs, crayfish, etc.) cannot become established. The size and number of ponds shall be determined by CDFG. Terrestrial habitat surrounding the proposed relocation site shall be as similar in type, aspect, and density to the location of the existing ponds as possible. No site preparation or construction activities shall be permitted in the vicinity of the currently occupied ponds until the design and construction of the pool habitat in preserved areas of the site has been completed and the relocation of all western spadefoot toad adult, tadpoles, and egg masses detected are moved to the created pool habitat to the satisfaction of the monitoring biologist and CDFG;	Applicant (Project Biologist)	Receipt and Review of Survey Report Field Verification (if Relocation and Habitat Restoration is Necessary)	1. LACDPW 2. LACDPW 3. Prior to Issuance of Grading Permits

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.4 BIOTA (cont.)			
LV 4.4-17. (cont.) (b) Based on appropriate rainfall and temperatures, generally between the months of February and April, the biologist shall conduct a series of surveys in all appropriate habitats within the development envelope prior to the initiation of construction activities. Surveys will include evaluation of all previously documented occupied areas and a reconnaissance level survey of the remaining natural areas of the site. All western spadefoot adults, tadpoles, and egg masses encountered shall be collected and released in identified relocation pond(s) described above; and (c) The qualified biologist shall monitor the relocation site for a minimum period of five years, or as otherwise directed by CDFG. Specific monitoring requirements and success criteria shall be approved by CDFG. It is expected that minimum requirements will include annual monitoring during and immediately following peak breeding season such that surveys can be conducted for adults as well as for egg masses, larval and post larval toads. Further, survey data will be provided to CDFG by the monitoring biologist following each monitoring period and a written report summarizing the monitoring results will be provided to CDFG at the end of the monitoring effort. Success criteria for the monitoring program shall include verifiable evidence of toad reproduction at the relocation site.			

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.4 BIOTA (cont.)			
LV 4.4-18. For all grading and construction activities a qualified biologist shall be retained by the applicant (with selection reviewed by the County) to ensure that incidental construction impacts on special-status wildlife species are avoided or minimized. The biologist shall be in possession of a Scientific Collecting permit and relocate any wildlife species (for which they are permitted to handle) that may be destroyed or adversely affected as a result of construction and/or site preparation activities. Should a state or federally listed species be encountered, construction shall be halted until a permitted biologist can relocate the animal(s). Responsibilities of the construction biological monitor include the following: • Attend the pre-construction meeting to ensure that timing/location of construction activities do not conflict with other mitigation requirements (e.g., seasonal surveys for nesting birds). Conduct meetings with the contractor and other key construction personnel describing the importance of restricting work to designated areas; • Discuss procedures for minimizing harm/harassment of wildlife encountered during construction; • Review/designate the construction area in the field with the contractor in accordance with the final grading plan. Haul roads, access roads, and on-site staging and storage areas shall be sited within grading areas to minimize degradation of habitat adjacent to these areas. If activities outside these limits are necessary, they shall be evaluated by the biologist to ensure no special-status species or habitat will be affected; • Conduct a field review of the staking (to be set by the surveyor) designating the limits of all construction activity. Any construction activity areas immediately adjacent to riparian areas or other special-status resources (such as large trees or bird nests) may be flagged or temporarily fenced by the monitor, at his/her discretion;	Applicant (Project Biologist)	Field Verification	1. LACDPW 2. LACDPW 3. During Grading and All Phases of Construction

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.4 BIOTA (cont.)			
LV 4.4-18. (cont.) • Periodically visit the site during construction to coordinate and monitor compliance with the above provisions; and • Submit to the County an immediate report of any conflicts or errors resulting in impacts to special-status resources as well as a final report on the results of construction and any recommendations for improving the process.			
LV 4.4-19. A mitigation plan for slender mariposa lily shall be developed prior to the issuance of a grading permit and implemented by the applicant. The plan shall include an assessment of enhancement opportunities of slender mariposa lily populations occurring within protected areas in the High Country SMA, the River Corridor SMA, the Salt Creek Corridor, and spineflower preserves. The plan shall demonstrate the feasibility of replacing the number of individual plants to be removed at a 1:1 ratio and/or enhancing and protecting existing populations of the species. The mitigation ratio should take in consideration the existing population of slender mariposa lily that are being preserved in Salt Creek, which is located within the Specific Plan area, to the south of the Landmark Village project site. A total of 30,830 slender mariposa lily plants have been recorded in Salt Creek (Dudek & Associates 2003). The plan shall specify, at a minimum, the following: (1) the location of mitigation sites in protected/preserved areas within the Newhall Ranch Specific Plan area; (2) methods for harvesting seeds and salvaging and transplantation of individual bulbs/plants to be impacted; (3) site preparation procedures for the mitigation site; (4) a schedule and action plan to maintain and monitor the mitigation area; (5) a list of criteria and performance standards by which to measure success of the mitigation site; (6) measures to exclude unauthorized entry into the mitigation areas; and (7) contingency measures in the event that mitigation efforts are not successful. The plan shall be subject to the approval of the County prior to the issuance of a grading permit.	Applicant (Project Biologist)	Receipt and Review of Mitigation Plan	1. LACDRP 2. LACDRP 3. Prior to the Issuance of Grading Permits

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.4 BIOTA (cont.)			
LV 4.4-20. Appropriately timed focused surveys for the undescribed species of Gnaphalium (Bio-6) shall be conducted by a qualified botanist prior to the commencement of grading/construction activities within suitable habitat (primarily river terraces) of the species to determine if plants have established within potential impacted areas since the time of the 2005 survey. No longer than one year shall elapse between completion of the survey and commencement of construction activities. Should the species be documented within the project boundary, avoidance measures shall be implemented to minimize impacts to individual plants. These measures shall include adjusting the boundaries/location of haul routes and other project features. If, due to project design constraints, avoidance of all plants is not possible, then available methods for salvaging seeds and/or transplantation of individual plants to be impacted will be evaluated and implemented. All seed collection and/or transplantation methods, as well as the location of the receiver site for seeds/plants (assumed to be within preserved open space areas of Newhall Ranch along the Santa Clara River), shall be coordinated and approved by the County prior to the issuance of a grading permit.	Applicant (Project Biologist)	Receipt and Review of Survey Report	1. LACDPW 2. LACDPW 3. Prior to the Commencement of Grading/Construction Activities Within Suitable Habitat
LV 4.4-21. The Oak Resource Replacement Plan to be prepared (as described in **Mitigation Measure 4.6-48**) shall include measures to create, enhance, and/or restore 7.82 acres of coast live oak woodland within the High Country SMA. The plan shall be subject to the requirements outlined in **Mitigation Measure 4.6-48**.	Applicant (Project Biologist)	Receipt and Review of Oak Resource Replacement Plan	1. LA County Forester 2. LA County Forester 3. Prior to Final Subdivision Map Recordation

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.5 FLOODPLAIN MODIFICATIONS			
Please refer to **Section 4.2, Hydrology**, of this MMP for a listing of Program EIR mitigation measures pertaining to flood control. No additional mitigation beyond that contained in the Biota section of this EIR (**Section 4.4, Biota**) is required because no significant impacts to biological resources are anticipated due to the bank stabilization, bridge, or changes in the floodplain due to project modifications. Please refer to **4.4, Biota**, of this MMP for a listing of the recommended Biota mitigation measures.	Please Refer to **4.2, Hydrology**, and **4.4, Biota**, of this MMP	Please Refer to **4.2, Hydrology**, and **4.4, Biota**, of this MMP	Please Refer to **4.2, Hydrology**, and **4.4, Biot**a, of this MMP
4.6 VISUAL QUALITIES			
SP 4.7-1. In conjunction with the development review process set forth in Chapter 5 of the Specific Plan, all future subdivision maps and other discretionary permits which allow construction shall incorporate the Development Guidelines (Specific Plan Chapter 3) and Design Guidelines (Specific Plan Chapter 4), and the design themes and view considerations listed in the Specific Plan.	Applicant	Plan Check	1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. Prior to Approval of Final Maps

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.6 VISUAL QUALITIES (cont.)			
SP 4.7-2. In design of residential tentative tract maps and site planning of multifamily areas and Commercial and Mixed-Use land use designations along State Route 126 (SR-126), the following Design Guidelines shall be utilized: • Where the elevations of buildings will obstruct the views from SR-126 to the south, the location and configuration of individual buildings, driveways, parking, streets, signs and pathways shall be designed to provide view corridors of the river, bluffs and the ridge lines south of the river. Those view corridors may be perpendicular to SR-126 or oblique to it in order to provide for views of passengers within moving vehicles on SR-126; • The Community Park between SR-126 and the Santa Clara River shall be designed to promote views from SR-126 of the river, bluffs and ridge lines to the south of the river; • Residential Site Planning Guidelines set forth in Section 4.3.1 and Residential and Architectural Guidelines set forth in Section 4.4.1 Residential shall be employed to ensure that the views from SR-126 are aesthetically pleasing and that views of the river, bluffs and ridge lines south of the river are preserved to the extent practicable; • Mixed-Use and the Commercial Site Planning Guidelines set forth in Section 4.3.2 and Architectural Guidelines set forth Section 4.4.2 shall be incorporated to the extent practicable in the design of the Riverwood Village Mixed-Use and Commercial land use designations to ensure that the views from SR-126 are aesthetically pleasing and to preserve views of the river, bluffs and ridge lines south of the river; and • Landscape improvements along SR-126 shall incorporate the Landscape Design Guidelines, set forth in Section 4.6 in order to ensure that the views from SR-126 are aesthetically pleasing and to preserve views of the river, bluffs and ridge lines south of the river.	Applicant	Plan Check	1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. Prior to Approval of Final Subdivision Maps or Site Plans as applicable

Mitigation Measures/Conditions of Approval		Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.7 TRAFFIC/ACCESS				
SP 4.8-1.	The applicants for future subdivision maps which permit construction shall be responsible for funding and constructing all on-site traffic improvements except as otherwise provided below. The obligation to construct improvements shall not preclude the applicants' ability to seek local, state or federal funding for these facilities.	Applicant(s)	Bonding of and/or Receipt of Funding and/or Field Verification of Construction	1. LACDPW 2. LACDPW 3. Prior to Issuance of Building Permit
SP 4.8-2.	Prior to the approval of each subdivision map which permits construction, the applicant for that map shall prepare a transportation performance evaluation which shall indicate the specific improvements for all on-site roadways which are necessary to provide adequate roadway and intersection capacity as well as adequate right-of-way for the subdivision and other expected traffic. Transportation performance evaluations shall be approved by Los Angeles County Department of Public Works according to standards and policies in effect at that time. The transportation performance evaluation shall form the basis for specific conditions of approval for the subdivision.	Applicant (Traffic Engineer)	Receipt and Review of Transportation Performance Evaluation	1. LACDPW 2. LACDPW 3. Prior to Approval of Subdivision Maps
SP 4.8-3.	The applicants for future subdivisions shall provide the traffic signals at the 15 locations labeled B through P in Figure 4.8-17, as well as any additional signals warranted by future subdivision design. Signal warrants shall be prepared as part of the transportation performance evaluations noted in Mitigation Measure 4.8-2.	Applicant (Traffic Engineer)	Installation of Traffic Signals or funding of or bonding of project's share	1. LACDPW 2. LACDPW 3. Prior to Issuance of Occupancy Permits
SP 4.8-4.	All development within the Specific Plan shall conform to the requirements of the Los Angeles County Transportation Demand Management (TDM) Ordinance.	Applicant (Traffic Engineer)	Subdivision Review	1. LACDPW 2. LACDPW 3. Prior to Final Map Approval and/or approval of improvement plans

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.7 TRAFFIC/ACCESS (cont.)			
SP 4.8-5. The applicants for all future subdivision maps which permit construction shall consult with the local transit provider regarding the need for, and locations of, bus pull-ins on highways within the Specific Plan area. All bus pull-in locations shall be approved by the Department of Public Works, and approved bus pull-ins shall be constructed by the applicant.	Applicant (Traffic Engineer)	Verification of Consultation with Transit Providers Review of bus pull-in locations	1. LACDPW 2. LACDPW 3. Prior to Final Map Approval and/or approval of improvement plans
SP 4.8-6. Prior to the recordation of the first subdivision map which permits construction, the applicant for that map shall prepare a transportation performance evaluation which shall determine the specific improvements needed to each off-site arterial and related costs in order to provide adequate roadway and intersection capacity for the expected Specific Plan and General Plan buildout traffic trips. The transportation performance evaluation shall be based on the Master Plan of Highways in effect at that time and shall be approved by the Los Angeles County Department of Public Works. The applicant shall be required to fund its fair share of improvements to these arterials, as stated on Table 4.8-18. The applicants total funding obligation shall be equitably distributed over the housing units and non-residential building square footage (i.e., Business Park, Visitor-Serving, Mixed-Use, and Commercial) in the Specific Plan, and shall be a fee to be paid to the County and/or the City at each building permit. For off-site areas within the County unincorporated area, the applicant may construct improvements for credit against or in lieu of paying the fee.	Applicant(s)	Payment of Fee Determination of fair share funding obligation and fee structure for off-site improvements	1. LACDPW 2. LACDPW 3. Prior to Recordation of the First Subdivision Map

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.7 TRAFFIC/ACCESS (cont.)			
SP 4.8-7. Each future performance evaluation which shows that a future subdivision map will create significant impacts on SR-126 shall analyze the need for additional travel lanes on SR-126. If adequate lane capacity is not available at the time of subdivision, the applicant of the subdivision shall fund or construct the improvements necessary to serve the proposed increment of development. Construction or funding of any required facilities shall not preclude the applicant's ability to seek state, federal, or local funding for these facilities.	Applicant(s)	Receipt and Review of Transportation Performance Evaluation Applicant Funding of or bonding of Fair Share of Improvements	1. LACDPW 2. LACDPW 3. Prior to Recordation of Final Tract Map
SP 4.8-8. Project-specific environmental analysis for future subdivision maps which allow construction shall comply with the requirements of the Congestion Management Program in effect at the time that subdivision map is filed.	Applicant	Review of future environmental analysis	1. LACDPW 2. LACDPW 3. Prior to certification of future environmental documents

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.7 TRAFFIC/ACCESS (cont.)			
SP 4.8-9. Prior to the recordation of the first subdivision map which permits construction, the applicant for that map shall prepare a transportation evaluation including all of the Specific Plan land uses which shall determine the specific improvements needed to the following intersections with SR-126 in the City of Fillmore and community of Piru in Ventura County: A, B, C, D, and E Streets, Old Telegraph, Olive, Central, Santa Clara, Mountain View, El Dorado Road, and Pole Creek (Fillmore), and Main/Torrey and Center (Piru). The related costs of those intersection improvements and the project's fair share shall be estimated based upon the expected Specific Plan traffic volumes. The transportation performance evaluation shall be based on the Los Angeles County Master Plan of Highways in effect at that time and shall be approved by the Los Angeles County Department of Public Works. The applicant's total funding obligation shall be equitably distributed over the housing units and non-residential building square footage (i.e., Business Park, Visitor Center, Mixed Use, and Commercial) in the Specific Plan, and shall be a fee to be paid to the City of Fillmore and the County of Ventura at each building permit.	Applicant (Traffic Engineer)	Receipt and Review of Transportation Performance Evaluation Payment of Fee to City of Fillmore or County of Ventura	1. LACDPW 2. LACDPW 3. Prior to Recordation of the First Subdivision Map; Payment of Fee Prior to Issuance of Building Permits
SP 4.8-10. The Specific Plan is responsible to construct or fund its fair-share of the intersections and interchange improvements indicated on Table 4.8-18. Each future transportation performance evaluation required by Mitigation Measure 4.8-2 which identifies a significant impact at these locations due to subdivision map-generated traffic shall address the need for additional capacity at each of these locations. If adequate capacity is not available at the time of subdivision map recordation, the performance evaluation shall determine the improvements necessary to carry Specific Plan generated traffic, as well as the fair share cost to construct such improvements. If the future subdivision is conditioned to construct a phase of improvements which results in an overpayment of the fair-share cost of the improvement, then an appropriate adjustment (offset) to the fees paid to Los Angeles County and/or City of Santa Clarita pursuant to Mitigation Measure 4.8-6 above shall be made.	Applicant	Field Verification of Construction or Receipt of Fair Share Funding or Bonding	1. LACDPW 2. LACDPW 3. Prior to Issuance of Occupancy Permits

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.7 TRAFFIC/ACCESS (cont.)			
SP 4.8-11. The applicant of the Newhall Ranch Specific Plan shall participate in an I-5 developer fee program, if adopted by the Board of Supervisors for the Santa Clarita Valley.	Applicant	Field Verification of Construction or Receipt of Fair Share Funding or Bonding	1. LACDPW 2. LACDPW 3. Prior to Issuance of Occupancy Permits
SP 4.8-12. The applicant of the Newhall Ranch Specific Plan shall participate in a transit fee program, if adopted for the entire Santa Clarita Valley by Los Angeles County and City of Santa Clarita.	Applicant	Field Verification of Construction or Receipt of Fair Share Funding or Bonding	1. LACDPW 2. LACDPW 3. Prior to Issuance of Occupancy Permits
SP 4.8-13. Prior to the approval of each subdivision map which permits construction, the applicant for that map shall prepare a traffic analysis approved by the Los Angeles County Department of Public Works. The analysis will assess project and cumulative development (including an existing plus cumulative development scenario under the County's Traffic Impact Analysis Report Guidelines (TIA) and its Development Monitoring System (DMS)). In response to the traffic analysis, the applicant may construct off-site traffic improvements for credit against, or in lieu of paying, the mitigation fees described in Mitigation Measure 4.8-6, above. If future subdivision maps are developed in phases, a traffic study for each phase of the subdivision map may be submitted to determine the improvements needed to be constructed with that phase of development.	Applicant(s) (Project Traffic Engineer)	Receipt and Review of TIA and DMS Traffic Analysis Applicant Funding of or bonding of Fair Share of Improvements	1. LACDPW 2. LACDPW 3. Prior to Recordation of the Final Tract Map
LV-4.7-1. The project applicant shall construct all on-site local roadways and intersections to County of Los Angeles codes and regulations.	Applicant (Traffic Engineer)	Field Verification of Construction	1. LACDPW 2. LACDPW 3. Prior to Recordation of the Final Tract Map

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.7 TRAFFIC/ACCESS (cont.)			
LV 4.7-2. The main access for River [Landmark] Village will be provided from SR-126 via the existing intersections of Wolcott Way and Chiquito Canyon Road. Future phases of the NRSP will provide access to and from south via Long Canyon Road. Unless an updated long range study is prepared which demonstrates that the intersections will adequately handle the area buildout traffic as at grade intersections, adequate road right of way shall be reserved for future grade separated interchanges at these two locations, as approved in the NRSP.	Applicant (Traffic Engineer)	Field Verification of Construction	1. LACDPW 2. LACDPW 3. Concurrent with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed
LV 4.7-3. 80. Wolcott/SR-126 –The project applicant shall add a northbound left turn lane and a northbound right turn lane (resulting in 1 northbound left turn lane, 1 northbound through lane and 1 northbound right turn lane) and convert a shared southbound left turn lane/southbound through lane to a dedicated southbound through lane (for 1 southbound left turn lane, 1 southbound through lane, and 1 southbound right turn lane) and shall be completed at their ultimate design locations and operational to the satisfaction of Public Works concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed.	Applicant (Traffic Engineer)	Field Verification of Construction	1. LACDPW 2. LACDPW 3. Concurrent with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed
LV 4.7-4. 110. Chiquito Canyon-Long Canyon/SR-126 –The project applicant shall add a northbound left turn lane and a northbound right turn lane (for 1 northbound left turn lane, 1 northbound through lane, and 1 northbound right turn lane), add a southbound left turn lane (for 1 southbound left turn lane and 1 shared southbound through lane/southbound right turn lane), and add a westbound left turn lane (for 1 westbound left turn lane, 2 westbound through lanes, and 1 westbound right turn lane) and shall be completed at their ultimate design locations and operational to the satisfaction of Public Works concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed.	Applicant (Traffic Engineer)	Field Verification of Construction	1. LACDPW 2. LACDPW 3. Concurrent with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.7 TRAFFIC/ACCESS (cont.)			
LV 4.7-5. The study is based on the Santa Clarita Valley Consolidated Traffic Model and assumes the following roadway improvements will be in place with Phase I of the project. In accordance with our Traffic Impact Analysis Report Guidelines (TIARG), these improvements shall be made a condition of approval for the project to be completed at their ultimate design locations and operational to the satisfaction of Public Works concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed: - Reconstruct the Golden State (I-5) Freeway/SR-126 Freeway interchange by adding access to eastbound SR-126 from southbound I-5, access to southbound I-5 from westbound SR-126, direct access to northbound I-5 from westbound SR-126, and widening bridge to 8 lanes. - Construct Newhall Ranch Road segment between Vanderbilt Way and Copper Hill Drive/Rye Canyon Road.	Applicant (Traffic Engineer)	Field Verification of Construction	1. LACDPW 2. LACDPW 3. Concurrent with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed
LV 4.7-6. Although the traffic study prepared for the project determined that a traffic signal is not warranted at the school, the project applicant shall be required to monitor for the possible installation of a traffic signal once the school is fully occupied.	Applicant (Traffic Engineer)	Field Verification of Construction	1. LACDPW 2. LACDPW 3. Upon school being fully occupied
LV 4.7-7. 80. Wolcott/SR-126 –The project applicant shall add a northbound left turn lane and 2 northbound right turn lanes (resulting in 1 northbound left turn lane, 1 northbound through lane, and 2 northbound right turn lanes), add a eastbound right turn lane (for 1 eastbound left turn lane, 2 eastbound through lanes, and 1 eastbound right turn lane), and add a second westbound left turn lane (for 2 westbound left turn lanes, 2 westbound through lanes, and 1 westbound right turn lane) and shall be completed at their ultimate design locations and operational to the satisfaction of Public Works concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed. Signals shall be modified to the satisfaction of Public Works.	Applicant (Traffic Engineer)	Field Verification of Construction	1. LACDPW 2. LACDPW 3. Concurrent with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.7 TRAFFIC/ACCESS (cont.)			
LV-4.7-8. 7. I-5 SB Ramps/SR-126 – The project shall finance its fair share to add a third westbound through lane (for 3 westbound through lanes and a free flow westbound right turn lane) and shall be completed at their ultimate design locations and operational to the satisfaction of Public Works concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed. [This measure has been completed.]	Applicant	Receipt of Fair Share Funding or Bonding	1. LACDPW 2. LACDPW 3. Concurrent with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed
LV 4.7-9. 80. Wolcott/SR-126 – The project applicant shall add a third east bound through lane (for one east bound left turn lane, three east bound through lanes, and one east bound right turn lane) and shall be completed at their ultimate design locations and operational to the satisfaction of Public Works concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed.	Applicant (Traffic Engineer)	Field Verification of Construction	1. LACDPW 2. LACDPW 3. Concurrent with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.7 TRAFFIC/ACCESS (cont.)			
LV 4.7-10. 110. Chiquito Canyon/Long Canyon/SR-126 –The project applicant shall add a second northbound through lane and a second northbound right turn lane (for one northbound left turn lane, two northbound through lanes, and two northbound right turn lanes). Also add a southbound right turn lane (for one southbound left turn lane, one southbound through lane, and one southbound right turn lane) one eastbound right turn lane (for one eastbound left turn lane, two eastbound through lanes, and one eastbound right turn lane), and a second westbound left turn lane (for two westbound left turn lanes, two westbound through lanes, and one westbound right turn lane) and shall be completed at their ultimate design locations and operational to the satisfaction of Public Works concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed. Signals shall be modified to the satisfaction of Public Works.	Applicant (Traffic Engineer)	Field Verification of Construction	1. LACDPW 2. LACDPW 3. Concurrent with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed
LV 4.7-11. 7. I-5 SB Ramps/SR-126 –The applicant shall fund a fair share of the cost to add a third southbound lane (for two southbound lanes, one shared southbound left turn lane/one southbound right turn lane, and one dedicated southbound right turn lane), a third and fourth eastbound through lane (for four eastbound through lanes and one free flow eastbound right turn lane), and a fourth westbound through lane (for four westbound through lanes and one free flow westbound right turn lane). (Project share = 38.3 percent). The project may elect to pay by phase as each phase gets recorded: Phase I= 8.3 percent, Phase II= 8.1 percent and Phase III= 21.9 percent)[1] Said improvements shall be completed at their ultimate design locations and operational to the satisfaction of Public Works concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed. [This measure has been completed.]	Applicant	Receipt of Fair Share Funding or Bonding	1. LACDPW 2. LACDPW 3. Concurrent with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed

[1] Percentage pro-rata calculation figures were determined by the County of Los Angeles, Department of Public Works, written communication of December 9, 2004.

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.7 TRAFFIC/ACCESS (cont.)			
LV 4.7-12. 8. I-5 NB Ramps/SR-126 –The project applicant shall fund a fair share of the cost to add a third northbound left turn lane (for three northbound left turn lanes and one northbound right turn lane), a third and fourth eastbound through lane (for four eastbound through lanes and one free flow eastbound right turn lane), and a third westbound through lane (for three westbound through lanes and one free flow westbound right turn lane). (Project Share = 20.8 percent). The project may elect to pay by phase as each phase gets recorded: Phase I= 4.7 percent, Phase II= 4.0 percent and Phase III= 12.1 percent)[2] Said improvements shall be completed at their ultimate design locations and operational to the satisfaction of Public Works concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed. [This measure has been completed.]	Applicant	Receipt of Fair Share Funding or Bonding	1. LACDPW 2. LACDPW 3. Concurrent with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed
LV 4.7-13. 80. Wolcott/SR-126 –The project applicant shall fund a fair share of the cost to add a second southbound left turn lane (for two southbound left turns, one southbound through lane, and one southbound right turn lane), add a second eastbound left turn lane (for two eastbound left turn lanes, three eastbound through lanes, and one eastbound right turn lane), and a third westbound through lane (for two westbound left turn lanes, three westbound through lanes, and one westbound right turn lane). (Project Share = 62.1 percent). The project may elect to pay by phase as each phase gets recorded: Phase I= 12.2 percent, Phase II= 19.3 percent and Phase III= 30.6 percent)[3] Said improvements shall be completed at their ultimate design locations and operational to the satisfaction of Public Works concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed.	Applicant	Receipt of Fair Share Funding or Bonding	1. LACDPW 2. LACDPW 3. Concurrent with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed

[2] Ibid.
[3] Ibid.

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.7 TRAFFIC/ACCESS (cont.)			
LV 4.7-14. 81,82,83 and 94. Commerce Center/SR-126 – The project applicant shall finance its fair share to construct a Grade Separated Interchange (Project Share = 33.8 percent). The project may elect to pay by phase as each phase gets recorded: Phase I= 6.6 percent, Phase II= 9.1 percent and Phase III= 18.1 percent) Said improvements shall be completed at their ultimate design locations and operational to the satisfaction of Public Works concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed.	Applicant	Receipt of Fair Share Funding or Bonding	1. LACDPW 2. LACDPW 3. Concurrent with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed
LV 4.7-15. 110. Chiquito Canyon/Long Canyon Road/SR-126 – The project applicant shall fund its fair share to add a second northbound left turn lane (for two northbound left-turn lanes, two northbound through lanes and two northbound right turn lanes), add a second southbound left turn lane, and second & third southbound through lanes (for two southbound left turn lanes, three southbound through lanes and one southbound right turn lane), add a second eastbound left turn lane and third eastbound through lane (for two eastbound left turn lanes, three eastbound through lanes, and one eastbound right turn lane), and add a third westbound through lane (for two westbound left turn lanes, three westbound through lanes, and one westbound right turn lane). (Project Share = 62 percent) or construct a grade separated crossing to the satisfaction of the County of Los Angeles Department of Public Works. Said improvements shall be completed at their ultimate design locations and operational to the satisfaction of Public Works concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed.	Applicant	Receipt of Fair Share Funding or Bonding	1. LACDPW 2. LACDPW 3. Concurrent with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.7 TRAFFIC/ACCESS (cont.)			
LV 4.7-16. Prior to issuance of occupancy permits for the elementary school, a painted school pedestrian crossing with associated signing shall be installed across A Street and across U Street at the elementary school access from A Street. Driver behavior shall be monitored as the community develops and, if necessary, additional treatments shall be installed to further enhance the pedestrian crossing. These may include crossing guards at an intersection, such as the A Street/U Street intersection, and pedestrian activated in-pavement warning lights or overhead flashing lights to identify the pedestrian crossing. These warnings can be configured with automated detection units that would activate the lights automatically given the presence of a pedestrian rather than relying on the children to manually engage the system.	Applicant	Field Verification of Installation	1. LACDPW 2. LACDPW 3. Prior to Issuance of Occupancy Permit for the elementary school
LV 4.7-17. Applicable transit mitigation fees shall be paid at the time of final map recordation, unless modified by an approved development agreement.	Applicant	Receipt of Fair Share Funding or Bonding	1. LACDPW 2. LACDPW 3. Prior to Recordation of the Final Tract Map
LV 4.7-18. Prior to the commencement of project construction activities, the applicant shall institute construction traffic management controls in accordance with the California Department of Transportation (Caltrans) traffic manual. These traffic management controls shall include measures determined on the basis of site-specific conditions including, as appropriate, the use of construction signs (e.g., "Construction Ahead") and delineators, and private driveway and cross-street closures.	Applicant	Field Verification of Installation	1. LACDPW 2. LACDPW 3. Concurrent with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.7 TRAFFIC/ACCESS (cont.)			
LV 4.7-19. The traffic signals shall be installed at the following intersections. The design and the construction of the traffic signals shall be the sole responsibility of the project. The signals shall be completed at their ultimate design locations and operational to the satisfaction of Public Works concurrently with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed. Phase I: Wolcott Way at Henry Mayo Drive (SR-126) Phase II: Chiquito Canyon Road and Long Canyon Road (Future) at Henry Mayo Drive (SR-126) Phase III: Long Canyon Road at "Y" Street and "A" Street (TT 53108)	Applicant	Field Verification of Installation	1. LACDPW 2. LACDPW 3. Concurrent with the installation of the curb, gutter, the first lift of asphalt pavement, and the temporary traffic detection loops, if needed
LV 4.7-20. The developer shall coordinate with and notify the Castaic Union School District (CUSD) that traffic circulation plan and the drop-off/pick-up procedures shall be prepared and submitted to Traffic and Lighting Division for review and approval. We recommend a mechanism for enforcement and levying of noncompliance penalties be included in the plan. The CUSD shall prepare informational packets containing the approved drop-off/pick-up procedures and provide to the parents/guardians of students of the school. The recordation of the phase containing Lot 345 where the school is proposed shall be withheld until the student drop-off/pick-up procedures, the informational packets or brochures, and the revised school site plan have been received and approved by Public Works.	Applicant	Field Verification of Installation	1. LACDPW 2. LACDPW 3. Prior to Recordation of Phase containing lot of elementary school
LV 4.7-21. The project applicant shall fund fair share capacity augmentation of the segment of Interstate 5 (I-5) through the Santa Clarita Valley following the examples shown on **Table 4.7-31**. All other development that would impact the affected freeway segments shall also pay a fair share of required funding.	Applicant	Receipt of Fair Share Funding or Bonding	1. Caltrans 2. Caltrans 3. Payment of fair share in accordance with Caltrans requirements

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.7 TRAFFIC/ACCESS (cont.)			
LV-4.7-22. Concurrent with issuance of the first building permit for Landmark Village, the project applicant shall submit a one-time payment of $300,000 to the City of Fillmore (City) in Ventura County to fund transportation-related improvements in the City consistent with the March 2000 agreement entered into between The Newhall Land and Farming Company and the City.	Applicant	Payment of Fees	1. LACDPW 2. LACDPW 3. Concurrent with first building permit
LV 4.7-23. Concurrent with the issuance of each Newhall Ranch Specific Plan building permit, the project applicant shall pay to the County of Ventura that development's pro-rata share of the entire Newhall Ranch Specific Plan's fair-share (nine percent) of the costs to implement the following roadway improvements at the intersection of Center Street and Telegraph Road (SR-126) in the Ventura County community of Piru: (1) Re-stripe the Center Street southbound approach lane resulting in separate left and right turn lanes; (2) Add a westbound right turn deceleration lane to Telegraph Road; and (3) Install a traffic signal at the intersection when warranted.	Applicant	Payment of Fees	1. LACDPW 2. LACDPW 3. Concurrent with first building permit
4.8 NOISE			
SP 4.9-1. All construction activity occurring on the Newhall Ranch Specific Plan site shall adhere to the requirements of the *County of Los Angeles Construction Equipment Noise Standards*, County of Los Angeles Ordinance No. 11743, §12.08.440 as identified in Table 4.9-3.	Applicant (Construction Contractor)	Include Measure in Specifications Field Verification With Noise Monitor	1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. During Grading and Construction Activities
SP 4.9-2. Limit all construction activities near occupied residences to between the hours of 6:30 AM and 8:00 PM, and exclude all Sundays and legal holidays pursuant to County Department of Public Works, Construction Division standards.	Applicant (Construction Contractor)	Include Measure in Specifications Field Verification	1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. During Grading and Construction Activities

Mitigation Measures/Conditions of Approval		Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.8 NOISE (cont.)				
SP 4.9-3.	When construction operations occur adjacent to occupied residential areas, implement appropriate additional noise reduction measures that include changing the location of stationary construction equipment, shutting off idling equipment, notifying adjacent residences in advance of construction work, and installing temporary acoustic barriers around stationary construction noise sources.	Applicant (Construction Contractor)	Include Measure in Specifications Field Verification and Verification that Adjacent Residents Were Notified	1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. During Grading and Construction Activities
SP 4.9-4.	Locate construction staging areas on site to maximize the distance between staging areas and occupied residential areas.	Applicant (Construction Contractor)	Include Measure in Specifications Field Verification	1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. During Grading and Construction Activities
SP 4.9-5.	Where new single family residential buildings are to be constructed within an exterior noise contour of 60 dB(A) (decibels measured on an A-weighted scale) CNEL (Community Noise Equivalent Level) or greater, or where any multi-family buildings are to be constructed within an exterior noise contour of 65 dB(A) CNEL or greater, an acoustic analysis shall be completed prior to approval of building permits. The acoustical analysis shall show that the building is designed so that interior noise levels resulting from outside sources will be no greater than 45 dB(A) CNEL.	Applicant	Receipt and Review of Acoustical Analysis	1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. Prior to the Issuance of Building Permits

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.8 NOISE (cont.)			
SP 4.9-6. For single-family residential lots located within the 60 dB(A) CNEL or greater noise contour, an acoustic analysis shall be submitted prior to tentative approval of the subdivision. The acoustic analysis shall show that exterior noise in outdoor living areas (e.g., back yards, patios, etc.) will be reduced to 60 dB(A) CNEL or less.	Applicant	Receipt and Review of Acoustical Analysis	1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. Prior to Tentative Approval of Subdivision
SP 4.9-7. For multi-family residential lots located within the 65 dB(A) CNEL or greater noise contour, an acoustic analysis shall be submitted prior to tentative approval of the subdivision. The acoustic analysis shall show that exterior noise in outdoor living areas (e.g., back yards, patios, etc.) will be reduced to 65 dB(A) CNEL or less.	Applicant	Receipt and Review of Acoustical Analysis	1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. Prior to Tentative Approval of Subdivision
SP 4.9-8. For school sites located within the 70 dB(A) CNEL or greater noise contour, an acoustic analysis shall be submitted prior to tentative approval of the subdivision. The acoustic analysis shall show that noise at exterior play areas will be reduced to 70 dB(A) CNEL or less.	Applicant	Receipt and Review of Acoustical Analysis	1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. Prior to Tentative Approval of Subdivision
SP 4.9-9. All residential air conditioning equipment installed within the Newhall Ranch Specific Plan site shall adhere to the requirements of the *County of Los Angeles Residential Air Conditioning and Refrigeration Noise Standards*, County of Los Angeles Ordinance No. 11743, §12.08.530.	Building Contractor	Field Verification	1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. Prior to the Issuance of Occupancy Permits
SP 4.9-10. All stationary and point sources of noise occurring on the Newhall Ranch Specific Plan site shall adhere to the requirements of the County of Los Angeles Ordinance No. 11743, §12.08.390 as identified in Table 4.9-2, County of Los Angeles Exterior Noise Standards for Stationary and Point Noise Sources.	Future Owners/ Operators within project	Field Verification	1. LA County Department of Health Services 2. LA County Department of Building and Safety 3. During Life of Project

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.8 NOISE (cont.)			
SP 4.9-11. Loading, unloading, opening, closing, or other handling of boxes, crates, containers, building materials, garbage cans or similar objects between the hours of 10:00 PM and 6:00 AM in such a manner as to cause a noise disturbance is prohibited in accordance with the County of Los Angeles Ordinance No. 11743, §12.08.460.	Future Owners/ Operators within project	Field Verification	1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. During Life of Project
SP 4.9-12. Loading zones and trash receptacles in commercial and Business Park areas shall be located away from adjacent residential areas, or provide attenuation so that noise levels at residential uses do not exceed the standards identified in §12.08.460 of the Ordinance No. 11743.	Applicant	Plan Check Field Verification	1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. Prior to Approval of Final Maps or improvement/building plans and Verify Prior to Issuance of Occupancy Permits
SP 4.9-14. After the time that occupancy of uses on the Newhall Ranch Specific Plan site occurs, AND when noise levels at the Travel Village RV Park reach 70 dB(A) CNEL at locations where recreational vehicles are inhabited, the applicant shall construct a noise abatement barrier to reduce noise levels at the RV Park to 70 dB(A) CNEL or less.	Applicant	Receipt and Review of Acoustical Analysis Field Verification	1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. Upon Occupancy of Uses on Newhall Ranch and if/when noise levels in Travel Village reach 70 dB(A) CNEL

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.8 NOISE (cont.)			
SP 4.9-15. Despite the absence of a significant impact, applicants for all building permits of Residential, Mixed-Use, Commercial, and Business Park land uses (Project) shall pay to the Santa Clara Elementary School District, prior to issuance of building permits, the project's pro rata share of the cost of a sound wall to be located between SR-126 and the Little Red School House. The project's pro rata share shall be determined by multiplying the estimated cost of the sound wall by the ratio of the project's estimated contribution of average daily trips on SR-126 (ADT) at the Little Red School House (numerator) to the total projected cumulative ADT increase at that location (denominator). The total projected cumulative ADT increase shall be determined by subtracting the existing trips on SR-126 from the projected cumulative trips as shown in Table 1 of Topical Response 5 – Traffic Impacts to State and Local Roads in Ventura County after adding the total Newhall Ranch ADT traveling west of the City of Fillmore.	Applicants for all Building Permits	Payment to Santa Clara Elementary School District	1. LACDRP 2. LACDPW, Building and Safety 3. Upon Issuance of Building Permits
SP 4.9-16. Despite the absence of a significant impact, the applicant for all building permits of Residential, Mixed-Use, Commercial and Business Park land uses (Project) shall participate on a fair-share basis in noise attenuation programs developed and implemented by the City of Moorpark to attenuate vehicular noise on SR-23 just north of Casey Road for the existing single-family homes which front SR-23. The mitigation criteria shall be to reduce noise levels to satisfy state noise compatibility standards. The project's pro rata share shall be determined by multiplying the estimated cost of attenuation by the ratio of the project's estimated contribution of average daily trips on SR-23 (ADT) north of the intersection of SR-23 and Casey Road (numerator) to the total projected cumulative ADT increase at that location (denominator). The total projected cumulative ADT increase shall be determined by subtracting the existing trips on SR-23 north of Casey Road from the projected cumulative trips as shown in Topical Response 5 – Traffic Impacts to State and Local Roads in Ventura County after adding the total Newhall Ranch ADT traveling south of the City of Fillmore.	Applicants for all Building Permits	Payment to City of Moorpark	1. LACDRP 2. LACDPW, Building and Safety 3. Upon Issuance of Building Permits

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.8 NOISE (cont.)			
SP 4.9-17. Prior to the approval of any subdivision map which permits construction within the Specific Plan area, the applicant for that map shall prepare an acoustical analysis assessing project and cumulative development (including an existing plus project analysis, and an existing plus cumulative development analysis including the project). The acoustical analysis shall be based upon State noise land use compatibility criteria and shall be approved by the Los Angeles County Department of Health Services. In order to mitigate any future impacts resulting from the project's contribution to significant cumulative noise impacts to development in existence as of the adoption of the Newhall Ranch Specific Plan and caused by vehicular traffic on off-site roadways, the applicant for building permits of Residential, Mixed-Use, Commercial, Visitor Serving and Business Park land uses shall, prior to issuance of building permits, pay a fee to Los Angeles County, Ventura County, the City of Fillmore or the City of Santa Clarita. The amount of the fee shall be the project's fair-share under any jurisdiction-wide or Santa Clarita Valley-wide noise programs adopted by any of the above jurisdictions.	Applicants for all Building Permits	Payment of Fee to Los Angeles County, Ventura County, City of Fillmore or the City of Santa Clarita	1. LACDRP 2. Los Angeles Co. Department of Health Services 3. Upon Issuance of Building Permits
LV 4.8-1. The project applicant, or its designee, shall not undertake construction activities that can generate noise levels in excess of the County's Noise Ordinance on Sundays.	Applicant (Construction Contractor)	Include Measure in Specifications Field Verification With Noise Monitor	1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. During Grading DuringConstruction Activities

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.8 NOISE (cont.)			
LV 4.8-2. When construction operations occur in close proximity to on- or off-site occupied residences, and if it is determined by County staff during routine construction site inspections that the construction equipment could generate a noise level at the residences that would be in excess of the Noise Ordinance, the project applicant or its designee shall implement appropriate additional noise reduction measures. These measures shall include, among other things, changing the location of stationary construction equipment, shutting off idling equipment, notifying residents in advance of construction work, and installing temporary acoustic barriers around stationary construction noise sources.	Applicant (Construction Contractor)	Field Verification With Noise Monitor	1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. During Grading During Construction Activities
LV 4.8-3. Prior to construction of the utility corridor north of the Travel Village RV Park, the project applicant or its designee shall erect solid construction and continuous temporary noise barriers south of the utility corridor north of the RV Park without blocking ingress/egress at the Park. Prior to issuance of the construction permit for the utility corridor, a qualified acoustic consultant shall be retained to specify the placement and height of the noise barriers in order to maximize their effectiveness in attenuating noise levels. Construction activities north of the RV Park shall comply with the Los Angeles County Noise Ordinance; stationary construction equipment shall be placed as far away from occupied spaces within the RV Park, and equipment shall not be permitted to idle. A qualified acoustic consultant shall be retained to monitor construction noise once a month at occupied RV spaces to ensure noise levels are in compliance with the County's Noise Ordinance for the duration of the construction.	Applicant (Construction Contractor and Project Acoustic Consultant)	Field Verification With Noise Monitor	1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. Prior to construction of the utility corridor north of the Travel Village RV Park
LV 4.8-4. To mitigate noise impacts on Lots 325, 326, and 350 (condominiums east of Wolcott Road) from SR-126, the project applicant or its designee shall, prior to occupancy, construct a 10-foot berm/solid wall at top of slope along northern and eastern edges of Lot 326, and along the northern edge of Lots 325 and 350. The berm/wall shall be continuous with no breaks or gaps.	Applicant (Construction Contractor)	Field Verification	1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. Prior to Issuance of Occupancy Permit

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.8 NOISE (cont.)			
LV 4.8-5. To mitigate noise impacts on Lots 343 and 377 (condominium) and on Lot 376 (apartment east of Long Canyon Road) from SR-126, the project applicant or its designee shall, prior to occupancy, construct a 9-foot berm/solid wall along the northern edge of Lots 360, 379, 380, and 381 (open space) directly north of Lots 343, 376, and 377. The berm/wall shall be continuous with no openings or gaps, and shall form a continuous union with the 4-foot berm/solid wall recommended for Lot 344 (park) to the east.	Applicant (Construction Contractor)	Field Verification	1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. Prior to Issuance of Occupancy Permit
LV 4.8-6. To mitigate noise impacts on Lots 344 and 345 (park and school) from SR-126, the project applicant or its designee shall, prior to occupancy construct a 4-foot berm/solid wall along the northern edge of Lots 381 and 382 directly north of Lots 344 and 345. To preserve views, 5/8-inch Plexiglas or transparent material with equivalent or better acoustic value may be incorporated into the wall design. The wall shall be continuous with no openings or gaps, and shall form a continuous union with the 9-foot berm/solid wall recommended for Lot 343 (condominium) to the west and the 10-foot berm/solid wall recommended for Lot 346 (condominium) to the east.	Applicant (Construction Contractor)	Field Verification	1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. Prior to Issuance of Occupancy Permit
LV 4.8-7. Prior to occupancy of Lot 346 (condominiums), the project applicant or its designee shall construct an 8-foot berm/solid wall along the eastern boundary of Lot 345 (school) to mitigate any delivery truck/garbage truck/school bus noise impacts on Lot 346 to the east.	Applicant (Construction Contractor)	Field Verification	1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. Prior to Issuance of Occupancy Permit

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.8 NOISE (cont.)			
LV 4.8-8. To mitigate noise impacts on Lot 346 (condominium west of Wolcott Road) from SR-126 the project applicant or its designee shall, prior to occupancy, construct a 10-foot berm/solid wall along the northern edge of Lot 346 from its northeastern corner to a point approximately 325 feet to the west along the lot line. From this point, a 10-foot berm/solid wall shall be constructed through Lot 383 (open space) to the edge of the Caltrans right-of-way where the wall shall continue westerly to where it would connect with the 4-foot berm/solid wall recommended for Lot 345 (school) to the west. The wall shall be continuous with no openings or gaps, and shall form a continuous union with the 4-foot berm/solid wall recommended for Lot 345.	Applicant (Construction Contractor)	Field Verification	1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. Prior to Issuance of Occupancy Permit
LV 4.8-9. Prior to occupancy of Lot 346 (condominium west of Wolcott Road), the project applicant or its designee, shall construct an 8-foot berm/solid wall along the eastern boundary of Lot 346 to mitigate delivery truck traffic noise from Lot 347 (mixed use commercial).	Applicant (Construction Contractor)	Field Verification	1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. Prior to Issuance of Occupancy Permit
LV-4.8-10. To mitigate noise impacts on Lot 349 (apartment) from SR-126, the project applicant or its designee shall, prior to occupancy, construct a 10-foot berm/solid wall along the northern, western, and southern edges of Lot 349, with the wall terminating just west of the lot entrance off "A" Street.	Applicant (Construction Contractor)	Field Verification	1. LA County Department of Health Services, Caltrans 2. LACDPW, Building and Safety 3. Prior to Issuance of Occupancy Permit
LV-4.8-11. To mitigate delivery truck and other noises from the commercial center west of Long Canyon Road on Lot 354 (apartments west of Long Canyon Road), the project applicant or its designee shall, prior to occupancy, construct an 8-foot berm/solid wall along the eastern perimeter of Lot 354.	Applicant (Construction Contractor)	Field Verification	1. LA County Department of Health Services, Caltrans 2. LACDPW, Building and Safety 3. Prior to Issuance of Occupancy Permit

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.8 NOISE (cont.)			
LV-4.8-12. To mitigate noise impacts on Lot 354 (apartments west of Long Canyon Road) from SR-126, the project applicant or its designee shall, prior to occupancy, construct a 16-foot berm/solid wall along the northern boundary of Lot 354. A 12-foot berm/solid wall shall be constructed along the northern 200 feet of the western lot line. From this point, a 10-foot berm/solid wall shall be constructed along the western lot line for 250 feet, at which point an 8-foot berm/solid wall shall be constructed for an additional 100 feet. A 6-foot berm/solid wall shall be constructed along the remaining western lot line to Lot 403 (recreation). To preserve views of the Santa Clara River, 5/8-inch Plexiglas or transparent material with equivalent or better acoustic value may be incorporated into the wall design.	Applicant (Construction Contractor)	Field Verification	1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. Prior to Issuance of Occupancy Permit
LV-4.8-13. To mitigate noise impacts on Lot 376 (apartments east of Long Canyon Road) from delivery truck and other noise from the commercial center proposed east of Long Canyon Road, the project applicant or its designee shall, prior to occupancy, construct an 8-foot berm/solid wall along the western boundary of Lot 376.	Applicant (Construction Contractor)	Field Verification	1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. Prior to Issuance of Occupancy Permit
LV-4.8-14. Frequent use areas, as defined in this EIR, on Lots 325, 326, 329, 331, 338, 339, 341, 342, 343, 346, 349, 350, 377, and 416 (condominium), if any, shall be positioned in such a way so that they are separated from adjacent roadways by condominiums. Upon completion of plot plans for Lots 325, 326, 329, 331, 338, 339, 341, 342, 343, 346, 349, 350, 377, and 416, acoustic analyses shall be conducted by a qualified acoustic consultant to ensure that the noise levels of frequent use areas on these lots would not exceed 65 dB(A) CNEL.	Applicant (Project Acoustic Consultant)	Receipt and Review of Noise Impact Analysis	1. LA County Department of Health Services, Caltrans 2. LACDPW, Building and Safety 3. Prior to Issuance of Building Permit

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.8 NOISE (cont.)			
LV-4.8-15. To further reduce noise impacts on Lot 349 (apartments east of Wolcott Road), frequent use area(s) shall be positioned in the interiors of the lot so that they are separated from adjacent roadways by apartment buildings. Upon completion of the plot plans for Lot 349, and for Lots 388 and 389 (mixed use commercial) that separate Lot 349 from SR-126, acoustic analyses shall be conducted for Lot 349 by a qualified acoustic consultant to ensure that the noise levels of the frequent use area(s) would not exceed 65 dB(A) CNEL.	Applicant (Project Acoustic Consultant)	Receipt and Review of Noise Impact Analysis	1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. Prior to Issuance of Building Permit
LV-4.8-16. Frequent use areas on Lot 354 (apartment west of Long Canyon Road) shall be positioned on the interior of the lot so that they are separated from surrounding uses by apartment buildings. Upon completion of plot plans for Lot 354 and the commercial center proposed west of Long Canyon Road, acoustic analyses shall be conducted by a qualified acoustic consultant to ensure that the noise levels of frequent use area(s) on Lot 354 do not exceed 65 dB(A) CNEL.	Applicant (Project Acoustic Consultant)	Receipt and Review of Noise Impact Analysis	1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. Prior to Issuance of Building Permit
LV-4.8-17. To further reduce noise impacts on Lot 376 (apartments east of Long Canyon Road), frequent use area(s) shall be positioned in the interiors of the lot so that they are separated from adjacent roadways by apartment buildings. Upon completion of plot plans for Lot 376, and for Lot 360 which separates Lot 376 from SR-126, acoustic analyses shall be conducted for Lot 376 by a qualified acoustic consultant to ensure that the noise levels of the frequent use area(s) would not exceed 65 dB(A) CNEL.	Applicant (Project Acoustic Consultant)	Review of Noise Impact Analysis	1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. Prior to Issuance of Building Permit
LV-4.8-18. To further reduce noise impacts on Lot 377 (condominiums east of Long Canyon Road), frequent use areas of Lot 377, if any, shall be separated from "A" Street and SR-126 by the condominium units. Upon completion of a plot plan for Lot 377, acoustic analyses shall be conducted by a qualified acoustic consultant to ensure that the noise levels of any frequent use areas on this lot would not exceed 65 dB(A) CNEL.	Applicant (Project Acoustic Consultant)	Review of Noise Impact Analysis	1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. Prior to Issuance of Building Permit

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.8 NOISE (cont.)			
LV-4.8-19. Residences within mixed-use commercial areas shall be discouraged within 500 feet of the centerline of SR-126. Residences that do occur within mixed use commercial lots shall be set back as far as possible from SR-126, Wolcott Road, Long Canyon Road, and "A" Street in order to minimize the need for acoustic insulation of the units. When the plot plan for the commercial center is complete, acoustic analyses shall be conducted by a qualified acoustic consultant to ensure that interior noise levels of any residences within the commercial center can be feasibly reduced to 45 dB(A).	Applicant (Project Acoustic Consultant)	Review of Noise Impact Analysis	1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. Prior to Issuance of Commercial Center Building Permit
LV-4.8.20. Balconies with direct lines of sight to SR-126, Wolcott Road, Long Canyon Road, and/or "A" Street shall be discouraged from exposure to exterior noise levels greater than the 60 dB(A) CNEL standard for single family residences or the 65 dB(A) CNEL standard for multi-family residences through architectural or site design. Alternatively, balconies shall be enclosed by solid noise barriers, such as 3/8-inch glass or 5/8-inch Plexiglas to a height specified by a qualified noise consultant.	Applicant (Construction Contractor and Project Acoustic Consultant)	Building Plan Check	1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. Prior to Issuance of Building Permit
LV-4.8-21. All single family and multi-family structures, including multi-family units incorporated into commercial centers, within 500 feet of SR-126 and all residential units with direct lines of sight to SR-126, Wolcott Road, Long Canyon Road, and/or "A" Street shall incorporate the following into the exterior wall that faces onto those roadways: (a) All windows, both fixed and operable, shall consist of either double-strength glass or double-paned glass. All windows facing sound waves generated from the mobile source noise shall be manufactured and installed to specifications that prevent any sound from window vibration caused by the noise source. (b) Doors shall be solid core and shall be acoustically designed with gasketed stops and integral drop seals. (c) If necessitated by the architectural design of a structure, special insulation or design features shall be installed to meet the required interior ambient noise level.	Applicant	Building Plan Check	1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. Prior to Issuance of Building Permit

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.8 NOISE (cont.)			
LV-4.8-22. Air conditioning units shall be installed to serve all living areas of all residences with direct lines of sight to SR-126, Wolcott Road, Long Canyon Road, and/or "A" Street so that windows may remain closed without compromising the comfort of the occupants.	Applicant (Construction Contractor)	Field Verification	1. LA County Department of Health Services 2. LACDPW, Building and Safety 3. Prior to Issuance of Occupancy Permit
4.9 AIR QUALITY			
SP 4.10-1. The Specific Plan will provide Commercial and Service uses in close proximity to residential subdivisions.	Applicant	Approval of Tentative Maps	1. LACDRP 2. LACDRP 3. Prior to Tentative Subdivision Map Approvals
SP 4.10-2. The Specific Plan will locate residential uses in close proximity to Commercial uses, Mixed-Uses, and Business Parks.	Applicant	Approval of Tentative Maps	1. LACDRP 2. LACDRP 3. Prior to Tentative Subdivision Map Approvals
SP 4.10-3. Bus pull-ins will be constructed throughout the Specific Plan site.	Applicant	Final Highway Plan Check	1. LACDPW 2. LACDPW 3. Prior to Tentative Subdivision Map Approvals
SP 4.10-4. Pedestrian facilities, such as sidewalks, and community regional, and local trails, will be provided throughout the Specific Plan site.	Applicant	Submittal of Tentative Maps	1. LACDRP 2. LACDRP 3. Prior to Tentative Subdivision Map Approvals
SP 4.10-5. Roads with adjacent trails for pedestrian and bicycle use will be provided throughout the Specific Plan site connecting the individual Villages and community.	Applicant	Submittal of Tentative Maps	1. LACDRP 2. LACDRP 3. Prior to Tentative Subdivision Map Approvals

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.9 AIR QUALITY (cont.)			
SP 4.10-6. The applicant of future subdivisions shall implement all rules and regulations adopted by the Governing Board of the Southern California Air Quality Management District (SCAQMD) which are applicable to the development of the subdivision (such as Rule 402 - Nuisance, Rule 403 - Fugitive Dust, Rule 1113 - Architectural Coatings) and which are in effect at the time of development. The purpose of Rule 403 is to reduce the amount of particulate matter entrained in the ambient air as a result of man-made fugitive dust sources by requiring actions to prevent, reduce, or mitigate fugitive dust emissions. Rule 403 applies to any activity or man-made condition capable of generating fugitive dust such as the mass and remedial grading associated with the project as well as weed abatement and stockpiling of construction materials (i.e., rock, earth, gravel). Rule 403 requires that grading operations either (1) take actions specified in Tables 1 and 2 of the Rule for each applicable source of fugitive dust and take certain notification and record keeping actions; or (2) obtain an approved Fugitive Dust Control Plan. A complete copy of the SCAQMD's Rule 403 Implementation Handbook, which has been included in **Appendix 4.10**, provides guideline tables to demonstrate the typical mitigation program and record keeping required for grading operations (Tables 1 and 2 and sample record keeping chart). The record keeping is accomplished by on-site construction personnel, typically the construction superintendent. Each future subdivision proposed in association with the Newhall Ranch Specific Plan shall implement the following if found applicable and feasible for that subdivision. **GRADING** a. Apply non-toxic soil stabilizers according to manufacturers' specification to all inactive construction areas (previously graded areas inactive for ten days or more). b. Replace groundcover in disturbed areas as quickly as possible.	Applicant	Plan Check Review and apply applicable rules as part of environmental document	1. LACDRP 2. LACDRP 3. Prior to Tentative Subdivision Map Approvals

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.9 AIR QUALITY (cont.)			
4.10-6. (cont.) c. Enclose, cover, water twice daily, or apply non-toxic soil binders according to manufacturers' specifications, to exposed piles (i.e., gravel, sand, dirt) with 5 percent or greater silt content. d. Water active sites at least twice daily. e. Suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 mph. f. Monitor for particulate emissions according to District-specified procedures. g. All trucks hauling dirt, sand, soil, or other loose materials are to be covered or should maintain at least two feet of freeboard (i.e., minimum vertical distance between top of the load and the top of the trailer) in accordance with the requirements of California Vehicle Code (CVC) Section 23114. **PAVED ROADS** h. Sweep streets at the end of the day if visible soil material is carried onto adjacent public paved roads (recommend water sweepers with reclaimed water). i. Install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash off trucks and any equipment leaving the site each trip.			

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.9 AIR QUALITY (cont.)			
4.10-6 (cont.) **UNPAVED ROADS** j. Apply water three times daily, or non-toxic soil stabilizers according to manufacturers' specifications, to all unpaved parking or staging areas or unpaved road surfaces. k. Reduce traffic speeds on all unpaved roads to 15 mph or less. l. Pave construction roads that have a traffic volume of more than 50 daily trips by construction equipment, 150 total daily trips for all vehicles. m. Pave all construction access roads at least 100 feet on to the site from the main road. n. Pave construction roads that have a daily traffic volume of less than 50 vehicular trips.			

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.9 AIR QUALITY (cont.)			
SP 4.10-7. Prior to the approval of each future subdivision proposed in association with the Newhall Ranch Specific Plan, each of the construction emission reduction measures indicated below (and in Tables 11-2 and 11-3 of the SCAQMD's CEQA Air Quality Handbook, as amended) shall be implemented if found applicable and feasible for that subdivision. Tables of currently applicable measures are provided for reference in EIR **Appendix 4.10**. **ON-ROAD MOBILE SOURCE CONSTRUCTION EMISSIONS:** a. Configure construction parking to minimize traffic interference. b. Provide temporary traffic controls when construction activities have the potential to disrupt traffic to maintain traffic flow (e.g., signage, flag person, detours). c. 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). d. Develop a trip reduction plan to achieve a 1.5 average vehicle ridership (AVR) for construction employees. e. Implement a shuttle service to and from retail services and food establishments during lunch hours. f. Develop a construction traffic management plan that includes the following measures to address construction traffic that has the potential to affect traffic on public streets: - Rerouting construction traffic off congested streets; - Consolidating truck deliveries; and - Providing temporary dedicated turn lanes for movement of construction trucks and equipment on and off of the site. g. Prohibit truck idling in excess of two minutes.	Applicant	Field Verification and review and include applicable and feasible rules as part of environmental document	1. LACDRP 2. LACDRP 3. Prior to Tentative Subdivision Map Approvals

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.9 AIR QUALITY (cont.)			
SP 4.10-7. (cont.) **OFF-ROAD MOBILE SOURCE CONSTRUCTION EMISSIONS:** h. Use methanol-fueled pile drivers. i. Suspend use of all construction equipment operations during second stage smog alerts. j. Prevent trucks from idling longer than two minutes. k. Use electricity from power poles rather than temporary diesel-powered generators. l. Use electricity from power poles rather than temporary gasoline-powered generators. m. Use methanol- or natural gas-powered mobile equipment instead of diesel. n. Use propane- or butane-powered on-site mobile equipment instead of gasoline.			
SP 4.10-8. The applicant of future subdivisions shall implement all rules and regulations adopted by the Governing Board of the SCAQMD which are applicable to the development of the subdivision (such as Rule 402 – Nuisance, Rule 1102 – Petroleum Solvent Dry Cleaners, Rule 1111 – Oxides of Nitrogen (NO_x) Emissions from Natural Gas-Fired, Fan-Type Central Furnaces, Rule 1146 – Emissions of Oxides of Nitrogen from Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters) and which are in effect at the time of occupancy permit issuance.	Applicant	Field Verification and review and include applicable and feasible rules as part of environmental document	1. LACDRP 2. LACDRP 3. Prior to Tentative Subdivision Map Approvals

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.9 AIR QUALITY (cont.)			
SP 4.10-9. Prior to the approval of each future subdivision proposed in association with the Newhall Ranch Specific Plan, each of the operational emission reduction measures indicated below (and in Tables 11-6 and 11-7 of the SCAQMD's *CEQA Air Quality Handbook*, as amended) shall be implemented if found applicable and feasible for that subdivision. Tables of currently applicable measures are provided for reference in Appendix 4.10. **ON-ROAD MOBILE SOURCE OPERATIONAL EMISSIONS:** **Residential Uses** b. Establish a shuttle service from residential subdivisions to commercial core areas. c. Construct on-site or off-site bus stops (e.g., bus turnouts, passenger benches, and shelters). d. Construct off-site pedestrian facility improvements, such as overpasses and wider sidewalks. e. Include retail services within or adjacent to residential subdivisions. f. Provide shuttles to major rail transit centers or multi-modal stations. g. Contribute to regional transit systems (e.g., right-of-way, capital improvements, etc.). h. Synchronize traffic lights on streets impacted by development. i. Construct, contribute, or dedicate land for the provision of off-site bicycle trails linking the facility to designated bicycle commuting routes.	Applicant	Field Verification and review and include applicable and feasible rules as part of environmental document	1. LACDRP 2. LACDRP 3. Prior to Tentative Subdivision Map Approvals

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.9 AIR QUALITY (cont.)			
SP 4.10-9. (cont.) **Commercial Uses** j. Provide preferential parking spaces for carpools and vanpools and provide 7-foot, 2-inch minimum vertical clearance in parking facilities for vanpool access. k. Implement on-site circulation plans in parking lots to reduce vehicle queuing. l. Improve traffic flow at drive-throughs by designing separate windows for different functions and by providing temporary parking for orders not immediately available for pickup. m. Provide video-conference facilities. n. Set up resident worker training programs to improve job/housing balance. s. Implement a lunch shuttle service from a worksite(s) to food establishments. w. Establish a home-based telecommuting program. x. Provide on-site child care and after-school facilities or contribute to off-site development within walking distance. y. Require retail facilities or special event centers to offer travel incentives such as discounts on purchases for transit riders. z. Provide on-site employee services such as cafeterias, banks, etc. aa. Establish a shuttle service from residential core areas to the worksite. ab. Construct on-site or off-site bus stops (e.g., bus turnouts, passenger benches, and shelters). ac. Implement a pricing structure for single-occupancy employee parking and/or provide discounts to ridesharers. ad. Include residential units within a commercial project. ae. Utilize parking in excess of code requirements as on-site park-n-ride lots or contribute to construction of off-site lots.	Applicant	Field Verification and review and include applicable and feasible rules as part of environmental document	1. LACDRP 2. LACDRP 3. Prior to Tentative Subdivision Map Approvals

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.9 AIR QUALITY (cont.)			
SP 4.10-9. (cont.) af. Any two of the following: - Construct off-site bicycle facility improvements, such as bicycle trails linking the facility to designated bicycle commuting routes, or on-site improvements, such as bicycle paths. - Include bicycle parking facilities, such as bicycle lockers and racks. - Include showers for bicycling employees' use. ag. Any two of the following: - Construct off-site pedestrian facility improvements, such as overpasses, wider sidewalks. - Construct on-site pedestrian facility improvements, such as building access which is physically separated from street and parking lot traffic and walk paths. - Include showers for pedestrian employees' use. ah. Provide shuttles to major rail transit stations and multi-modal centers. ai. Contribute to regional transit systems (e.g., right-of-way, capital improvements, etc.). aj. Charge visitors to park. ak. Synchronize traffic lights on streets impacted by development. al. Reschedule truck deliveries and pickups to off-peak hours. am. Set up paid parking systems where drivers pay at walkup kiosk and exit via a stamped ticket to reduce emissions from queuing vehicles. an. Require on-site truck loading zones. ao. Implement or contribute to public outreach programs. ap. Require employers not subject to Regulation XV (now Rule 2202) to provide commuter information area.	Applicant	Field Verification and review and include applicable and feasible rules as part of environmental document	1. LACDRP 2. LACDRP 3. Prior to Tentative Subdivision Map Approvals

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.9 AIR QUALITY (cont.)			
SP 4.10-9. (cont.) **STATIONARY SOURCE OPERATIONAL EMISSIONS**			
Residential Uses			
br. Use solar or low emission water heaters. bs. Use central water heating systems. bt. Use built-in energy-efficient appliances. bu. Provide shade trees to reduce building heating/cooling needs. bv. Use energy-efficient and automated controls for air conditioners. bw. Use double-paned windows. bx. Use energy-efficient low-sodium parking lot lights.	Applicant	Field Verification and review and include applicable and feasible rules as part of environmental document	1. LACDRP 2. LACDRP 3. Prior to Tentative Subdivision Map Approvals
Commercial Uses			
by. Use lighting controls and energy-efficient lighting. bz. Use fuel cells in residential subdivisions to produce heat and electricity. ca. Orient buildings to the north for natural cooling and include passive solar design (e.g., daylighting). cb. Use light-colored roofing materials to reflect heat. cc. Increase walls and attic insulation beyond Title 24 requirements. cd. Use solar or low emission water heaters. ce. Use central water heating systems. cf. Provide shade trees to reduce building heating/cooling needs. cg. Use energy-efficient and automated controls for air conditioners. ch. Use double-paned windows. ci. Use energy-efficient low-sodium parking lot lights. cj. Use lighting controls and energy-efficient lighting. ck. Use light-colored roofing materials to reflect heat. cl. Increase walls and attic insulation beyond Title 24 requirements. cm. Orient buildings to the north for natural cooling and include passive solar design (e.g., daylighting).	Applicant	Field Verification and review and include applicable and feasible rules as part of environmental document	1. LACDRP 2. LACDRP 3. Prior to Tentative Subdivision Map Approvals

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.9 AIR QUALITY (cont.)			
SP 4.10-10. All non-residential development of 25,000 gross square feet or more shall comply with the County's Transportation Demand Management (TDM) Ordinance (Ordinance No. 93-0028M) in effect at the time of subdivision. The sizes and configurations of the Specific Plan's non-residential uses are not known at this time and the Ordinance specifies different requirements based on the size of the project under review. All current provisions of the ordinance are summarized in **Appendix 4.10**.	Applicant	Include Requirement in Future environmental documents and/or check at Building Permit	1. LACDPW 2. LACDRP 3. Tentative Map Approval or Building Permit, as applicable
SP 4.10-11. Subdivisions and buildings shall comply with Title 24 of the California Code of Regulations which are current at the time of development.	Applicant	Include Requirement in Future environmental documents and/or check at Building Permit	1. LACDPW, Building and Safety 2. LACDPW, Building and Safety 3. Tentative Map Approval or Building Permit, as applicable
SP 4.10-12. Lighting for public streets, parking areas, and recreation areas shall utilize energy efficient light and mechanical, computerized or photo cell switching devices to reduce unnecessary energy usage.	Applicant	Include Requirement in Future environmental documents and/or check at Building Permit	1. LACDPW 2. LACDPW 3. Tentative Map Approval or Building Permit, as applicable
SP 4.10-14. The sellers of new residential units shall be required to distribute brochures and other relevant information published by the SCAQMD or similar organization to new homeowners regarding the importance of reducing vehicle miles traveled and related air quality impacts, as well as on local opportunities for public transit and ridesharing.	Applicant	LACDRP Review of information package and distribution records	1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. Prior to Issuance of Building Permit (Package) and Occupancy Permits (Records)

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.9 AIR QUALITY (cont.)			
LV 4.9-1. Maintain construction equipment and vehicle engines in good condition and in proper tune as per manufacturers' specifications and per SCAQMD rules, to minimize exhaust emissions.	Applicant (Construction Superintendent)	Field Verification	1. LACDPW 2. LACDPW 3. During Grading During Construction
LV 4.9-2. All on-road and off-road construction equipment shall use aqueous fuel, to the extent feasible, as determined by the County of Los Angeles.	Applicant (Construction Superintendent)	Field Verification	1. LACDPW 2. LACDPW 3. During Grading DuringConstruction
LV 4.9-3. All on-road and off-road construction equipment shall employ cooled exhaust gas recirculation technology, to the extent feasible, as determined by the County of Los Angeles. Cooled exhaust gas recirculation (EGR) reduces Carbon Monoxide (CO), Volatile Organic Compounds (VOC), NO_x, and Fine Particulate Matter (PM_{10}) emissions as follows: Oxygen is required for fuel to be consumed in a combustion engine. The high temperatures found within combustion engines cause nitrogen in the surrounding air to react with any unused oxygen from the combustion process to form NO_x. EGR technology directs some of the exhaust gases that have already been used by the engine and no longer contain much oxygen back into the intake of the engine. By mixing the exhaust gases with fresh air, the amount of oxygen entering the engine is reduced. Since there is less oxygen to react with, fewer nitrogen oxides are formed and the amount of nitrogen oxides that a vehicle releases into the atmosphere is decreased. Based on information provided in the URBEMIS2002 model for its use in construction equipment, cooled exhaust gas recirculation technology can reduce CO and VOC emissions by 90 percent, NO_x emissions by 40 percent and PM_{10} emissions by 85 percent.	Applicant (Construction Superintendent)	Field Verification	1. LACDPW 2. LACDPW 3. During Grading During Construction

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.9 AIR QUALITY (cont.)			
LV 4.9-4. All on-road and off-road construction equipment shall employ diesel particulate filters, which can reduce PM_{10} emissions from construction equipment by as much as 80 percent based on information provided in the URBEMIS2002 model.	Applicant (Construction Superintendent)	Field Verification	1. LACDPW 2. LACDPW 3. During Grading and Construction
LV 4.9-5. Any dry cleaners proposing to locate on site shall utilize the services of off-site cleaning operations at already SCAQMD-permitted locations. No on-site dry cleaning operations shall be permitted within Landmark Village.	Applicant	Site Plan Check	1. LACDPW 2. LACDPW 3. Prior to Issuance of Building Permit
LV 4.9-6. The project developer(s) shall coordinate with Santa Clarita Transit to identify appropriate bus stop/turnout locations.	Applicant	Site Plan Check	1. LACDPW 2. LACDPW 3. Prior to Issuance of Building Permit
LV 4.9-7. Kiosks containing transit information shall be constructed by the project applicant adjacent to selected future bus stops prior to initiation of bus service to the site.	Applicant	Site Plan Check	1. LACDRP 2. LACDRP 3. Prior to Issuance of Occupancy Permit
LV 4.9-8. Wood-burning fireplaces and stoves shall be prohibited in all residential units. Use of wood in fireplaces shall be prohibited through project Covenants, Conditions, and Restrictions (CC&R).	Applicant	Building Plan Check	1. LACDPW 2. LACDPW 3. Prior to Issuance of Building Permit
4.10 WATER RESOURCES			
SP 4.11-1. The proposed Specific Plan shall implement a water reclamation system in order to reduce the Specific Plan's demand for imported potable water. The Specific Plan shall install a distribution system to deliver non-potable reclaimed water to irrigate land uses suitable to accept reclaimed water, pursuant to Los Angeles County Department of Health Standards.	Applicant	Subdivision Map Improvement Plan Check	1. LACDRP 2. LACDPW 3. Prior to Issuance of Building Permit(s)

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.10 WATER RESOURCES (cont.)			
SP 4.11-2. Landscape concept plans shall include a palette rich in drought-tolerant and native plants.	Applicant	Preliminary Landscape Plan Review	1. LACDPW 2. LA County Fire Department or Parks and Recreation 3. Prior to Recordation of Final Map
SP 4.11-3. Major manufactured slopes shall be landscaped with materials that will eventually naturalize, requiring minimal irrigation.	Applicant	Preliminary Landscape Plan Review	1. LACDPW 2. LA County Fire Department or Parks and Recreation 3. Prior to Recordation of Final Map
SP 4.11-4. Water conservation measures as required by the State of California shall be incorporated into all irrigation systems.	Applicant	Architectural Plans	1. California Department of Conservation 2. LACDPW, Building and Safety 3. Prior to Issuance of Building Permit(s)
SP 4.11-5. The area within each future subdivision within Newhall Ranch shall be annexed to the Valencia Water Company prior to issuance of building permits.	Applicant	California Public Utilities Commission (CPUC) Annexation Approval	1. CPUC 2. LACDPW, Building and Safety 3. Prior to Issuance of Building Permit(s)

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.10 WATER RESOURCES (cont.)			
SP 4.11-6. In conjunction with the submittal of applications for tentative tract maps or parcel maps which permit construction, and prior to approval of any such tentative maps, and in accordance with the requirements of the Los Angeles County General Plan Development Monitoring System (DMS), as amended, Los Angeles County shall require the applicant of the map to obtain written confirmation from the retail water agency identifying the source(s) of water available to serve the map concurrent with need. If the applicant of such map cannot obtain confirmation that a water source(s) is available for buildout of the map, the map shall be phased with the timing of an available water source(s), consistent with the County's DMS requirements.	Applicant	Written Confirmation of Water Availability	1. LACDPW 2. LACDPW 3. Prior to Recordation of Final Subdivision Maps
SP 4.11-7. Prior to commencement of use, all uses of recycled water shall be reviewed and approved by the State of California Health and Welfare Agency, Department of Health Services.	Applicant	Plan Check	1. County Department of Health Services 2. LACDPW, Building and Safety 3. Prior to Issuance of Grading or Occupancy Permit(s) as applicable
SP 4.11-8. Prior to the issuance of building permits that allow construction, the applicant of the subdivision shall finance the expansion costs of water service extension to the subdivision through the payment of connection fees to the appropriate water agency(ies).	Applicant	Payment of Connection Fees	1. Castaic Lake Water Agency (CLWA)/VWC 2. LACDPW, Building and Safety 3. Prior to Issuance of Building Permits

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.10 WATER RESOURCES (cont.)			
SP 4.11-9. Pursuant to Public Resources Code §21081(a)(2), the County shall recommend that the Upper Santa Clara Water Committee (or Santa Clarita Valley Water Purveyors), made up of the Castaic Lake Water Agency, Los Angeles County Waterworks District No. 36, Newhall County Water District, Santa Clarita Water Division of CLWA and the Valencia Water Company, prepare an annual water report that will discuss the status of groundwater within the Alluvial and Saugus Aquifers, and State Water Project water supplies as they relate to the Santa Clarita Valley. The report will also include an annual update of the actions taken by CLWA to enhance the quality and reliability of existing and planned water supplies for the Santa Clarita Valley. In those years when the Committee or purveyors do not prepare such a report, the applicant at its expense shall cause the preparation of such a report that is acceptable to the County to address these issues. This annual report shall be provided to Los Angeles County who will consider the report as part of its local land use decision-making process. (To date, four such water reports have been prepared (1998, 1999, 2000, and 2001) and provided to both the County of Los Angeles and the City of Santa Clarita.)	Applicant	Receipt of Annual Report	1. Board of Supervisors 2. LACDRP 3. Prior to Recordation of Final Subdivision Maps
SP 4.11-10. Pursuant to Public Resources Code §21081(a)(2), the County shall recommend that CLWA, in cooperation with other Santa Clarita Valley retail water providers, continue to update the Urban Water Management Plan (UWMP) for Santa Clarita Valley once every five years (on or before December 31) to ensure that the County receives up-to-date information about the existing and planned water supplies in the Santa Clarita Valley. The County will consider the information contained in the updated UWMP in connection with the County's future local land use decision-making process. The County will also consider the information contained in the updated UWMP in connection with the County's future consideration of any Newhall Ranch tentative subdivision maps allowing construction. (see, Mitigation Measure 4.11-15, below.)	Applicant	Receipt of written identification of water service from retailer	1. Board of Supervisors 2. LACDRP 3. Prior to Recordation of Final Subdivision Maps

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.10 WATER RESOURCES (cont.)			
SP 4.11-15. Groundwater historically and presently used for crop irrigation on the Newhall Ranch Specific Plan site and elsewhere in Los Angeles County shall be made available by the Newhall Land and Farming Company, or its assignee, to partially meet the potable water demands of the Newhall Ranch Specific Plan. The amount of groundwater pumped for this purpose shall not exceed 7,038 Acre-feet per year (AFY). This is the amount of groundwater pumped historically and presently by the Newhall Land and Farming Company in Los Angeles County to support its agricultural operations. Pumping this amount will not result in a net increase in groundwater use in the Santa Clarita Valley. To monitor groundwater use, the Newhall Land and Farming Company, or its assignee, shall provide the County an annual report indicating the amount of groundwater used in Los Angeles County and the specific land upon which that groundwater was historically used for irrigation. For agricultural land located off the Newhall Ranch Specific Plan site in Los Angeles County, at the time agricultural groundwater is transferred from agricultural uses on that land to Specific Plan uses, The Newhall Land and Farming Company, or its assignee, shall provide a verified statement to the County's Department of Regional Planning that Alluvial aquifer water rights on that land will now be used to meet Specific Plan demand.	Applicant	Receipt of written identification of water service provider or applicant	1. Board of Supervisors 2. LACDRP 3. Prior to Recordation of Final Subdivision Maps
SP 4.11-16. The agricultural groundwater used to meet the needs of the Specific Plan shall meet the drinking water quality standards required under Title 22 prior to use.	Applicant	Receipt of written report on water quality from ASR program engineer	1. LACDPW 2. LACDRP 3. Concurrent with Submittal of Application for Tentative Tract Maps which permit construction.

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.10 WATER RESOURCES (cont.)			
SP 4.11-19. A Memorandum of Understanding (MOU) and Water Resource Monitoring Program has been entered into between United Water Conservation District and the Upper Basin Water Purveyors, effective August 20, 2001. The MOU/Water Resource Monitoring Program, when executed, will put in place a joint water resource monitoring program that will be an effective regional water management tool for both the Upper and Lower Santa Clara River areas as further information is developed, consistent with the MOU. This monitoring program will result in a database addressing water usage in the Saugus and Alluvium aquifers over various representative water cycles. The parties to the MOU intend to utilize this database to further identify surface water and groundwater impacts on the Santa Clara River Valley. The applicant, or its designee, shall cooperate in good faith with the continuing efforts to implement the MOU and Water Resource Monitoring Program. As part of the MOU process, the United Water Conservation District and the applicant have also entered into a "Settlement and Mutual Release" agreement, which is intended to continue to develop data as part of an on-going process for providing information about surface and groundwater resources in the Santa Clara River Valley. In that agreement, the County and the applicant have agreed to the following: 4.3 Los Angeles County and Newhall will each in good faith cooperate with the parties to the MOU and will assist them as requested in the development of the database calibrating water usage in the Saugus and Alluvium aquifers over multi-year water cycles. Such cooperation will include, but not be limited to, providing the parties to the MOU with historical well data and other data concerning surface water and groundwater in the Santa Clara River and, in the case of Newhall, providing Valencia Water Company with access to wells for the collection of well data for the MOU.	Applicant	Review of Initial Study and subdivision maps	1. LACDRP 2. LACDRP 3. Concurrent with Submittal of Application for Tentative Tract Maps which permit construction.

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.10 WATER RESOURCES (cont.)			
SP 4.11-19. (cont.) Los Angeles County and Newhall further agree that the County of Los Angeles will be provided with, and consider, the then-existing data produced by the MOU's monitoring program in connection with, and prior to, all future Newhall Ranch subdivision approvals or any other future land use entitlements implementing the Newhall Ranch Specific Plan. If the then-existing data produced by the MOU's monitoring program identifies significant impacts to surface water or groundwater resources in the Santa Clara River Valley, Los Angeles County will identify those impacts and adopt feasible mitigation measures in accordance with the California Environmental Quality Act.	Applicant	Review of Initial Study and subdivision maps	1. LACDRP 2. LACDRP 3. Concurrent with Submittal of Application for Tentative Tract Maps which permit construction.
SP 4.11-21. The applicant, in coordination with RWQCB staff, shall select a representative location upstream and downstream of the Newhall Ranch Specific Plan and sample surface and groundwater quality. Sampling from these two locations would begin upon approval of the first subdivision map and be provided annually to the RWQCB and County for the purpose of monitoring water quality impacts of the Specific Plan over time. If the sampling data results in the identification of significant new or additional water quality impacts resulting from the Specific Plan, which were not previously known or identified, additional mitigation shall be required at the subdivision map level.	Applicant	Water quality sampling in coordination with RWQCB staff	1. LACDRP 2. LACDRP/RWQCB 3. Concurrent with Approval of the first Subdivision Map which permits construction, and annually thereafter.
SP 4.11-22. Beginning with the filing of the first subdivision map allowing construction on the Specific Plan site and with the filing of each subsequent subdivision map allowing construction, the Specific Plan applicant, or its designee, shall provide documentation to the County of Los Angeles identifying the specific portion(s) of irrigated farmland in the County of Los Angeles proposed to be retired from irrigated production to make agricultural water available to serve the subdivision. As a condition of subdivision approval, the applicant or its designee, shall provide proof to the County that the agricultural land has been retired prior to issuance of building permits for the subdivision.	Applicant	Receipt of written report from applicant	1. LACDRP 2. LACDRP 3. Concurrent with Submittal of Application for Tentative Tract Maps which permit construction.

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.11 WASTEWATER DISPOSAL			
SP 4.12-1. The Specific Plan shall reserve a site of sufficient size to accommodate a water reclamation plant to serve the Newhall Ranch Specific Plan.	Applicant	Specific Plan Review	1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. Prior to Final Approval of Specific Plan
SP 4.12-2. A 5.8 to 6.9 million gallon per day (mgd) water reclamation plant shall be constructed on the Specific Plan site, pursuant to County, state, and federal design standards, to serve the Newhall Ranch Specific Plan.	WRP Applicant	Review of WRP Construction Plans	1. County Sanitation Districts of Los Angeles County (CSDLAC) 2. CSDLAC 3. Prior to Demand for First Phase or WRP Capacity
SP 4.12-3. The Conceptual Backbone Sewer Plan shall be implemented pursuant to County, state, and federal design standards.	Applicant (Project Engineer)	Review of Tentative Map	1. LACDPW 2. LACDPW 3. Prior to Approval of Tentative Maps
SP 4.12-4. Prior to recordation of each subdivision permitting construction, the applicant of each subdivision shall obtain a letter from the new County sanitation district stating that treatment capacity will be adequate for that subdivision.	Applicant	Review Final Subdivision Map	1. CSDLAC 2. LACDPW 3. Prior to Recordation of Each Final Subdivision Map
SP 4.12-5. All facilities of the sanitary sewer system will be designed and constructed for maintenance by the County of Los Angeles Department of Public Works and the County Sanitation Districts of Los Angeles County, and/or the new County sanitation district or similar entity in accordance with their manuals, criteria, and requirements.	Applicant (Project Engineer)	Review Final Subdivision Plans	1. CSDLAC, LACDPW 2. CSDLAC, LACDPW 3. Prior to Recordation of Each Final Subdivision Map

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.11 WASTEWATER DISPOSAL (cont.)			
SP 4.12-6. Pursuant to Los Angeles County Code, Title 20, Division 2, all industrial waste pretreatment facilities shall, prior to the issuance of building permits, be reviewed by the County of Los Angeles Department of Public Works, Industrial Waste Planning and Control Section and/or the new County sanitation district, to determine if they would be subject to an Industrial Wastewater Disposal Permit.	Applicants for Such Industrial Facilities	Plan Check Review	1. LACDPW 2. LACDPW 3. Prior to Issuance of Building Permits
SP 4.12-7. Each subdivision permitting construction shall be required to be annexed into the Los Angeles County Consolidated Sewer Maintenance District.	LACDPW	Review of Final Sewer Plans	1. LACDPW 2. LACDPW 3. After County Acceptance of Sewer Improvements
4.12 SOLID WASTE DISPOSAL			
SP 4.15-1. Each future subdivision which allows construction within the Newhall Ranch Specific Plan shall meet the requirements of all applicable solid waste diversion, storage, and disposal regulations that are in effect at the time of subdivision review. Current applicable regulations include recycling areas that are: • compatible with nearby structures; • secured and protected against adverse environmental conditions; • clearly marked, and adequate in capacity, number and distribution; • in conformance with local building code requirements for garbage collection access and clearance; • designed, placed and maintained to protect adjacent developments and transportation corridors from adverse impacts, such as noise, odors, vectors, or glare; • in compliance with federal, state, or local laws relating to fire, building, access, transportation, circulation, or safety; and • convenient for persons who deposit, collect, and load the materials.	Applicant	Include in Future Subdivision Design and/or environmental documents for Tentative Maps	1. LACDPW, Waste Management Division 2. LACDPW, Waste Management Division 3. Prior to Tentative Map Approval

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.12 SOLID WASTE DISPOSAL (cont.)			
SP 4.15-2. Future multi-family, commercial, and industrial projects within the Specific Plan shall provide accessible and convenient areas for collecting and loading recyclable materials. These areas are to be clearly marked and adequate in capacity, number, and distribution to serve the development.	Applicant	Include in Future Subdivision Design and/or environmental documents for Tentative Maps	1. LACDPW, Waste Management Division 2. LACDPW, Waste Management Division 3. Prior to Tentative Map Approval
SP 4.15-3. The first purchaser of each residential unit within the Specific Plan shall be given educational or instructional materials which will describe what constitutes recyclable and hazardous materials, how to separate recyclable and hazardous materials, how to avoid the use of hazardous materials, and what procedures exist to collect such materials.	Applicant	Review of Information Package and Distribution Records	1. LACDRP 2. LACDRP 3. Prior to Issuance of Building Permit (Package) and Occupancy Permits (Records)
SP 4.15-4. The applicant of all subdivision maps which allow construction within the Specific Plan shall comply with all applicable future state and Los Angeles County regulations and procedures for the use, collection and disposal of solid and hazardous wastes.	Applicant	Include in Future Subdivision Design and/or environmental documents for Tentative Maps	1. LACDPW, Waste Management Division 2. LACDPW, Waste Management Division 3. Prior to Tentative Map Approval
LV 4.12-1. The project shall comply with Title 20, Chapter 20.87, of the Los Angeles County Code, Construction and Demolition Debris Recycling. The project proponent shall also provide a Waste Management Plan to recycle, at a minimum, 50 percent of the construction and demolition debris. Reports shall be submitted to the Los Angeles County Environmental Programs Division.	Applicant	Review of Waste Management Plan and corresponding reports	1. Los Angeles County Environmental Programs Division 2. Los Angeles County Environmental Programs Division 3. Prior to Tentative Map Approval

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.13 SHERIFF SERVICES			
SP 4.17-1. As subdivision maps are submitted to the County for approval in the future, the applicant shall incorporate County Sheriff's Department design requirements (such as those pertaining to site access, site security lighting, etc.) which will reduce demands for Sheriff's service to the subdivisions and which will help ensure adequate public safety features within the tract designs.	Applicant	Plan Check Field Verification	1. LA County Sheriff's Department 2. LA County Sheriff's Department 3. Prior to Final Map Approvals and Verify Prior to Issuance of Occupancy Permits
LV 4.13-1. Construction signs shall be posted with a reduced construction zone speed limit. These signs shall be posted to the satisfaction of the California Highway Patrol.	Applicant	Field Verification	1. California Highway Patrol 2. California Highway Patrol 3. During All Construction Phases
LV 4.13-2. A California Highway Patrol officer shall be hired on a reimbursable services contract to provide traffic control and additional traffic enforcement for the area during the Chiquito Canyon grading site phase of the proposed project construction.	Applicant	Contract Review Field Verification	1. California Highway Patrol 2. California Highway Patrol 3. During Chiquito Canyon Grading Site Phase

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.14 FIRE PROTECTION SERVICES			
SP 4.18-1. At the time of final subdivision maps permitting construction in development areas that are adjacent to Open Area and the High Country SMA, a Wildfire Fuel Modification Plan shall be prepared and submitted for approval by the County Fire Department. The Wildfire Fuel Modification Plan shall include the following construction period requirements: (a) a fire watch during welding operations; (b) spark arresters on all equipment or vehicles operating in a high fire hazard area; (c) designated smoking and non-smoking areas; and (d) water availability pursuant to County Fire Department requirements. The wildfire fuel modification plan shall depict a fuel modification zone in conformance with the Fuel Modification Ordinance in effect at the time of subdivision. Within the zone, tree pruning, removal of dead plant material and weed and grass cutting shall take place as required by the County Forester. Fire resistant plant species containing habitat value may be planted in the fuel modification zone.	Applicant	Receipt and Review of Wildfire Fuel Modification Plan	1. LA County Fire Department 2. LA County Fire Department 3. Prior to Approval of Final Maps
SP 4.18-2. Each subdivision and site plan for the proposed Specific Plan shall provide sufficient capacity for fire flows of 1,250 gallons per minute (gpm) at 20 pounds per square inch (psi) residual pressure for a two hour duration for single family residential units, and 5,000 gpm at 20 psi residual pressure for a five-hour duration for multi-family residential units and commercial/retail uses, or whatever fire flow requirement is in effect at the time of subdivision and site plan approval.	Applicant	Field Verification of Required Fire Flows	1. LA County Fire Department 2. LA County Fire Department 3. Prior to Issuance of Occupancy Permits
SP 4.18-3. Each subdivision map and site plan for the proposed Specific Plan shall comply with all applicable building and fire codes and hazard reduction programs for Fire Zones 3 and 4 that are in effect at the time of subdivision map and site plan approval.	Applicant	Field Verification	1. LA County Fire Department 2. LA County Fire Department 3. Prior to Issuance of Occupancy Permits

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.14 FIRE PROTECTION SERVICES (cont.)			
SP 4.18-4. The developer will provide funding for three fire stations to the Consolidated Fire Protection District of Los Angeles County (the "Fire District") in lieu of developer fees. The developer will dedicate two fire station sites for the two fire stations located in Newhall Ranch. The Fire District will dedicate the site for the fire station to be located at the Del Valle Training Facility. Each fire station site will have a building pad consisting of a net buildable area of one acre. If the cost of constructing the three fire stations, providing and dedicating the two fire station sites, and providing 3-engines, 1 paramedic squad and 63 percent of a truck company exceeds the developer's developer fee obligation for the Newhall Ranch development as determined by the Fire District, the Fire District will fund the costs in excess of the fee obligation. Two of the three fire stations to be funded by the developer will not exceed 6,000 square feet; the third fire station to be funded by the developer will not exceed 8,500 square feet. The Fire District, will fund the cost of any space/square footage of improvement in excess of these amounts as well as the cost of the necessary fire apparatus for any such excess square footage of improvements. The cost of three fire engines, a proportionate share of a truck and one squad to be provided by the developer will be determined based upon the apparatus cost at the time the apparatus is placed in service.	Applicant	Execute "Fire Protection Plan" Agreement Monitor Adequacy of Fire Prevention Services	1. LA County Fire Department 2. LA County Fire Department 3. Prior to Approval of First Final Subdivision Map Subdivision Map Review Process

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.14 FIRE PROTECTION SERVICES (cont.)			
SP 4.18-4. (cont.) The Fire District and the developer will mutually agree to the requirements of first-phase protection requirements based upon projected response/travel coverage. Such mutual agreement regarding first-phase fire protection requirements ("fire protection plan") and the criteria for timing the development of each of the three fire stations will be defined in a Memorandum of Understanding between the developer and the Fire District. Delivery of fire service for Newhall Ranch will be either from existing fire stations or one of the three fire stations to be provided by the developer pursuant to this section. Prior to the commencement of the operation of any of the three fire stations, fire service may be delivered to Newhall Ranch from existing fire stations or from temporary fire stations to be provided by the developer at mutually agreed-upon locations, to be replaced by the permanent stations which will be located within the Newhall Ranch development. The developer and the Fire District will annually review the fire protection plan to evaluate development and market conditions and modify the Memorandum of Understanding accordingly.			
LV 4.14-1. Prior to approval of a final subdivision map for the project, the applicant must prepare and submit for approval by the County Fire Department a fuel modification plan, a landscape plan and an irrigation plan for the project, as required by Section 1117.2.1 of the County of Los Angeles Fire Code.	Applicant	Receipt and Review of Fuel Modification Plan, Landscape Plan, and Irrigation Plan	1. LA County Fire Department 2. LA County Fire Department 3. Prior to Approval of First Final Subdivision Map

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.14 FIRE PROTECTION SERVICES (cont.)			
LV 4.14-2. The applicant will construct three fully equipped and furnished fire stations (including all ancillary requirements such as landscaping, parking, fuel tanks, storage rooms, etc., required for normal fire station operations). Such stations are to be conveyed to the Consolidated Fire Protection District of Los Angeles County (the "Fire District") in lieu of developer fees. The Fire District shall approve all plans and designs for the three fire stations. The applicant will dedicate fire station sites for all three fire stations within Newhall Ranch. Two fire station sites will have a building pad consisting of a minimum net buildable area of 1.25 acres, and one fire station site will have a building pad consisting of a minimum net buildable area of 1.5 acres; the locations and configurations of each site shall be approved by the Fire District. Two of the three fire stations to be constructed by the applicant will not exceed 11,000 square feet; the third fire station to be constructed by the applicant will not exceed 13,500 square feet. Future changes in federal, state or local requirements may affect these station minimum sizes. One of the three fire stations will be located within the Landmark project, at a location approved by the Fire District. Such station shall be 11,000 square feet constructed upon a minimum 1.25 net building pad. The fully constructed, equipped and furnished station shall be conveyed to the Fire District prior to the issuance of the 723rd certificate of occupancy issued for the Landmark project. Additionally, the applicant shall provide funding for the purchase of one Fire District standard, fully equipped fire pumper engine and paramedic squad prior to the issuance of the 723rd certificate of occupancy.	Applicant	Field Verification	1. LA County Fire Department 2. LA County Fire Department 3. Prior to Issuance of 723rd Occupancy Permit

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.14 FIRE PROTECTION SERVICES (cont.)			
LV 4.14-2. (cont.) For the remaining two fire stations, the Fire District will evaluate with the applicant the requirements of first-phase protection based upon projected response/travel coverage with the goal of achieving 5-minute response coverage. The results of such evaluation shall include requirements for first-phase fire protection ("fire protection plan") and the criteria for timing the development of each of the fire stations, which will be defined in a Memorandum of Understanding between the applicant and the Fire Chief of the Fire District. Prior to the commencement of the operation of any of the three fire stations, fire service may be delivered to Newhall Ranch from existing fire stations or from temporary fire stations to be provided by the applicant at mutually agreed-upon locations, to be replaced by the permanent stations, which will be located within the Newhall Ranch development. The use of such temporary fire stations must be approved by the Fire District and detailed in the Memorandum of Understanding. The applicant and the Fire District will annually review the fire protection plan to evaluate development and market conditions and modify the Memorandum of Understanding accordingly.			
LV 4.14-3. If the project applicant alters the Fire District's road access, it must provide paved access acceptable to the Fire District from Chiquito Canyon Road to the Del Valle facility.	Applicant	Plan Review	1. LA County Fire Department 2. LA County Fire Department 3. Prior to Issuance of Building Permits
LV 4.14-4. The proposed development shall provide multiple ingress/egress access for the circulation of traffic, and emergency response issues. Said determinations shall be approved through the tentative map approval.	Applicant	Plan Review	1. LA County Fire Department 2. LA County Fire Department 3. Prior to Final Map Approval
LV 4.14-5. The development of this project shall comply with all applicable code and ordinance requirements for construction, access, water mains, fire flows and fire hydrants. Specifics for said requirements shall be established during the review and approval process of the tentative map.	Applicant	Plan Review	1. LA County Fire Department 2. LA County Fire Department 3. Prior to Final Map Approval

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.14 FIRE PROTECTION SERVICES (cont.)			
LV 4.14-6. This property is located within the area described by the Forester and Fire Warden as a Fire Zone 4, Very High Fire Hazard Severity Zone (VHFHSZ). All applicable fire code and ordinance requirements for construction, access, water mains, fire hydrants, fire flows, brush clearance and fuel modification plans, must be met.	Applicant	Plan Review	1. LA County Fire Department 2. LA County Fire Department 3. Prior to Issuance of Building Permit
LV 4.14-7. Specific fire and life safety requirements for the construction phase will be addressed at the building fire plan check. There may be additional fire and life safety requirements during this time.	Applicant	Plan Review	1. LA County Fire Department 2. LA County Fire Department 3. Prior to Issuance of Building Permit
LV 4.14-8. Every building constructed shall be accessible to Fire Department apparatus by way of access roadways, with an all-weather surface of not less than the prescribed width and indicated on the Tentative or Exhibit "A" maps. The roadway shall be extended to within 150 feet of all portions of the exterior walls when measured by an unobstructed route around the exterior of the building.	Applicant	Plan Review	1. LA County Fire Department 2. LA County Fire Department 3. Prior to Issuance of Building Permit
LV 4.14-9. Access roads shall be maintained with a minimum of 10 feet of brush clearance on each side. Fire access roads shall have an unobstructed vertical clearance clear-to-sky with the exception of protected tree species. Protected tree species overhanging fire access roads shall be maintained to provide a vertical clearance of 13 feet, 6 inches. Applicant to obtain all necessary permits prior to the commencement of trimming of any protected tree species.	Applicant	Field Inspection	1. LA County Fire Department 2. LA County Fire Department 3. LA County Forester

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.14 FIRE PROTECTION SERVICES (cont.)			
LV 4.14-10. The maximum allowable grade shall not exceed 15% except where topography makes it impractical to keep within such grade; in such cases, an absolute maximum of 20% will be allowed for up to 150 feet in distance. The average maximum allowed grade, including topographical difficulties, shall be no more than 17%. Grade breaks shall not exceed 10% in 10 feet.	Applicant	Plan Review	1. LA County Fire Department 2. LA County Fire Department 3. Prior to Final Map Approval
LV 4.14-11. When involved with a subdivision in unincorporated areas within the County of Los Angeles, Fire Department, requirements for access, fire flows and hydrants are addressed at the Los Angeles County Subdivision Committee meeting during the subdivision tentative map stage.	Applicant	Plan Review	1. LA County Fire Department 2. LA County Fire Department 3. Prior to Final Map Approval
LV 4.14-12. Fire sprinkler systems are required in some residential and most commercial occupancies. For those occupancies not requiring fire sprinkler systems, it is encouraged that fire sprinkler systems be installed. This will reduce potential fire and life losses. Systems are now technically and economically feasible for residential use.	Applicant	Plan Review	1. LA County Fire Department 2. LA County Fire Department 3. Prior to Final Map Approval
LV 4.14-13. Prior to construction, the following items shall be addressed: a. Installation and inspection of the required all weather access to be provided as determined by either the tentative map review process or building penult issuance. b. Fire hydrants shall be installed and tested prior to the clearance for the commencement of construction.	Applicant	Plan Review/Field Inspection	1. LA County Fire Department 2. LA County Fire Department 3. Prior to Final Map Approval or Building Permit Approval
INSTITUTIONAL: LV 4.14-14. The development may require fire flows up to 8,000 gallons per minute at 20 pounds per square inch residual pressure for up to a four-hour duration as outlined in the 2002 County of Los Angeles Fire Code Appendix III-AA. Final fire flows will be based on the size of buildings, their relationship to other structures, property lines, and types of construction used.	Applicant	Plan Review	1. LA County Fire Department 2. LA County Fire Department 3. Prior to Final Map Approval

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.14 FIRE PROTECTION SERVICES (cont.)			
LV 4.14-15. Fire hydrant spacing shall be based on fire flow requirements as outlined in the 2002 County of Los Angeles Fire Code Appendix III-BB. Additional hydrants will be required if hydrant spacing exceeds specified distances.	Applicant	Plan Review	1. LA County Fire Department 2. LA County Fire Department 3. Prior to Final Map Approval
LV 4.14-16. All access devices and gates shall comply with California Code of Regulations, Title 19, Article 3.05 and Article 3.16.Los Angeles County Fire Department Regulation #5.	Applicant	Plan Review	1. LA County Fire Department 2. LA County Fire Department 3. Prior to Final Map Approval
COMMERCIAL/HIGH-DENSITY RESIDENTIAL: LV 4.14-17. The development may require fire flows up to 5,000 gallons per minute at 20 pounds per square inch residual pressure for up to a five-hour duration. Final fire flows will be based on the size of buildings, their relationship to other structures, property lines, and types of construction used. Fire flows shall be established as part of the tentative map review process with the submittal of architectural details to determine actual flow requirement. If adequate architectural detail is unavailable during the tentative map review process, maximum fire flows will be established with the ability of the fire flow to be changed during the actual architectural plan review by Fire Prevention Engineering for building permit issuance.	Applicant	Plan Review	1. LA County Fire Department 2. LA County Fire Department 3. Prior to Issuance of a Building Permit
LV 4.14-18. Fire hydrant spacing shall be 300 feet and shall meet the following requirements: a. No portion of lot frontage shall be more than 200 feet via vehicular access from a public fire hydrant. b. No portion of a building shall exceed 400 feet via vehicular access from a properly spaced public fire hydrant. c. Additional hydrants will be required if hydrant spacing exceeds specified distances. d. When cul-de-sac depth exceeds 200 feet on a commercial street, hydrants shall be required at the corner and mid-block. e. A cul-de-sac shall not be more than 500 feet in length, when serving land zoned for commercial use.	Applicant	Plan Review	1. LA County Fire Department 2. LA County Fire Department 3. Prior to Issuance of a Building Permit

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.14 FIRE PROTECTION SERVICES (cont.)			
LV 4.14-19. Turning radii shall not be less than 32 feet. This measurement shall be determined at the centerline of the road. A Fire Department approved turning area shall be provided for all driveways exceeding 150 feet in length and at the end of all cul-de-sacs.	Applicant	Plan Review	1. LA County Fire Department 2. LA County Fire Department 3. Prior to Final Map Approval
LV 4.14-20. All on-site driveways/roadways shall provide a minimum unobstructed width of 28 feet, clear-to-sky. The on-site driveway is to be within 150 feet of all portions of the exterior walls of the first story of any building. The centerline of the access driveway shall be located parallel to, and within 30 feet of an exterior wall on one side of the proposed structure.	Applicant	Plan Review	1. LA County Fire Department 2. LA County Fire Department 3. Prior to Final Map Approval
LV 4.14-21. Driveway width for non-residential developments shall be increased when any of the following conditions will exist: a. Provide 34 feet in width, when parallel parking is allowed on one side of the access roadway/driveway. Preference is that such parking is not adjacent to the structure. b. Provide 42 feet in width, when parallel parking is allowed on each side of the access roadway/driveway. c. Any access way less than 34 feet in width shall be labeled "Fire Lane" on the final recording map, and final building plans. d. For streets or driveways with parking restrictions: The entrance to the street/driveway and intermittent spacing distances of 150 feet shall be posted with Fire Department approved signs stating "NO PARKING – FIRE LANE" in 3-inch-high letters. Driveway labeling is necessary to endure access for Fire Department use.	Applicant	Plan Review	1. LA County Fire Department 2. LA County Fire Department 3. Prior to Final Map Approval

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.14 FIRE PROTECTION SERVICES (cont.)			
SINGLE-FAMILY/TWO-FAMILY DWELLING UNITS: LV 4.14-22. Single-family detached homes shall require a minimum fire flow of 1,250 gallons per minute at 20 pounds per square inch residual pressure for a two-hour duration. Two-family dwelling units (duplexes) shall require a fire flow of 1,500 gallons per minute at 20 pounds per square inch residual pressure for a two-hour duration. When there are five or more condominium units are taking access on a single driveway, the minimum fire flow shall be increased to 1,500 gallons per minute at 20 pounds per square inch residual pressure for a two-hour duration.	Applicant	Plan Review/Field Inspection	1. LA County Fire Department 2. LA County Fire Department 3. Prior to Final Map Approval or Building Permit Issuance
LV 4.14-23. Fire hydrant spacing shall be 600 feet and shall meet the following requirements: a. No portion of lot frontage shall be more than 450 feet via vehicular access from a public fire hydrant. b. Lots of 1 acre or more shall place no portion of a structure where it exceeds 750 feet via vehicular access from a properly spaced public fire hydrant. c. When cul-de-sac depth exceeds 450 feet on a residential street, fire hydrants shall be required at the corner and mid-block. d. Additional hydrants will be required if hydrant spacing exceeds specified distances during the tentative map review process or building permit plan check.	Applicant	Plan Review/Field Inspection	1. LA County Fire Department 2. LA County Fire Department 3. Prior to Final Map Approval

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.14 FIRE PROTECTION SERVICES (cont.)			
LV-4.14-24. Streets or driveways within the development shall be provided with the following: a. Provide 36 feet in width on all streets where parking is allowed on both sides. b. Provide 34 feet in width on cul-de-sacs up to 700 feet in length. This allows parking on both sides of the street. c. Provide 36 feet in width on cul-de-sacs from 701 to 1,000 feet in length. This allows parking on both sides of the street. d. For streets or driveways with parking restrictions: The entrance to the street/driveway and intermittent spacing distances of 150 feet shall be posted with Fire Department approved signs stating "NO PARKING – FIRE LANE" in 3-inch-high letters. Driveway labeling is necessary to ensure access for Fire Department use. e. Turning radii shall not be less than 32 feet. This measurement shall be determined at the centerline of the road.	Applicant	Plan Review	1. LA County Fire Department 2. LA County Fire Department 3. Prior to Final Map Approval
LV 4.14-25. A Fire Department approved turning area shall be provided for all driveways exceeding 150 feet in length and at the end of all cul-de-sacs.	Applicant	Plan Review	1. LA County Fire Department 2. LA County Fire Department 3. Prior to Final Map Approval
4.15 EDUCATION			
SP 4.16-1. The Specific Plan developer shall reserve five elementary schools sites, one junior high school site and one high school site, of 7 to 10, 20 to 25, and 40 to 45 acres in size, respectively, depending upon adjacency to local public parks and joint use agreements.	Applicant	Tentative Tract Map Subdivision Review	1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. Prior to Final Approval of Tentative Tract Maps

Mitigation Measures/Conditions of Approval		Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.15 EDUCATION (cont.)				
SP 4.16-2.	The developer of future subdivisions which allow construction will comply with the terms and conditions of the School Facilities Funding Agreement between The Newhall Land and Farming Company and the Newhall School District.	Applicant	Verification of Compliance from School District	1. Newhall School District 2. LACDPW, Building and Safety 3. Prior to Issuance of Residential Building Permits
SP 4.16-3.	The developer of future subdivisions which allow construction will comply with the terms and conditions of the School Facilities Funding Agreement between The Newhall Land and Farming Company and the William S. Hart Union High School District.	Applicant	Verification of Compliance from School District	1. William S Hart Unified High School District (WSHUHSD) 2. LACDPW, Building and Safety 3. Prior to Issuance of Residential Building Permits
SP 4.16-4.	The developer of future subdivisions which allow construction will comply with the terms and conditions of the School Facilities Funding Agreement between The Newhall Land & Farming Company and the Castaic Union School District.	Applicant	Verification of Compliance from School District	1. Castaic Union School District 2. LACDPW, Building and Safety 3. Prior to Issuance of Residential Building Permits
SP 4.16-5.	In the event that School District boundaries on the Specific Plan site remain unchanged, prior to recordation of all subdivision maps which allow construction, the developer of future subdivisions which allow construction is to pay to the Castaic Union School District the statutory school fee for commercial/industrial square footage pursuant to Government Code Sections 65995 and 65996, unless a separate agreement to the contrary is reached with the District.	Applicant	Payment of Fees	1. Castaic Union School District 2. LACDPW, Building and Safety 3. Prior to Issuance of Building Permits

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.16 PARKS AND RECREATION			
SP 4.20-1. Development of the Newhall Ranch Specific Plan will provide the following acreages of parks and Open Area: • Ten public Neighborhood Parks totaling 55 acres; • Open Areas totaling 1,106 acres of which 186 acres are Community Parks; • High Country Special Management Area of 4,214 acres; • River Corridor Special Management Area of 819 acres; • a 15-acre Lake; • an 18-hole Golf Course; and • a trail system consisting of: - Regional River Trail, - Community Trails, and - Unimproved Trails.	Applicant	Subdivision Review for Compliance with Specific Plan	1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. Processing of Tentative Subdivision Maps
SP 4.20-2. Prior to the construction of the proposed trail system, the project applicant shall finalize the alignment of trails with the County Department of Parks and Recreation.	Applicant	Verification of Consultation of Department of Parks and Recreation	1. LACDRP 2. LA County Department of Parks and Recreation 3. Prior to Issuance of Grading Permit for Trails
SP 4.20-3. Trail construction shall be in accordance with the County of Los Angeles Department of Parks and Recreation trail system standards.	Applicant	Trails Plan Review Field Verification	1. LA County Department of Parks and Recreation 2. LA County Department of Parks and Recreation 3. Prior to Approval of Trail Plans and Verify Upon Construction Completion

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.17 LIBRARY SERVICES			
SP 4.19-1. The developer will provide funding for a maximum of two libraries (including the site(s), construction, furniture, fixtures, equipment and materials) to the County Librarian. The developer will dedicate a maximum of two library sites for a maximum of two libraries located in Newhall Ranch in lieu of the land component of the County's library facilities mitigation fee, in accordance with the provisions of Section 22.72.090 of Section 2 of Ordinance No. 98-0068. The actual net buildable library site area required and provided by the developer will be determined by the actual size of the library building(s), the Specific Plan parking requirements, the County Building Code, and other applicable rules. The total library building square footage to be funded by the developer will not exceed 0.35 net square feet per person. The developer's funding of construction of the library(s) and furnishings, fixtures, equipment and materials for the library(s) will be determined based on the cost factors in the library facilities mitigation fee in effect at the time of commencement of construction of the library(s).	Applicant	Review of Memorandum of Understanding and Library Construction Plan	1. LA County Library 2. LACDPW 3. Prior to Issuance of First Residential Building Permit

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.17 LIBRARY SERVICES (cont.)			
SP 4.19-1. (cont.) Prior to County's issuance of the first residential building permit of Newhall Ranch to the developer, the County Librarian and the developer will mutually agree upon the library construction requirements (location, size, funding and time of construction) based upon the projected development schedule and the population of Newhall Ranch based on the applicable number of average persons per household included in the library facilities mitigation fee in effect at the time. Such mutual agreement regarding the library construction requirements ("Library Construction Plan") and the criteria for timing the completion of the library(s) will be defined in a Memorandum of Understanding between the developer and the County Librarian. Such Memorandum of Understanding shall include an agreement by the developer to dedicate sufficient land and pay the agreed amount of fees on a schedule to allow completion of the library(s) as described below. The developer's funding for library facilities shall not exceed the developer's fee obligation at the time of construction under the developer fee schedule. If two libraries are to be constructed, the first library will be completed and operational by the time of County's issuance of the 8,000th residential building permit of Newhall Ranch, and the second library will be completed and operational by the time of County's issuance of the 15,000th residential building permit of Newhall Ranch. If the County Librarian decides that only one library will be constructed, the library will be completed and operational by the time of County's issuance of the 10,000th residential building permit of Newhall Ranch. No payment of any sort with respect to library facilities will be required under Section 2.5.3.d. of the Specific Plan in order for the developer to obtain building permits for nonresidential buildings.			

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.18 AGRICULTURAL RESOURCES			
SP 4.4-1. Purchasers of homes located within 1,500 feet of an agricultural field or grazing area are to be informed of the location and potential effects of farming uses prior to the close of escrow.	Applicant	Include this Information in CC&Rs	1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. At Home Sales
4.19 UTILITIES			
SP 4.14-1. All development within the Specific Plan area shall comply with the Energy Building Regulations adopted by the California Energy Commission (Title 24 of the California Administrative Code), as applicable.	Applicant	Plan Check Field Verification	1. LACDPW, Building and Safety 2. LACDPW, Building and Safety 3. Prior to Issuance of Occupancy Permit(s)
SP 4.14-2. Southern California Edison (SCE) or other energy provider is to be notified of the nature and extent of future development on the Specific Plan site prior to recordation of all future subdivisions.	Applicant	Receipt of Notification to Energy Provider	1. LACDRP 2. LACDRP 3. Prior to Recordation of All Subdivisions
SP 4.14-3. All future tract maps are to comply with SCE or other energy provider guidelines for grading, construction, and development within SCE easements.	Applicant (Construction Contractor)	Plan Check Field Verification	1. LACDPW, Building and Safety 2. LACDPW, Building and Safety 3. Prior to Final Tract Map Approvals and Verify Prior to Issuance of Occupancy Permits

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.19 UTILITIES (cont.)			
SP 4.14-4. Electrical infrastructure removals and relocations are to be coordinated between the Specific Plan engineer and SCE or other energy provider as each tract is designed and constructed.	Applicant (Specific Plan Engineer)	Receipt of Verification of Such Consultations	1. LACDPW 2. LACDPW 3. Prior to Final Tract Map Approval and During Construction
SP 4.14-5. All future tract maps are to be reviewed by Los Angeles County to ensure adequate accessibility to SCE or other energy provider facilities as a condition of their approvals.	Applicant	Plan Check	1. LACDPW 2. LACDPW 3. Prior to Final Tract Map Approval
SP 4.14-6. Upon transfer of the High Country Special Management Area to another entity for long-term maintenance, continued and adequate access to all SCE facilities in the High Country Special Management Area is to be ensured within the transfer agreement.	Applicant	Review of Transfer Agreement	1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. Upon Transfer of High Country SMA
SP 4.13-1. All development within the Specific Plan area shall comply with the Energy Building Regulations adopted by the California Energy Commission (Title 24 of the California Administrative Code), as applicable.	Applicant/Future Owners and Operators within project	Plan Check Field Verification	1. LACDPW, Building and Safety 2. LACDPW, Building and Safety 3. Prior to Issuance of Occupancy Permit(s)
SP 4.13-2. A letter from Southern California Gas Company (SCGC) or other gas provider is to be obtained prior to recordation of all future subdivisions stating that service can be provided to the subdivision under recordation.	Applicant	Receipt of Letter from Gas Provider	1. LACDRP 2. LACDRP 3. Prior to Recordation of Final Maps

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.19 UTILITIES (cont.)			
SP 4.13-3. The Specific Plan is to meet the requirements of SCGC in terms of pipeline relocation, grading in the vicinity of gas mains, and development within SCGC easements. These requirements would be explicitly defined by SCGC at the future tentative map stage.	Applicant (Construction Contractor)	Receipt and implementation of Such Requirements from SCGC	1. LACDPW, Building and Safety 2. LACDPW, Building and Safety 3. Grading and Construction Operations
SP 4.13-4. All potential buyers or tenants of property in the vicinity of SCGC transmission lines are to be made aware of the line's presence in order to assure that no permanent construction or grading occurs over and within the vicinity of the high-pressure gas mains.	Applicant	Include in Sale/Lease Disclosure Documents	1. LACDRP 2. LACDRP 3. Prior to Issuance of Occupancy Permits
4.21 ENVIRONMENTAL SAFETY			
SP 4.5-1. Not Applicable			
SP 4.5-2. Only non-habitable structures shall be located within SCE easements.	Applicant	Tentative Tract Map Review	1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. Prior to Approval of Tract Maps

Mitigation Measures/Conditions of Approval		Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.21 ENVIRONMENTAL SAFETY (cont.)				
SP 4.5-3.	Prior to issuance of grading permits, all abandoned oil and natural gas-related sites must be remediated to the satisfaction of the California Department of Oil and Gas, the Los Angeles County Hazardous Materials Control Program, the South Coast Air Quality Management District, and/or the Regional Water Quality Control Board (Los Angeles region).	Applicant/On-Site Oil and Natural Gas Producers	Confirmation that Oil- and Natural Gas-Related Sites are Satisfactorily Remediated	1. California Department of Conservation, Division of Oil and Gas; LA County Hazardous Materials Control Program; SCAQMD; and RWQCBLAR 2. California Department of Conservation, Division of Oil and Gas; LA County Hazardous Materials Control Program; SCAQMD; and RWQCBLAR 3. Prior to Issuance of Grading Permits
SP 4.5-5.	The Specific Plan is to meet the requirements of SCGC in terms of pipeline relocation, grading in the vicinity of gas mains, and development within Southern California Gas Company easements. These requirements would be explicitly defined by SCGC at the future tentative map stage.	Applicant (Civil Engineer)	Grading Plan Check	1. SCGC 2. LACDPW 3. Prior to Approval of Grading Plan
SP 4.5-6.	All potential buyers or tenants of property in the vicinity of Southern California Gas Company transmission lines are to be made aware of the line's presence in order to assure that no permanent construction or grading occurs over and within the vicinity of the high-pressure gas mains.	Applicant	Include this Information in CC&Rs	1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. At Home Sales
SP 4.5-7.	In accordance with the provisions of the Los Angeles County Building Code, Section 308(d), all buildings and enclosed structures that would be constructed within the Specific Plan located within 25 feet of oil or gas wells shall be provided with methane gas protection systems. Buildings located between 25 feet and 200 feet of oil or gas wells shall, prior to the issuance of building permits by the County of Los Angeles, be evaluated in accordance with the current rules and regulations of the State of California Division of Oil and Gas.	Applicant (Building Contractors)	Include this Requirement in Building Specifications Field Verification	1. California Department of Conservation, Division of Oil and Gas and LACDPW, Building and Safety 2. LACDPW, Building and Safety 3. Prior to Issuance of Occupancy Permits

Mitigation Measures/Conditions of Approval		Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.21 ENVIRONMENTAL SAFETY (cont.)				
SP 4.5-8.	In accordance with the provisions of the Los Angeles County Building Code, Section 308(c), all buildings and structures located within 1,000 feet of a landfill containing decomposable material (in this case the Chiquito Canyon Landfill) shall be provided with a landfill gas migration protection and/or control system.	Applicant (Building Contractors)	Include this Requirement in Building Specifications Field Verification	1. LACDPW, Building and Safety 2. LACDPW, Building and Safety 3. Prior to Issuance of Occupancy Permits
SP 4.5-9.	In accordance with the provisions of the Los Angeles County Code, Title 11, Division 4, Underground Storage of Hazardous Materials regulations, the County of Los Angeles Department of Public Works shall review, prior to the issuance of building permits by the County of Los Angeles, any plans for underground hazardous materials storage facilities (e.g., gasoline) that may be constructed or installed within the Specific Plan.	Applicant (Building Contractors)	Include this Requirement in Building Specifications Field Verification	1. LACDPW, Building and Safety 2. LACDPW, Building and Safety 3. Prior to Issuance of Occupancy Permits

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.21 ENVIRONMENTAL SAFETY (cont.)			
LV-4.21-1. Prior to the issuance of grading permits, those areas of the Landmark Village tract map property, the Adobe Canyon borrow site and the Chiquito Canyon grading site identified as formerly containing above-ground storage tanks, current agricultural storage areas and current soil staining by the Phase I Environmental Site Assessment of Landmark Village Tentative Tract Map No. 53108, Highway 126, Newhall Ranch, California (BNA Environmental, May 2004) and Addendum Letter Phase I Environmental Site Assessment of Proposed Water Tank Locations and Utility Corridor Easements Associated With the Proposed Landmark Village Development Tentative Tract Map No. 53108, State Highway 126, Newhall Ranch, California (BNA Environmental, September 2004), shall be investigated for the presence of petroleum hydrocarbons and hazardous materials and/or wastes, and, where necessary, shall be remediated in conformance with applicable federal, state and local laws, to the satisfaction of the California Department of Conservation, Division of Oil and Gas, the Los Angeles County Hazardous Materials Control Program, the South Coast Air Quality Management District, and/or the Regional Water Quality Control Board (Los Angeles region).	Applicant	Receipt and Review of Test Results or Verification of Remediation	1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. Prior to Issuance of Grading Permits
LV-4.21-2. Prior to the issuance of grading permits, all former oil wells located on the Landmark Village tract map property, the Adobe Canyon borrow site and the Chiquito Canyon grading site shall be reabandoned according to the requirements of the California Department of Conservation, Division of Oil and Gas, if such sites are to be disturbed or are located in an area of development.	Applicant (Civil Engineer and Well Abandonment Specialist)	Receipt of Confirmation of Reabandon-ment	1. California Department of Conservation, Division of Oil and Gas, Building and Safety 2. California Department of Conservation, Division of Oil and Gas, Building and Safety 3. Prior to Issuance of Grading Permits

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.21 ENVIRONMENTAL SAFETY (cont.)			
LV-4.21-3. Prior to the issuance of grading permits, all pipelines located on the Landmark Village tract map property or the Chiquito Canyon grading site that will no longer be used to transport oil products shall be reabandoned according to the requirements of the California Department of Conservation, Division of Oil and Gas. The soil beneath these pipelines shall be assessed for petroleum hydrocarbons. Any contaminated soil located within grading operations or development areas shall be remediated in conformance with applicable federal, state and local laws, to the satisfaction of the California Department of Conservation, Division of Oil and Gas, the Los Angeles County Hazardous Materials Control Program, the South Coast Air Quality Management District, and/or the Regional Water Quality Control Board (Los Angeles region). Any pipeline to remain in use shall be assessed for hydrocarbon leakage.	Applicant (Civil Engineer and Pipeline Abandonment Specialist)	Receipt of Confirmation of Reabandon-ment Receipt and Review of Test Results or Verification of Remediation	1. California Department of Conservation, Division of Oil and Gas, Building and Safety 2. California Department of Conservation, Division of Oil and Gas, Building and Safety 3. Prior to Issuance of Grading Permits
LV-4.21-4. Prior to the issuance of grading permits, all scattered suspect asbestos-containing material debris located on the Landmark Village tract map property, the Adobe Canyon borrow site and the Chiquito Canyon grading site shall be disposed of in accordance with applicable federal, state and local requirements.	Applicant (Building Contractors)	Field Verification	1. LACDPW, Building and Safety 2. LACDPW, Building and Safety 3. Prior to Issuance of Grading Permits
LV-4.21-5. In the event that previously unidentified, obvious, or suspected hazardous materials, contamination, underground storage tanks, or other features or materials that could present a threat to human health or the environment are discovered during construction, construction activities shall cease immediately until the subject site is evaluated by a qualified professional. Work shall not resume until appropriate actions recommended by the professional have been implemented to demonstrate that contaminant concentrations do not exceed risk-based criteria.	Applicant (Building Contractors)	Field Verification	1. LACDPW, Building and Safety 2. LACDPW, Building and Safety 3. During All Phases of Construction

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.22 CULTURAL/PALEONTOLOGICAL RESOURCES			
SP 4.3-1. Any adverse impacts to California-LAN-2133, -2235, and the northern portion of -2233 are to be mitigated by avoidance and preservation. Should preservation of these sites be infeasible, a Phase III data recovery (salvage excavation) operation is to be completed on the sites so affected, with archaeological monitoring of grading to occur during subsequent soils removals on the site. This will serve to collect and preserve the scientific information contained therein, thereby mitigating all significant impacts to the affected cultural resource.	Applicant (Archaeologist)	Qualified Archaeologist Present During Grading Activities of Sites	1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. Prior to and During Grading Activities, as appropriate
SP 4.3-2. Any significant effects to California-LAN-2241 are to be mitigated through site avoidance and preservation. Should this prove infeasible, an effort is to be made to relocate, analyze and re-inter the disturbed burial at some more appropriate and environmentally secure locale within the region.	Applicant (Archaeologist)	Qualified Archaeologist Present During Grading Activities of site if not located before	1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. Prior to and During Grading Activities, as appropriate
SP 4.3-3. In the unlikely event that additional artifacts are found during grading within the development area or future roadway extensions, an archaeologist will be notified to stabilize, recover and evaluate such finds.	Applicant (Archaeologist)	Include this Measure in Subdivision Map Conditions if appropriate	1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. During Tentative Map Processing

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.22 CULTURAL/PALEONTOLOGICAL RESOURCES (cont.)			
SP 4.3-4. 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. Because of known presence of microvertebrates in the Saugus Formation, samples of at least 2,000 pounds of rock shall be taken from likely horizons, including localities 13, 13A, 14, and 23. These samples can be stockpiled to allow processing later to avoid delays in grading activities. The frequency of these samples will be determined based on field conditions. 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. Because of the long duration of the Specific Plan, a reassessment of the paleontological potential of each rock unit will be used to develop mitigation plans for subsequent subdivisions. The report 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 those rock units. 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.	Applicant (Archaeologist)	LA County Natural History Museum-Approved Inspector Present During Grading Activities	1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. During Grading Activities in the Pico Formation, Saugus Formation, Quaternary Terrace Deposits, and Quaternary Older Alluvium

Mitigation Measures/Conditions of Approval	Party Responsible for Implementing Mitigation	Monitoring Action	1. Enforcement Agency 2. Monitoring Agency 3. Monitoring Phase
4.22 CULTURAL/PALEONTOLOGICAL RESOURCES (cont.)			
LV 4.22-1. Although no other significant cultural resources were observed or recorded, all grading activities and surface modifications must be confined to only those areas of absolute necessity to reduce any form of impact on unrecorded (buried) cultural resources that may existing within the confines of the project area. In the event that resources are found during construction, activity shall stop and a qualified archaeologist shall be contacted to evaluate the resources. If the find is determined to be a historical or unique archaeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation should be available. 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).	Applicant (Archaeologist)	Construction Activity Stopped Qualified Archaeologist Contacted	1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. During Grading Activities, as appropriate
LV 4.22-2. For archeological sites accidentally discovered during 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).	Applicant (Archaeologist)	Construction Activity Stopped Qualified Archaeologist Contacted	1. LA County Department of Regional Planning 2. LA County Department of Regional Planning 3. During Grading Activities, as appropriate

9.0 LIST OF EIR PREPARERS, AND ORGANIZATIONS/PERSONS CONSULTED

The following persons and organizations were responsible for the content of this environmental impact report:

- **County of Los Angeles Department of Regional Planning**
  Role: Lead Agency

  Daryl Koutnik, Supervising Regional Planner
  Daniel Fierros, Regional Planning Assistant

- **Impact Sciences, Inc.**
  Role: Environmental Consulting and Environmental Impact Report

  Thomas Worthington, Principal
  Susan Tebo, Associate Principal, Project Manager
  Ken Koch, Associate Principal
  Rosemarie Mamaghani, AICP
  Minta Schafer, Staff Planner
  Julie Berger, Project Manager
  Josh Phillips, Biologist
  Keith Babcock, Principal and Director of Biology
  Christina Danko, Staff Planner
  Paul Manzer, Arts and Communications Director
  Leslie Fitzgerald, Production Manager
  Ian Hillway, Production Coordinator

- **Psomas**
  Role: Project Engineer

  Ross Barker, PE
  Peter Meisner, PE
  Sean Logal

The following individuals/agencies were contacted by letter, telephone or in person for information during the preparation of this environmental impact report:

- **California Air Resources Board**

  Patrick Gaffney, Air Pollution Specialist
  Marcy Nystrom

- **California Department of Water Resources**

  Vernon Persson, Chief of the Division of Safety of Dams

- **California Highway Patrol, Newhall Area Station**

  Captain D. F. Hoff, Commander
  Captain E. Conley, Commander
  Lieutenant Mark Odle
  Officer Michelle Esposito
  Lieutenant Todd Hoose

- **Castaic Union School District**

  Jamie Garcia

- **County of Los Angeles Department of Parks and Recreation**

  James Barber
  Lillie Lowery

- **County of Los Angeles Department of Public Works**

  Carlos Ruiz, Supervising Civil Engineer III, Head, Planning Section, Environmental Programs Division
  Rod Kubomoto, Watershed Management Division

- **County of Los Angeles Department of Regional Planning**

  Julie Striplin Lowry, Senior Regional Planning Assistant

- **County of Los Angeles Fire Department**

  David R. Leininger, Chief, Forestry Division, Prevention Bureau
  Danny Kolker, Planning Analyst, Planning Division
  Debbie Aguirre, Supervising Planning Analyst, Planning Division
  Frank Vidales, Assistant Chief, Forestry Division, Prevention Bureau

- **County of Los Angeles Office of Emergency Management**

  Bob Garrott, Assistant Manager

- **County of Los Angeles Public Library, Library Headquarters**

  Malou Rubio, Head, Staff Services
  Michele Mathieu
  Fred Hungerford, Staff Services
  Malaisha Hughs, Administrative Assistant III

- **County of Los Angeles Sanitation District**

  Basil Hewitt

- **County of Los Angeles Sheriff's Department, Santa Clarita Valley Station**

  Captain Patti A. Minutello
  Sergeant Carrie Stuart
  Deputy Sheriff Patrick A. Rissler
  Terri Beatty, Regional Allocation Police Services (RAPS) Coordinator

- **Lancaster Landfill**

  Kay Krumwied

- **South Coast Air Quality Management District**

  Charles Blankson, Ph.D.
  Randy Matsuyama, Air Quality Engineer II
  Steve Smith

- **Ventura County Public Works Agency, Flood Control Department**

  Alex Sheydayi, Deputy Director

- **William S. Hart Union High School District**

  Larna Baril

10.0 REFERENCES

The documents listed below are incorporated by this reference and are available for public review and inspection upon request to either: (1) Daryl Koutnik, Los Angeles County, Department of Regional Planning, 320 W. Temple Street, 13th Floor, Los Angeles, California 90012-3225, (213) 974-6461; or (2) Tom Worthington, Impact Sciences Inc., 803 Camarillo Springs Road, Suite A-1, Camarillo, California 93012, (805) 437-1900.

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