DRAFT ENVIRONMENTAL IMPACT REPORT
COUNTY OF LOS ANGELES PROJECT NO. 00-81
STATE CLEARING HOUSE NO. 2000071052
VESTING TENTATIVE TRACT MAP NO. 53189

VOLUME I
ENVIRONMENTAL IMPACT REPORT

County of Los Angeles
Department of Regional Planning
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Los Angeles, California 90012

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EXECUTIVE SUMMARY

INTRODUCTION

This Executive Summary has been prepared in accordance with Section 15123 of the California Environmental Quality Act (CEQA) Guidelines. This Draft Environmental Impact Report (EIR) has been prepared by the County of Los Angeles Department of Regional Planning to analyze the potential impacts on the environment resulting from the implementation of Project 00-81 Vesting Tentative Tract Map No. (VTTM) 53189 and Conditional Use Permit (CUP) 00-81. The EIR discusses alternatives to the proposed project and includes a mitigation program that will offset, minimize, or otherwise avoid significant environmental impacts.

The proposed project consists of 66 lots (60 single-family, 3 open space, and 3 public facility). The project site is located in the unincorporated County of Los Angeles north of the City of Santa Clarita. The project site is accessed regionally by Interstate 5 and/or State Route (SR 126) and is located north of Copper Hill Drive between San Francisquito Canyon Road on the east and the Tesoro del Valle residential development to the west. Local access to the project site is currently provided via San Francisquito Canyon Road to Lady Linda Lane, although upon completion of the project, access to the single-family lots on the project site will be possible only through the Tesoro del Valle development.

The project site is surrounded by open space to the west, ranchland to the north, east, and southeast, and the Tesoro del Valle residential development (currently under construction) to the west and southwest. The Tesoro del Valle project will eventually develop a large portion of the hillsides to the west and north of the project site. The proposed project would develop 60 single-family homes along two main streets; “A Street” runs north to south and “B Street” runs east to west, and the smaller “C Street”, which will provide access to Lots 6-12 as well as private property to the north of the project site. “A” and “B” Streets would connect to planned streets in the Tesoro del Valle project, which would ultimately connect to Copper Hill Drive. The southerly connection of “A Street” with “Stoney Creek Road” would be constructed first and provide the initial access to the site. No access to the single-family lots would be available via San Francisquito Canyon Road.

The approximately 186-acre project site is currently undeveloped vacant land with a few dirt roads traversing through the property. The County of Los Angeles has designated the San Francisquito Canyon Creek as Significant Ecological Area (SEA) No. 19, which flows north-south from the Angeles National Forest to the Santa Clara River and comprises a large portion of the eastern side of the project property. SEA No. 19 is considered sensitive partially due to the populations of unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*) found in San Francisquito Canyon Creek. The unarmored threespine stickleback is listed as a federal and state endangered species and requires clean, free-flowing perennial streams and ponds surrounded by natural vegetation. The portion of the San Francisquito Canyon Creek within the project boundary is an intermittent stream that is dry during the summer months.

Three large open space lots (including the SEA No. 19 within Lot 61) would comprise approximately 80 percent of the project site. The development footprint of the proposed project is located west of the SEA No. 19 boundary. The project site supports various vegetation communities which are described in Section 4.3, Biota, of this EIR.

The proposed project site is currently designated by the Santa Clarita Valley Area Plan (SCVAP) as Hillside Management Area (HM), Non-Urban 1 (N-1), and Floodway/Floodplain (W). The N1 designation includes 127 acres of the project site and allows a maximum of 0.5 dwelling units (du) per acre for slopes less than 50 percent (1 du per 20 acres for slopes

above 50 percent). The HM designation comprises 4.58 acres of the site and has the same dwelling unit requirements as the N1 designation. The W designation does not allow for development. Therefore, the SCVAP would allow for approximately 61 lots on the project site. The project site contains 60 proposed residential lots, which is in conformance with SCVAP requirements.

PROJECT IMPACTS AND MITIGATION MEASURES

Table ES-1 at the end of this section provides a summary of the potential environmental effects of the project, the recommended mitigation measures, and identifies any unavoidable adverse impacts. The reader is referred to the full text of this EIR as well as the technical appendices for a description of the environmental effects of the proposed project and the recommended mitigation measures.

The summary provided in Table ES-1 shows that the proposed project would result in potentially significant impacts to the following topical issues: Geotechnical Hazards, Fire Hazards, Water Quality, Air Quality, Biota, Cultural Resources, Traffic/Access, Sewage Disposal, Education Services, and Environmental Safety. After implementation of the mitigation program, the following impacts would remain significant:

- Air Quality – Emissions of NO_X on the Peak Day and the Peak Quarter during construction

PROJECT ALTERNATIVES

In accordance with Section 15126.6 of the CEQA Guidelines, Section 8.0 of this EIR includes an analysis of a reasonable range of alternatives that could feasibly attain the basic objectives of the project and evaluates the comparative merits of the alternatives. The following alternatives to the proposed project area evaluated in this EIR:

Alternatives Under Consideration:

- Alternative 1: No Project/No Development
- Alternative 2: Small Lot Alternative
- Alternative 3: 30 Large Lot Alternative
- Alternative 4: 52 Lot Alternative

Alternatives Considered and Eliminated:

- Alternative Location
- Large Lot Alternative

AREAS OF CONTROVERSY/ISSUES TO BE RESOLVED

CEQA requires a EIR to identify areas of controversy which are known to the lead agency, including issues raised by other agencies and the public. Areas of controversy associated with the proposed project are known through the responses to the Notice of Preparation as well as through an understanding of the issues in the Santa Clarita Valley area. Areas of controversy and issues to be resolved include the following:

- Potential impacts to the SEA No. 19 and associated wildlife/habitat,
- Ensuring an adequate water supply and potential impacts to water wells that supply neighboring ranches,
- Maintaining equestrian trail connections to existing trails and the Angeles National Forest,
- Potential water quality impacts to surface and groundwater,
- Proper handling of two abandoned oil wells located within property boundaries,
- Potential impacts to Native American archaeological resources, and
- Exposure of people and property to wildland fires.

TABLE ES-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

POTENTIAL IMPACTS	MITIGATION MEASURES	LEVEL OF SIGNIFICANCE AFTER MITIGATION
Geotechnical Hazards (Section 3.1)		
The compact footprint of the project design has reduced the extent of remedial alluvial removals anticipated as well as minimized the total graded area.		
Drainage devices (i.e. interceptor drain/concrete swale) shall be constructed at the mouth of the swale behind Lot 28 and Lot 29 to convey drainage and sediment to appropriate storm drain inlets.		
Manufactured slopes shall be contoured to conform to the natural topography to the greatest extent feasible.		
The project shall comply with the Uniform Building Code (UBC) and compliance shall be verified by the Department of Public Works prior to issuance of grading permits. Development on the project site shall comply with the applicable provisions of the UBC, which regulate the design and construction of excavations, foundations, retaining walls and other elements to control the effects of seismic ground shaking and adverse soil conditions.		
The project site is in a seismically active region and people and structures could be exposed to seismic ground shaking and secondary seismic-related impacts, including liquefaction.	MM 3.1-1 During construction, all grading and earthwork shall be conducted in conformance with the recommendations set forth in the geotechnical investigation and review sheets from A.G.I. Geotechnical, Inc.; shall be performed under the observation of a registered geotechnical engineer in order to achieve proper sub-grade preparation, selection of satisfactory materials, and placement and compaction of all engineered fill; and shall be verified by the Department of Public Works. MM 3.1-2 Removal of alluvial and colluvial soils shall be required during grading and prior to fill replacement. The removed soil shall be re-compacted as engineered fill in accordance with the recommendations in the Geotechnical Investigation and Response to Review Sheets by AGI Geotechnical, Inc.; shall be performed under the observation of a registered geotechnical engineer; and shall be verified by the Department of Public Works. The specific depth and extent of removals shall be determined during grading based upon observation and testing. Removal of compressible materials shall be required in areas planned for development.	Mitigated to a level less than significant.
Flood Hazards (Section 3.2)		
An underground bank stabilization levee system will be constructed below the graded pads along the existing floodplain boundary from the northern project boundary near Lady Linda Lane and southerly to Lot 46. The levee system would extend approximately 20 vertical feet below the ground and would be constructed with ungrouted rip-rap. Upon completion of the levee construction, the excavation would be entirely backfilled with existing creek soil and approximately four horizontal feet (2 vertical feet) of above ground levee “free board” space would be visible.		
Energy dissipaters will be constructed at every storm drain outlet that would drain into San Francisquito Canyon Creek in order to slow the flow velocity of concentrated discharges and to minimize potential erosion. The ultimate size and design of the energy dissipaters will be determined in the final design stages of the project according to the Los Angeles County Public Works Department standards.		

TABLE ES-1 (Continued)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION

POTENTIAL IMPACTS	MITIGATION MEASURES	LEVEL OF SIGNIFICANCE AFTER MITIGATION
Lots 34 through 44 are within the flood limits of Zone A as defined by FEMA; however, the recent on-site hydrology assessment concludes that the boundary is inaccurately depicted.	MM 3.2-1 Prior to approval of a grading permit, the project applicant shall submit a CLOMR to FEMA and receive a notice of approval from FEMA for the adjustment to the Zone A flood limits.	Mitigated to a level less than significant.
Fire Hazards (Section 3.3)		
In an effort to avoid off-site fuel modification, a six-foot solid fire wall will be located along the backyard property boundary of Lots 1 through 8 to provide adequate fire protection for these lots. This fire wall would negate the need for the off-site fuel modification Zone C.		
The proposed residential development is located within a Fire Zone 4 VHFHSZ and would be exposed to naturally vegetated open space, thereby increasing potential exposure to wildland fires.	MM 3.3-1 As required by Section 1117.2.1 of the County of Los Angeles Fire Code (Title 32), a fuel modification plan, landscape plan, and an irrigation plan shall be submitted to the Forestry Division and the County Department of Regional Planning and must be approved prior to the issuance of a grading permit. The project shall comply with the all applicable requirements of Los Angeles County Code Title 32, Fire Code.	Mitigated to a level less than significant.
	MM 3.3-2 The CC&Rs of the Homeowner's Association shall state that structures constructed with flammable materials are prohibited in the backyards of Lots 33 through 42 in order to maintain the 100-foot fuel modification buffer without impacting the SEA. The HOA shall enforce this requirement.	
	MM 3.3-3 Prior to issuance of a grading permit, the project applicant shall pay the required fire mitigation fee for fire services provided by the County of Los Angeles.	
Water Quality (Section 4.1)		
The project design includes three debris basins, desilting inlets, and fossil filter catch basins inserts to satisfy the Los Angeles County Department of Public Works SUSMP requirements.		
Energy dissipaters will be installed at stormwater discharge locations to minimize erosion in the San Francisquito Canyon Creek.		
Manufactured slopes shall be landscaped with native, drought tolerant vegetation as soon as practicable after completion of grading to reduce potential erosion and sediment discharges.		

TABLE ES-1 (Continued)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION

POTENTIAL IMPACTS	MITIGATION MEASURES	LEVEL OF SIGNIFICANCE AFTER MITIGATION
During construction, the proposed project may significantly impact water quality by causing soil erosion and releasing vehicle-related pollutants into downstream waters during storm events.	MM 4.1-1 Prior to the issuance of a grading permit, the project applicant shall be responsible for filing a Notice of Intent and the appropriate fees to the State Water Quality Control Board in order to obtain coverage under the NPDES General Construction Permit for construction activities. Pursuant to the permit requirements, the project applicant shall develop a Stormwater Pollution Prevention Plan that incorporates Best Management Practices, including sandbags along roadways and temporary desilting basins, for minimizing construction related pollutants in the site runoff.	Mitigated to a level less than significant.
The proposed project would increase the amount non-point source pollutants in the surface runoff from the site. Increased urban pollutants carried from the project site runoff to the Santa Clara River would result in potentially significant surface water quality impacts.	MM 4.1-2 Prior to issuance of a grading permit, the project applicant shall apply for annexation into the service area of the Los Angeles County Sanitation District No. 36. The proposed project will comply with the Los Angeles County Sanitation District No. 36 requirements that prohibit the installation of self-regenerating water softeners. The Homeowner's Association CC&Rs shall specifically prohibit the use of self-regenerating water softeners.	Mitigated to a level less than significant.
	MM 4.1-3 All storm drain inlets and catch basins with the project area shall be stenciled with prohibitive language (such as: NO DUMPING – DRAINS TO OCEAN) and/or graphical icons to discourage illegal dumping. Signs and prohibitive language shall be posted at public access points along the San Francisquito Canyon Creek within the project area and all signs and stenciled shall be maintained by the Homeowner's Association.	
	MM 4.1-4 The use of herbicides and pesticides will be prohibited from use on the manufactured slopes adjacent to the rear of Lots 33 through 51 along the SEA. The CC&Rs of the Homeowner's Association will specifically prohibit the use of such chemicals by the landscape contractors hired by the HOA to maintain the common areas on the site.	

TABLE ES-1 (Continued)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION

POTENTIAL IMPACTS	MITIGATION MEASURES	LEVEL OF SIGNIFICANCE AFTER MITIGATION
The proposed project would increase the amount non-point source pollutants in the surface runoff from the site, which has the potential to infiltrate into the Alluvial Aquifer, which would result in potentially significant water quality impacts.	MM 4.1-2 and SC 4.1-3 mitigates for this impact.	Mitigated to a level less than significant.
Air Quality (Section 4.2)		
Without mitigation, NO_X and PM_{10} emissions during construction activities would be significant in the peak day and in the peak quarter.	MM 4.2-1 Per the SCAQMD Rule 403 Implementation Handbook, the project applicant shall implement the following BMPs to minimize fugitive dust emissions. This requirement shall be included in the construction plans and verified by the County Engineer. • Visible roadway dust tracked from the project site to public paved roadways as the result of active operations shall be removed at the conclusion of each workday. • Gravel or a comparable substance shall be placed at the entrance to the project site to remove excess dust and debris from the tires of construction vehicles. • Bulk material tracked onto paved public roadways should either be prevented or removed within one hour. MM 4.2-2 The project applicant will require that all coatings are SCAQMD-compliant and will use pre-coated materials to the extent feasible.	Mitigation measures would reduce daily and quarterly PM_{10} emissions during construction activities to a level below the SCAQMD threshold for significance. However, NO_X emissions would remain significant in both the peak day and in the peak quarter after mitigation. All other emissions, including operational emissions, would be less than significant.

TABLE ES-1 (Continued)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION

POTENTIAL IMPACTS	MITIGATION MEASURES	LEVEL OF SIGNIFICANCE AFTER MITIGATION
	MM 4.2-3 The following mitigation measures used in the URBEMIS 2002 model will reduce PM_{10} fugitive dust emissions and equipment gaseous emissions. • Apply soil stabilizers to inactive areas. • Replace ground cover in disturbed areas quickly. • Water exposed surfaces three times daily. • Cover all stockpiles with tarps. • Water all haul roads three times daily. • Reduce speed on unpaved roads to 15 miles per hour. • Turn off equipment when not in use for longer than 5 minutes.	
Biota (Section 4.3)		
As a condition of approval for the project, the three open space parcels (Nos. 61, 62, and 63) will be shown on the proposed Tentative Tract Map as open space and will be granted to the County of Los Angeles and will remain as open space in perpetuity.		
As a standard condition of approval for the project, levee construction will be conducted outside of the rainy season and will avoid any ponded water potentially present on the project site.		

TABLE ES-1 (Continued)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION

POTENTIAL IMPACTS	MITIGATION MEASURES	LEVEL OF SIGNIFICANCE AFTER MITIGATION
Special Status Vegetation: The proposed project would result in the loss of coastal sage scrub, holly-leaf cherry woodland, and alluvial sage scrub.	MM 4.3-1 The loss of coastal sage scrub, holly-leaf cherry woodland, and alluvial sage scrub (i.e., proposed roadway expansion) within the impact area is considered a significant impact. These vegetation types will be restored onsite or, if appropriate, offsite at a ratio of not less than 1:1, as agreed to by the County of Los Angeles Department of Regional Planning and the Project Applicant. A revegetation program will be implemented in accordance with a County-approved landscape palette on all graded areas not utilized for improvements or structures. The revegetation program will be submitted to the County of Los Angeles Department of Regional Planning for review and approval by a qualified biologist prior to issuance of grading permits. Restoration will consist of seeding and container planting of appropriate species. Impacts are considered less than significant after implementation of the following measures: A detailed restoration program will be developed prior to map recordation and implemented and will contain the following items: a. Responsibilities and qualifications of the personnel to implement and supervise the plan. The responsibilities of the landowner, specialists, and maintenance personnel that will supervise and implement the plan will be specified. b. *Site selection*. The site(s) for mitigation will be determined in coordination with the project applicant and the Los Angeles Department of Regional Planning. The site will be located in a dedicated open space area and will be contiguous with other natural open space areas. c. *Site preparation and planting implementation*. The site preparation will include: 1) protection of existing native species, 2) trash and weed removal, 3) native species salvage and reuse (i.e., duff), 4) soil treatments (i.e., imprinting, decompacting), 5) erosion control measures (i.e., rice or willow wattles), and 6) native seed mix application. d. *Schedule.* Establishment of restoration/revegetation sites will be conducted between October 1st and January 30th. Seeding and planting of container plants will take place immediately after preparation of the restoration sites.	Mitigated to a level less than significant.

TABLE ES-1 (Continued)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION

POTENTIAL IMPACTS	MITIGATION MEASURES	LEVEL OF SIGNIFICANCE AFTER MITIGATION
	e. Maintenance plan/guidelines. The maintenance plan will include: 1) weed control, 2) herbivory control, 3) trash removal, 4) irrigation system maintenance, 5) maintenance training, and 6) replacement planting. f. Monitoring Plan. The monitoring plan will include: 1) qualitative monitoring (i.e., photographs and general observations), 2) quantitative monitoring (i.e., randomly placed transects), 3) performance criteria as approved by the County, 4) monthly reports for the first year and bimonthly reports thereafter, and 5) annual reports which will be submitted to the County for three to five years. The monitoring will be conducted for three to five years, depending upon the performance of the mitigation site. g. Long-term preservation. Long-term preservation of the site will be outlined in the conceptual mitigation plan to ensure the mitigation site is not impacted by future development. h. Performance standards will be identified and will apply for the revegetation of sage scrub. Revegetation will be considered successful at three years if the percent cover and species diversity of the restored and/or created habitat areas are similar to percent cover and species diversity of adjacent existing habitats, as determined by quantitative testing of existing, restored, and created habitat areas. In addition, earth-moving equipment will avoid maneuvering in areas outside the identified limits of grading in order to avoid disturbing open space areas that will remain undeveloped. Prior to grading, the construction boundary limits will be marked by the construction supervisor and the project biologist. These limits will be identified on the grading plan. The applicant will submit a letter to the County of Los Angeles verifying that construction limits have been flagged in the field. No earth-moving equipment will be allowed outside the construction boundary.	

TABLE ES-1 (Continued)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION

POTENTIAL IMPACTS	MITIGATION MEASURES	LEVEL OF SIGNIFICANCE AFTER MITIGATION
ACOE and CDFG Jurisdiction Areas: The proposed project would result in impacts to approximately 0.41 acre of non-wetland ACOE and CDFG jurisdictional waters.	MM 4.3-2 Upon completion of construction activities, impacts to approximately 0.17 acre of non-wetland ACOE and CDFG jurisdictional waters will be mitigated within the project boundaries through the creation of 0.17 acre of non-wetland jurisdictional waters. In addition to this assurance of "no net loss" of ACOE and CDFG jurisdictional area within the project boundaries, another 0.17 acre of non-wetland jurisdictional area will be restored or enhanced on the project site for a total of 2:1 replacement. Acquisition of a Section 404 "dredge and fill" permit from the ACOE (possibly through the use of Nationwide Permit No. 39), a Section 1602 "streambed alteration" permit from the CDFG, and a Section 401 water quality certification or waiver will be obtained from the Regional Water Quality Control Board. Prior to the final submittal of an application for an ACOE permit or CDFG agreement, the Project Applicant will develop a mitigation plan for the ACOE, CDFG, and Los Angeles Department of Regional Planning. The objective of the mitigation is to ensure no net loss of habitat values as a result of the project. The detailed restoration program will contain the following items: a. Responsibilities and qualifications of the personnel to implement and supervise the plan. The responsibilities of the landowner, specialists and maintenance personnel that would supervise and implement the plan will be specified. b. *Site selection.* The site(s) for the mitigation will be determined in coordination with the project applicant and resource agencies. The site will be located in a dedicated open space area and will be contiguous with other natural open space. c. *Site preparation and planting implementation.* The site preparation will include: 1) protection of existing native species, 2) trash and weed removal, 3) native species salvage and reuse (i.e. duff), 4) soil treatments (i.e., imprinting, decompacting), 5) temporary irrigation installation, 6) erosion control measures (i.e., rice or willow wattles), 7) native seed mix application, and 8) native container species.	Mitigated to a level less than significant.

TABLE ES-1 (Continued)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION

POTENTIAL IMPACTS	MITIGATION MEASURES	LEVEL OF SIGNIFICANCE AFTER MITIGATION
	d. *Schedule.* A schedule will be developed which includes planting to occur in late fall and early winter, between October 1st and January 30th. e. *Maintenance plan/guidelines.* The maintenance plan will include: 1) weed control, 2) herbivory control, 3) trash removal, 4) irrigation system maintenance, 5) maintenance training, and 6) replacement planting. f. *Monitoring Plan.* The monitoring plan will include: 1) qualitative monitoring (i.e., photographs and general observations), 2) quantitative monitoring (i.e., randomly placed transects), 3) performance criteria as approved by the resource agencies, 4) monthly reports for the first year and bimonthly reports thereafter, and 5) annual reports which will be submitted to the resource agencies for three to five years. The site will be monitored and maintained for five years to ensure successful establishment of riparian habitat within the restored and created areas; however, if there is successful coverage prior to five years, the Project Applicant may request from ACOE and CDFG to be released from monitoring requirements. g. *Long-Term Preservation*. Long-term preservation of the site will be outlined in the conceptual mitigation plan to ensure the mitigation site is not impacted by future development. h. Performance standards will be identified and will apply for the restoration of riparian habitat. Revegetation will be considered successful at three years if the percent cover and species diversity of the restored and/or created habitat areas are similar to percent cover and species diversity of adjacent existing habitats, as determined by quantitative testing of existing and restored and/or created habitat areas. This revegetation/enhancement plan may be combined with the revegetation plan required by Mitigation Measure 4.3-1, if appropriate.	Mitigated to a level less than significant.

TABLE ES-1 (Continued)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION

POTENTIAL IMPACTS	MITIGATION MEASURES	LEVEL OF SIGNIFICANCE AFTER MITIGATION
Braunton's Milk-Vetch: Braunton's milk-vetch was not observed during focused surveys in Spring 2004. However, because it may germinate following initial grading activities and/or any other soil disturbance, the potential for this plant to occur on site exists. Should this plant germinate and establish itself, significant impacts to this species would occur.	MM 4.3-3 Braunton's milk-vetch was not detected during the special status plant surveys. Prior to issuance of a grading permit, a follow-up survey for this species will be conducted in any area partially disturbed for surveyor access or geotechnical studies, or areas that may have recently burned in a wildfire. If Braunton's milk vetch is found in the study area during follow-up surveys, the applicant will be required to consult with the USFWS and CDFG to obtain a permit under Section 7 or 10(a) of the federal Endangered Species Act and a Section 2081 concurrence from CDFG under the state Endangered Species Act to impact this species. The consultation process will include preparation of a mitigation plan to avoid, relocate, or minimize impacts on this species. This plan will be submitted to and approved by the USFWS and CDFG.	Mitigated to a level less than significant.
Slender Mariposa Lily: Due to the presence of suitable habitat or substrate, the potential for the slender mariposa lily to occur on the project site exists and any impacts to such species would be considered significant.	MM 4.3-4 Slender mariposa lilies (Calochortus clavatus ssp. gracilis), possibly hybridized with club-haired mariposa lilies (Calochortus clavatus ssp. clavatus), have been observed during special status plant surveys on the site. Impacts on the slender mariposa lily population are considered significant under the CEQA, but can be mitigated to a level less than significant by the following measures. a. Preparation and Submittal of Mitigation Plan: A Mitigation Plan will be prepared by a qualified biologist. The plan will include: 1) a summary of mitigation area conditions; 2) a discussion of the mitigation program and anticipated success; 3) guidelines for mitigation area preparation; 4) guidelines for bulb collection; 5) guidelines for transporting and replanting salvaged bulbs; 6) guidelines for long-term site maintenance and performance monitoring, 7) site status documentation; and 8) a discussion of site performance standards such as survival rate.	Mitigated to a level less than significant.

TABLE ES-1 (Continued)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION

POTENTIAL IMPACTS	MITIGATION MEASURES	LEVEL OF SIGNIFICANCE AFTER MITIGATION
	b. Collection and Transplantation of Bulbs: Prior to any ground-disturbing activities, the slender mariposa lily population located within the project impact area will be transplanted to an onsite mitigation area. The mitigation area is located in Open Space Lot 62 and is outside of the proposed grading footprint and fuel modification areas. The bulbs will be transplanted directly into the mitigation area on the same day they are collected by a landscape contractor experienced in native habitat maintenance, and the plants will be protected from herbivores by the installation of wire cages. c. Supervision and Documentation of Transplantation: Bulb transplantation efforts will be documented by a biological monitor, who will keep field notes including the number and condition of bulbs transplanted. d. Establishment of Maintenance and Monitoring Plan: Performance criteria and remediation measures will be reviewed and approved by the County. Program monitoring will occur over a five-year period, including qualitative monitoring visits during the first season after transplant, monthly visits during the first lily blooming season (February – June 2006) to assess establishment success, non-native species coverage, and general site conditions, and additional monitoring visits to assess site conditions that may affect future success of lily establishment.	
Western spadefoot tadpoles have been observed on the project site in two ponds that would be impacted by grading for the project.	Remedial measures, such as invasive species control or soil amendments, will be recommended as needed in a timely manner to facilitate compliance with required performance standards. Any necessary contingency planting would be performed using seeds collected from adjacent lily populations located on the site, outside the project impact area.	Mitigated to a level less than significant.

TABLE ES-1 (Continued)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION

POTENTIAL IMPACTS	MITIGATION MEASURES	LEVEL OF SIGNIFICANCE AFTER MITIGATION
	MM 4.3-5 A relocation program for the western spadefoot will be conducted during the spring prior to construction at the height of the breeding season for this species (February through May and as determined by a qualified biologist monitoring a known location of this species). A detailed methodology for this effort will be submitted and approved by CDFG prior to implementation of the relocation program. Results of the relocation program will be provided to CDFG and the County of Los Angeles. The intent of the relocation plan will be to capture and relocate as many western spadefoots as possible. Western spadefoots will be relocated to an area of suitable habitat that takes into consideration habitat requirements for all life stages of the toad, as approved by CDFG. The site will be granted to the County of Los Angeles and will be located in an area of preserved open space protected from future development. The relocation breeding pool will be no smaller in size, and similar or better in quality, as the habitat within the project impact area where the western spadefoots are captured.	
Reptiles and Amphibians: Construction activities including the graded pads, roadways, and future fuel modification zones would directly impact coast horned lizard, coastal western whiptail, ringneck snake, coast patch-nosed snake, and loggerhead shrike.	MM 4.3-6 A qualified biologist, approved by the County, will install pit-fall traps and arrays beginning at least one week prior to the commencement of vegetation removal. The qualified biologist will be present to monitor the traps during vegetation removal and will also opportunistically salvage and relocate the coastal western whiptail as well as other special status amphibians and reptiles to similar habitat within proposed open space in San Francisquito Canyon.	Mitigated to a level less than significant.
Nesting Birds: Brush management and landscape activities would potentially impact birds nesting in the immediate area.	MM 4.3-7 Trimming of some native plants and clearing of non-native invasive species for fuel modification, will be monitored by a qualified biologist if it occurs during the peak bird nesting season. If possible, dependent upon the growth cycle of targeted annuals and the requirements of the Fire Department, brush management will be conducted outside of the peak bird nesting season (March 15 to September 15) to ensure that potential impacts to nesting birds are avoided.	Mitigated to a level less than significant.

TABLE ES-1 (Continued)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION

POTENTIAL IMPACTS	MITIGATION MEASURES	LEVEL OF SIGNIFICANCE AFTER MITIGATION
Native Plants: The planting of non-native or invasive species adjacent to natural areas could significantly impact existing native vegetation.	MM 4.3-8 Prior to the issuance of a grading permit, a Landscape Plan, prepared by HRP LanDesign, will be submitted and approved by the Los Angeles County Department of Regional Planning. The Landscape Plan requires the planting of native, drought tolerant plant species. Implementation of the Landscape Plan and brush management requirements will be coordinated with the project biologist and approved by the Los Angeles Department of Regional Planning.	Mitigated to a level less than significant.
Raptor Nesting: Nesting raptors would potentially incur temporary short-term impacts from construction noise if present in the vicinity of the proposed project, and would potentially be temporarily displaced due to these disturbances.	MM 4.3-9 Seven days prior to the start of construction activities, a qualified biologist will conduct a survey to determine if any raptors are nesting in or adjacent to the impact area. If nesting is not occurring, construction work can proceed. If an active nest is present, construction work will be prohibited within 500 feet of the nest (or as otherwise determined and approved by Department of Regional Planning biologist) until fledglings have left the nest. Results of the surveys will be provided to CDFG and the County.	Mitigated to a level less than significant.
Urban pollutants: Improper disposal of petroleum and chemical products from construction equipment (temporary) could adversely affect water quality and, in turn, affect populations of species in San Francisquito Creek and other downstream areas within SEA No. 19.	MM 4.3-10 Prior to the issuance of a grading permit, the Project Applicant will apply for coverage under the State Water Resources Control Board's General Permit for Storm Water Discharge Associated with Construction Activity (Construction Activities General NPDES Permit) and will comply with all the provisions of the permit, including the development of a Storm Water Pollution Prevention Plan, which includes provisions for the implementation of Best Management Practices and erosion control measures. Best Management Practices will include both structural and non-structural measures. The purpose of this mitigation measure is to insure that site runoff does not adversely affect SEA No. 19 and downstream biological resources.	Mitigated to a level less than significant.
Night Lighting: Lighting of the homes and yards in the proposed development would potentially spill over into SEA No. 19 and adversely affecting the behavioral patterns of nocturnal and crepuscular (i.e., active at dawn and dusk) wildlife in this area.	MM 4.3-11 The Codes, Covenants and Restrictions (CC&Rs) of the Homeowner's Association (HOA) shall require that all backyard lighting in Lot 33 through Lot 51, which are adjacent to the SEA No. 19, must not be directed into the SEA. For these lots, all backyard lighting must be mounted to the home structure and may not be freestanding or placed on backyard fences.	Mitigated to a level less than significant.

TABLE ES-1 (Continued)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION

POTENTIAL IMPACTS	MITIGATION MEASURES	LEVEL OF SIGNIFICANCE AFTER MITIGATION
Human activity: The potential for intrusion into the SEA from human activity and domestic pets could result in significant indirect impacts to the biological resources of the SEA.	MM 4.3-12 The portion of SEA No. 19 located within the proposed project site will be recorded as Open Space Lot No. 61 with approval of the Tentative Tract Map. Backyard fencing will be constructed behind all lots to protect open space areas, including the SEA No. 19 upon completion of site preparation and grading. This fencing would be required in order to prevent intrusion by future residents of the development and their pets. The fencing will discourage people and pets from entering the SEA. The fence will include permeable materials (i.e., wrought iron) in order to maintain view from the properties. Signs will be evenly spaced along the western edge of the SEA near Lot 33 through Lot 51 indicating that areas on the other side of the signs contain sensitive biological resources. The signs will be installed and maintained throughout the life of the project by the HOA. The CC&Rs of the HOA shall disclose the existence of the SEA and the responsibility each homeowner has for ensuring its protection.	Mitigated to a level less than significant.
If street lighting would be installed along San Francisquito Canyon Road, the lighting may adversely affect the behavioral patterns of small-ground-dwelling animals that use the darkness to hide from predators, and on owls, which are specialized night foragers. Indirect impacts as a result of the proposed project are considered potentially significant prior to mitigation. .	MM 4.3-13 Should lighting be required by the County to illuminate San Francisquito Canyon Road upon widening of the roadway, a lighting plan will be submitted to the County for review prior to approval of the roadway project. The lighting plan shall demonstrate that illumination from the proposed road expansion will be directed away from natural open space areas on and adjacent to the project impact area. If the County determines that the proposed lighting plan would potentially indirectly impact adjacent biological resources, the lighting plan will be redesigned or additional mitigation consistent with Mitigation Measure 4.3-15 will be required.	Mitigated to a level less than significant.

TABLE ES-1 (Continued)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION

POTENTIAL IMPACTS	MITIGATION MEASURES	LEVEL OF SIGNIFICANCE AFTER MITIGATION
Oak trees: Construction of the proposed San Francisquito Road and/or Cliffie Stone trail could impact 0.1 acre of coast live oak woodland.	MM 4.3-14 Prior to the initiation of the San Francisquito Road expansion and/or the Cliffie Stone Trail construction, a tree survey will be conducted within the area of the proposed roadway expansion and trail area. All trees meeting the County Oak Tree Ordinance requirements will be tagged, mapped, and evaluated to determine the approximate number of trees that would be impacted. Project design will be altered to avoid and minimize impacts on oak trees to the extent practicable, particularly if a heritage tree would be impacted. The heritage trees on the project site are adjacent to the proposed road alignment. Upon approval of the final design plans for the proposed roadway and trail alignment, the Project Applicant will develop a detailed oak woodland mitigation plan and submit the plan to the County for review and approval. The objective of the mitigation plan is to ensure no net loss of habitat values as a result of the project implementation. Required replacement trees shall be in the ratio of at least 2:1, consistent with the Los Angeles County Oak Tree Ordinances (Ord. 88-0157, adopted September 13, 1988). The mitigation plan shall require that a biological monitor be present during project grading to record the exact number of native trees impacted.	Mitigated to a level less than significant.
Special Status Species for San Francisquito Road Expansion and Cliffie Trail: Direct impacts on special status plant and wildlife species for the proposed road expansion and trail construction have not been determined.	MM 4.3-15 Prior to the issuance of a grading permit for the construction of the San Francisquito Road expansion and/or the Cliffie Stone Trail, special status plant and wildlife surveys will be conducted. The results of these surveys and associated mitigation will be submitted to Los Angeles County Regional Planning Department for approval.	Mitigated to a level less than significant.
Construction of the levee system has the potential to impact biological resources in the SEA No. 19.	MM 4.3-16 Upon completion of the levee construction, the excavation area shall be entirely backfilled with existing San Francisquito Creek soil and only the four horizontal feet of above ground levee “free board” space would be visible. The impacted area shall be restored onsite with alluvial sage scrub habitat in accordance with the requirements of the County of Los Angeles Department of Regional Planning approved revegetation program. The levee shall be constructed with ungrouted rip-rap, which would allow for percolation of water, accumulation of transported soils, and establishment of plant life.	Mitigated to a level less than significant.

TABLE ES-1 (Continued)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION

POTENTIAL IMPACTS	MITIGATION MEASURES	LEVEL OF SIGNIFICANCE AFTER MITIGATION
Cultural Resources (Section 4.4)		
Grading and excavation activities could significantly impact paleontological resources on the site, due to deep excavations within the development footprint and grading in the hills and ridges of the western and northern portions of the tract.	MM 4.4-1 In accordance with PRC 5097.94, if human remains are found, construction activity in the area of the find must halt and the Los Angeles County coroner must be notified within 24 hours of the discovery. If the coroner determines that the remains are not recent, the coroner will notify the Native American Heritage Commission for consultation. MM 4.4-2 The applicant shall agree to suspend construction in the vicinity of an archaeological resource encountered during ground-disturbing activities at the site and leave the resource in place until a qualified archaeologist can examine them and determine appropriate mitigation measures. MM 4.4-3 A qualified paleontologist shall be retained to attend pre-grade meetings and to monitor earthmoving activities, including grading and trenching below a depth of eight feet in lower alluvial areas of the site and all grading and cutting in elevated hilly areas of the site. If fossil resources are uncovered, a subsurface evaluation may be needed to assess the discovery. In the event that fossils are exposed, the paleontologist shall be allowed to temporarily divert or re-direct grading in the area of the exposure to recover potentially significant fossils. Because the Saugus Formation is known to contain tiny microfossils, the paleontologist should periodically screen sediment samples in order to identify these resources. Excavated significant fossil finds shall be offered, on a first right-of-refusal basis, to a repository with a retrievable collection system and an educational and research interest in the materials such as the Natural History Museum of Los Angeles County.	Mitigated to a level less than significant.
Visual Qualities (Section 4.5)		
Approximately 80 percent of the project site is preserved as open space in Lots 61, 62, and 63. Approximately 122.6 acres, or 66 percent of the project site, would remaining as undisturbed open space not impacted by fuel modification, in order to maintain the natural and aesthetic features of the project site.		
The final configuration of the Cliffie Stone Trail and the Butterfield Overland Stage Trail will be determined by the County of Los Angeles Parks and Recreation Department. The trails will not traverse the SEA and it is the intent of the applicant that the trails shall avoid oak tree impacts.		

TABLE ES-1 (Continued)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION

POTENTIAL IMPACTS	MITIGATION MEASURES	LEVEL OF SIGNIFICANCE AFTER MITIGATION
The majority of the landform and topography changes would not substantially alter the character of the site and there would not be any engineered fill slopes that would obstruct views. However, the grading hillside areas would necessitate a variety of manufactured slope areas that would reduce/alter the ridgetops of the surrounding hills.	MM 4.5-2 At the completion of construction activities, all manufactured slope areas shall be landscaped. Landscaping plans for the project site would use native vegetation (i.e., oaks, coastal sage scrub) on manufactured slopes that are adjacent to naturally vegetated areas to minimize the potential visual impacts of development. The plan materials, placement, and maintenance of the native revegetation would be approved by the Fire Department, Department of Regional Planning, and by the project biologist. The manufactured slope behind Lots 31, 32, and 33 would be constructed at a 3:1 grade to ensure slope stability and to minimize potential erosion along the hillside area. This manufactured slope shall be contoured to reflect the natural topography to the greatest extent feasible in order to enhance the aesthetic qualities of the slope area.	Mitigated to a level less than significant.
Traffic/Access (Section 5.1)		
The implementation of the proposed project would contribute to a cumulatively considerable traffic impact at the intersection of McBean Parkway and Copper Hill Drive during the AM and PM hours.	MM 5.1-1 Prior to the issuance of occupancy permits, the project applicant will contribute its pro-rata fair share (1.3 percent) of the costs of restriping the McBean Parkway and Copper Hill Drive intersection.	Mitigated to a level less than significant.
Sewage Disposal (Section 5.2)		
The proposed project would result in the generation of approximately 0.0156 million gallons per day (15,600 gallons per day) of wastewater to be treated by the SCVJSS. Though this facility would be able to handle the additional increase from the proposed project alone, the facility would be under pressure to expand to accommodate wastewater generated by related and future projects including the existing flows from the proposed project.	MM 5.2-1 Prior to the issuance of connection permits and building, the project applicant shall pay connection fees to the County Sanitation Districts of Los Angeles County.	Mitigated to a level less than significant.
	MM 5.2-2 After approval of the annexation by the Board of Directors of County Sanitation District No. 32 of Los Angeles County and prior to the issuance of occupancy permits, the project applicant shall pay annexation fees to the County Sanitation Districts of Los Angeles County.	Mitigated to a level less than significant.
Education (Section 5.3)		
Saugus Union School District is currently at capacity and the projected increase in enrollment of 25.86 new students would cause a significant impact.	MM 5.3-1 Prior to the issuance of a grading permit, the project applicant shall pay developer fees to the Saugus Union School District pursuant to the requirements established in SB50.	Mitigated to a level less than significant.

TABLE ES-1 (Continued)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION

POTENTIAL IMPACTS	MITIGATION MEASURES	LEVEL OF SIGNIFICANCE AFTER MITIGATION
William S. Hart School District is currently at capacity and the projected increase in enrollment of 26.2 new students would cause a significant impact.	MM 5.3-2 Prior to the issuance of a grading permit, the project applicant shall pay developer fees to the William S. Hart School District pursuant to the requirements established in SB50, or shall negotiate a separate agreement with the WHSD for school mitigation.	Mitigated to a level less than significant.
The growth in demand for library services (approximately 510 library items, 93 square feet of space, and 0.2 computers) resulting from the proposed project would significantly impact the County of Los Angeles Public Library system and service capabililties.	MM 5.3-3 Prior to the issuance of a grading permit, the project applicant shall pay the Facilities Mitigation Fee Program for library services.	Mitigated to a level less than significant.
Water Utilities (Section 5.4)		
The provision of water service to the project site could be denied unless conducted according to the Newhall County Water District's requirements and policies.	MM 5.4-1 Prior to issuance of a grading permit, The developer shall submit to the NCWD all plans, designs, and fire department regulations for the development in order that the NCWD may design the necessary water system facilities required for the development in accordance with the NCWD's Rules and Regulations; or, at the NCWD's option, the water system may be designed by the developer, subject to the NCWD's review and approval.	Mitigated to a level less than significant.
	MM 5.4-2 Prior to the issuance of a grading permit, the developer shall grant the NCWD any and all easements required for water service, together with a policy of title insurance, satisfactory to the NCWD, guaranteeing the NCWD's title to such easements.	Mitigated to a level less than significant.
	MM 5.4-3 Prior to the issuance of a grading permit, the developer shall, in accordance with the NCWD's Rules and Regulations, and any required Water Service Agreement, pay all required fees and charges, including any required deposit amount in order to process plans, design and complete construction of required on-site and off-site improvements, and if NCWD elects to design the water system, all costs and expenses of design.	Mitigated to a level less than significant.

TABLE ES-1 (Continued)
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION

POTENTIAL IMPACTS	MITIGATION MEASURES	LEVEL OF SIGNIFICANCE AFTER MITIGATION
Environmental Safety (Section 6.1)		
The abandoned oil wells on-site may pose a hazard to future development if it is determined that the abandonment procedures were not adequate.	MM 6.1-1 Prior to issuance of a grading permit, the two abandoned oil wells on the project site will be re-abandoned according to current California Department of Conservation, Division of Oil, Gas, and Geothermal Resources standards. Vegetation temporarily impacted by the re-abandonment process will be reseeded with native plant material mix.	Mitigated to a level less than significant.

SECTION 1.0 INTRODUCTION

1.1 PURPOSE OF THE EIR

This Draft Environmental Impact Report (EIR) has been prepared for the County of Los Angeles Project No. 00-81 pursuant to the California Environmental Quality Act (CEQA) Guidelines to evaluate the potential project-specific and cumulative environmental impacts that could result from the implementation of the proposed project. Pursuant to Section 15121 of the CEQA Guidelines, this EIR is an informational document that would inform public agency decision makers and the public generally of the significant environmental effect of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the proposed project that would reduce or avoid potentially significant impacts. The decision makers would consider the information in this EIR before taking action on the proposed project. This EIR may constitute substantial evidence in the record to support the agency's action on the project.

The County of Los Angeles (County) is the Lead Agency under CEQA and is responsible for preparing the Project No. 00-81, Vesting Tentative Tract Map (VTTM) 53189 EIR. For each significant impact identified in the EIR, the County must make findings and, if appropriate, prepare a statement of overriding considerations if mitigation presented does not reduce impacts below a level of significance. Other responsible agencies discussed in the following section would use this EIR in their discretionary approval processes involving issuance of the required permits.

1.2 PROJECT APPROVAL ACTIONS

The County and the responsible agencies identified below are expected to use the information contained in this EIR during their respective deliberations. This EIR has been prepared to support the discretionary actions and approvals necessary for implementation of the proposed project. The proposed project would require the following approvals and permits:

TABLE 1-1
REQUIRED APPROVALS AND PERMITS

DISCRETIONARY APPROVAL OR PERMIT	AGENCY	STATUS
Vesting Tract Map	County of Los Angeles	Lead Agency
Conditional Use Permit (Hillside Management, SEA, Density Controlled, Highway Realignment)	County of Los Angeles	Lead Agency
Section 404 Permit	U.S. Army Corps of Engineers	Responsible Agency
Streambed Alteration Agreement (1603)	California Dept. of Fish and Game	Responsible Agency
Section 401 Water Quality Certification	State Water Resources Control Board	Responsible Agency

1.3 INITIAL STUDY AND NOTICE OF PREPARATION

In compliance with the CEQA Guidelines, the County conducted an Initial Study of the proposed project and determined that a EIR would be the appropriate environmental document to analyze the project's potential impacts to the environment. In June 2000, the County prepared an Initial Study for a previous project site design for Project No. 00-81, VTTM 53189 that included residential homes along the eastern edge of San Francisquito Canyon. A Notice of Preparation (NOP) and the Initial Study were circulated between July 13, 2000 and August 11, 2000 for a

30-day public review period to the responsible and interested agencies and key interest groups to solicit comments and inform the public of the proposed project.

A new Initial Study was prepared in July 2003 to evaluate a revised site design. The new Initial Study was not circulated, as it was determined that the 2000 and the 2003 proposed designs were sufficiently similar so as not to warrant a need to recirculate the NOP. The new Initial Study and the NOP response letters from the 2000 NOP circulation are included in Appendix A of this document. NOP responses were received from the following:

- California Regional Water Quality Control Board, Los Angeles Region
- Department of Conservation, Office of Governmental and Environmental Relations
- Department of Fish and Game
- Department of Toxic Substances Control, California EPA
- Department of Transportation, District 7
- Native American Heritage Commission
- Santa Clarita Organization for Planning the Environment (SCOPE)
- Sherrie Stolarik

The Initial Study and NOP comments were used to establish the scope of the issues addressed in this EIR. The following environmental issues were identified through preparation of the Initial Study as being potential impacts associated with the implementation of the proposed project and are addressed in this EIR.

- Geotechnical
- Flood
- Fire
- Water Quality
- Air Quality
- Biota
- Cultural Resources
- Visual Qualities
- Traffic/Access
- Sewage Disposal
- Education
- Utilities
- Environmental Safety

Environmental issues that were determined to have “no impact” or “less than significant impact” on the Initial Study, and therefore not addressed in this EIR, are presented below.

- Noise
- Mineral Resources
- Agricultural Resources
- Fire/Sheriff Services
- General
- Land Use
- Population/Housing/Employment/Recreation

A discussion of why these environmental topics were determined to have “no impact” or “less than significant impact” is presented in Section 7.0 of this EIR.

1.4 LEAD AGENCY AND PROJECT APPLICANT CONTACT PERSONS

The County of Los Angeles is the lead agency for the preparation of this EIR; all inquiries regarding the EIR should be directed to the County.

Lead Agency: County of Los Angeles
Mr. Daniel Fierros
Department of Regional Planning
Impact Analysis Section
320 West Temple Street, Room 1348
Los Angeles, CA 90012

Applicant: SunCal Companies
Mr. Jerry Schamp
21900 Burbank Blvd., Suite 114
Woodland Hills, CA 91367

1.5 REVIEW OF THE EIR

This EIR is distributed to responsible and trustee agencies, other affected agencies, surrounding jurisdictions, and interested parties, as well as others requesting a copy of the document in accordance with the Public Resources Code Section 21092. The Notice of Completion (NOC) of the EIR was also distributed as required by CEQA. The EIR will be available for public review for not less than 45 days, pursuant to Section 15105 of the CEQA Guidelines. During this public review period, the EIR including technical appendices is available for review at the following locations:

Los Angeles County Department of Regional Planning
Impacts Analysis Section
320 West Temple Street, Room 1348
Los Angeles, CA 90012

Canyon Country Jo Anne Darcy Library
18601 Soledad Canyon Road
Canyon Country, CA 91351

Newhall Library
22704 W. 9th Street
Newhall, CA 91321

Valencia Library
23743 West Valencia Boulevard
Valencia, CA 91355

Written comments on the EIR should be addressed to Mr. Daniel Fierros at the address provided above. Upon closing of the public hearing, written responses will be prepared to address comments provided on the EIR and made available for review at least ten days before the Regional Planning Commission certifies the Final EIR. These environmental comments and their responses will be included as part of the environmental record.

1.6 ORGANIZATION OF EIR

This Project EIR is organized according to the structure of the County of Los Angeles Department of Regional Planning Initial Study. This Initial Study is included in Appendix A of

this EIR. This EIR conforms to the content requirements stated in Sections 15120 through 15130 of the CEQA Guidelines.

Section 1.0 Introduction

This section provides a general introduction to the purpose of the EIR, scoping of the EIR, process of reviewing the EIR, and appropriate methods of providing comments on the document.

Section 2.0 Environmental Setting and Project Description

This section discusses the location, objectives, and general characteristics of the proposed project. The environmental setting of the project, including surrounding land uses and biological considerations are also discussed. A summary of the required approvals and permits is provided in Table 1-1.

Section 3.0 through Section 6.0

The County Initial Study groups environmental issues into four categories: ***Hazards***, ***Resources***, ***Services***, ***Other***. These four sections include several environmental topics that are analyzed in the EIR. Each environmental topic includes an analysis of the potential impact of the implementation of the proposed project. Each environmental topic is analyzed in the following format:

Existing Conditions

Section 15125 of the CEQA Guidelines states that "an EIR must include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time of the Notice of Preparation is published… from both a local and regional perspective." The existing conditions are used as the baseline physical conditions to which potential adverse impacts associated with the implementation of the project would be compared. A discussion of the regional setting is included as appropriate and an emphasis is placed on environmental resources that are rare or unique to that region and would be affected by the project. This section also includes information about policies, procedures, and requirements which would be applicable to the proposed project.

Project Impacts

This section presents the consideration and discussion of environmental impacts associated with the implementation of the proposed project. The analysis includes the consideration of all phases of the proposed project. The thresholds of significance are presented, which are mandated by the CEQA Guidelines to constitute an identifiable quantitative, qualitative, or performance level of a particular environmental effect. If an environmental impact associated with implementation of the project exceeds the threshold of significance, then mitigation is required to reduce the impact.

Cumulative Impacts

Pursuant to Section 15130 of the State CEQA Guidelines, "an EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable. As defined in Section 15065(c) of the State CEQA Guidelines, an effect may be cumulatively considerable if "the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects."

Analyses are in compliance with CEQA Guidelines Section 15130(b)(1) which states the analysis may consider either a list of past, present, and probable future projects or may use a summary of projections contained in an adopted general plan or related planning document, or in a prior adopted EIR. This EIR uses both methods for the cumulative analyses.

Mitigation Measures

The mitigation program identifies methods of reducing potential project impacts through Project Design Features (PDF) and Mitigation Measures (MM).

Project Design Features are specific design elements proposed by the project applicant that have been incorporated into the project to prevent the occurrence of, or reduce the significance of, potential environmental effects. Because PDFs are incorporated into the project, they do not constitute mitigation measures as defined by CEQA. However, they have been incorporated into the project design in a preventative manner to minimize potential environmental impacts. PDFs are identified in the mitigation section for each topical issue to ensure that they are included in the mitigation monitoring program to be developed for, and implemented as a part of, the proposed project.

Mitigation Measures are incorporated when a potentially significant environmental effect has been identified and is not reduced to a level considered less than significant through the application of PDFs. Mitigation measures may be based on local, state, or federal regulations or laws that are frequently required independently of CEQA review and also serve to offset or prevent specific impacts. Project specific mitigation measures are recommended to minimize the potentially significant impacts of a project. The incorporation of mitigation measures does not ensure that project impacts would be considered less than significant.

Section 7.0 Effects Found Not to Be Significant

This section contains a summary of the environmental factors that were found not to be significant through the Initial Study analysis performed by the County of Los Angeles. Each issue found not to be significant is summarized. The Initial Study is provided in Appendix A.

Section 8.0 Alternatives Analysis

Pursuant to Section 15126.6 of the CEQA Guidelines, this section provides a discussion and analysis of alternatives to the proposed project. Alternatives are analyzed that would feasibly attain most of the basic objectives of the project, but would avoid or lessen any of the significant effects of the project. The comparative merits of each alternative are evaluated.

Section 9.0 Long-Term Environmental Effects

This section discusses the long-term environmental effects of the proposed project, including an analysis of growth-inducing impacts and changes that would be considered significant and irreversible. The analysis includes a discussion of the project's potential to foster economic or population growth (e.g. extend utilities, create new housing) or other activities that could significantly and irreversibly affect the environment, either individually or cumulatively.

Section 10.0 List of References

This section provides a listing of all sources of information referenced for the analysis contained within this EIR.

Section 11.0 List of EIR Preparers and Contributors

This section provides a listing of all persons that directly contributed to the preparation of this EIR.

SECTION 2.0 PROJECT DESCRIPTION AND ENVIRONMENTAL SETTING

2.1 PROJECT LOCATION

The proposed project (VTTM 53189) is located in the unincorporated territory of the County of Los Angeles just north of the City of Santa Clarita. The project site is bordered on the east by San Francisquito Canyon Road, on the north by Lady Linda Lane, and to the south by Lowridge Place. There is currently no development west of the project site, although the Tesoro del Valle residential development is currently under construction to the southwest of the site and will eventually extend to the west and north of the project site. The nearest highways are Interstate 5 (I-5) and State Route 126, located approximately four miles to the southwest of the project site. Thoroughfares that provide regional access to the site via San Francisquito Canyon Road include McBean Parkway, Copper Hill Drive and Seco Canyon Road. The proposed project's regional location and local vicinity are depicted in Figures 2.1-1 and 2.1-2, respectively.

2.2 ENVIRONMENTAL SETTING

The proposed tract map depicting the project design is provided in Figure 2.2-1A and 2.2-1B. VTTM 53189 contains vacant, undeveloped land located within the Santa Clarita Valley in Los Angeles County. The San Francisquito Canyon runs north to south through the eastern half of the project site. The San Francisquito Canyon contains an intermittent creek that drains hillside areas in the Angeles National Forest to the north and upper Santa Clarita Valley. Vegetation on the project site includes coast live oak woodland, Riversidian alluvial fan sage scrub, mixed chaparral/holly-leaf cherry woodland, chamise chaparral, coastal sage scrub, eucalyptus woodland, and non-native grassland.

The San Francisquito Canyon Creek is classified as Significant Ecological Area (SEA) No.19 by the County of Los Angeles General Plan. San Francisquito Canyon Creek possesses populations of the unarmored threespine stickleback fish, which is listed as a federal and state-listed endangered species. The San Francisquito Canyon Creek floodplain is included in the SEA in order to preserve downstream stickleback habitats. The boundary of the SEA No.19 is labeled on the VTTM 53189 (Figure 2.2-1A).

The project site contains six drainages outside of the SEA No. 19 (San Francisquito Canyon Creek). None of the six drainages meet the criteria for wetlands, but they are considered "waters of the United States" according to the U.S. Army Corps of Engineers (USACE) definition. These drainages traverse the property generally from west to east towards the SEA.

Site topography ranges from 1,250 feet above mean sea level (amsl) within the San Francisquito Canyon Creek to 1,480 amsl in the northwestern edge of the property. The majority of the project site can be characterized as being relatively flat and becoming more steeply sloped around the northwestern edges of the site. Land adjacent to the project site to the north and west contains steep slopes and ridges that drain into the San Francisquito Canyon Creek.

The project site was recently burned by wildfire. In 2002, the Copper Fire consumed approximately 19,000 acres in the Santa Clarita Valley area and the project site is within the burned area. This fire has resulted in changes to most of the vegetation on-site, although the native vegetation is generally expected to recover over time.

FIGURE 2.1-1

REGIONAL LOCATION

FIGURE 2.1-2
LOCAL VICINITY

FIGURE 2.2-1
TENTATIVE TRACT MAP

FIGURE 2.2-1B
TENTATIVE TRACT MAP

2.3 PROJECT DESCRIPTION

2.3.1 Setting

The 185.8 acre project site is partially within a Hillside Management Area. Slopes on the project site include approximately 161 acres of 0 – 24.9 percent slopes; 15.3 acres of 25 – 49.9 percent slopes; and 10 acres of 50 percent or more slopes. According to the Santa Clarita Valley Area Plan (SCVAP), development within a Non-Urban Hillside Area is required to occur in "the most suitable and least environmentally sensitive areas, and will be designed in terms of scale and intensity in a manner compatible with the natural resource values and character of the area." The proposed project avoids the majority of the steeply sloped areas and does not propose development within the SEA in order to avoid sensitive biological resources.

The project site is governed by the SCVAP and is designated as Hillside Management Area (HM), Non-Urban 1 (N-1), and Floodway/Floodplain (W). Figure 2.5-1 presents the land use designations per the SCVAP and the slope densities on the project site. The W designation refers to the central portion of the site, which accounts for 54.3 acres of the project site and does not allow for residential development. The large majority of the remaining portion of the project site is designated as N-1, which includes 127 acres and allows a maximum of 0.5 dwelling units per acre. The area designated as N-1 could contain up to 60 residential units, given the various ranges of slope on the site. Approximately 4.6 acres of the project site are included within the HM area, which could contain a total of 1.0 units, based on the range of slopes on the site. Therefore, based on the land use designation in the SCVAP, the project site could contain a total of up to approximately 61 units. The proposed project contains a total of 60 residential lots, which is in conformance with the SCVAP land use designations.

The Los Angeles County General Plan designates the area as Non-Urban and SEA No. 19. The proposed project site is zoned by the County of Los Angeles as R-1-7,000 (Single-Family Residence Zone) and A-2-2 (Heavy Agricultural Zone). The R-1-7,000 is applied to the eastern portion of the project site (approximately 75 acres), including the SEA No. 19, and indicates a residential zone with a minimum lot size of 7,000 square feet. In theory, there is enough land in the R-1-7,000 zone for up to approximately 460 dwelling units within this portion of the project site. The A-2-2 zone (Heavy Agricultural Zone) is applicable to the land west of the SEA No. 19 (approximately 111 acres), and requires a two acre minimum lot size. In theory, there is enough land in the A-2-2 zone for up to 55 dwelling units within this portion of the project site. Based on the current zoning, up to approximately 515 dwelling units could be allowable (without the consideration for hillside management or SEA restrictions). The proposed project includes only 60 dwelling units, in conformance with the SCVAP land use designation, which is considerably less dense than the number of lots that could be created from acreage under the Los Angeles County zoning designation for the site.

The project site is surrounded by undeveloped vacant land to the north and west. The Angeles National Forest is approximately 0.5 mile north of the project site. Directly north of the project site, at the intersection of Las Tunas and Quail Haven Trail, are two residential properties. Another residential property is located further west near the northern boundary of the property. This property is currently accessed through the project site via dirt road that connects to Lady Linda Lane. The undeveloped hillsides dominate the landscape further north of the project site, although there are a few ranch properties further north along San Francisquito Canyon Road.

To the south and west of the project site is the Tesoro del Valle single-family residential development. The first phase of this project, located in the southern portion of that property, has been graded and is currently under construction. Further south of the project site are single-family homes and ranch properties. There are no land uses to the west of the project

site, although the Tesoro del Valle project is entitled to develop a large portion of the hillsides in this area.

To the east of the project site are several ranches, many specializing in equestrian activities, and residential land uses. The San Francisquito Canyon bisects the project site and continues to the north into the Angeles National Forest and south through the City of Santa Clarita, where it joins the Santa Clara River. Further east of the San Francisquito Canyon Road along Lowridge Place are new single-family homes. Several existing trails traverse the project site. These trails are predominantly used for equestrian activities through San Francisquito Canyon, as well as through the upland areas of the project site. Ranging in width from 5 feet to 12 feet in some areas, these trails constitute existing disturbances to the project site and are not a part of the County regional trail system.

2.3.2 Project Design Features

The proposed project involves the construction of 60 residential single family lots, three large open space lots, and three debris basin lots on the 185.8 acre site. All project development will occur on the west side of San Francisquito Canyon Creek, with the exception of the development of two equestrian/hiking trails: the Cliffie Stone Trail along the San Francisquito Canyon Road and the Butterfield Overland Stage Trail located between the eastern SEA No. 19 boundary and the Cliffie Stone Trail.

Residential Lots

The 60 residential lots would range in size from 39,336 square feet to 10,075 square feet, or 0.90 to 0.23 acres, respectively. The footprint of the residential development would lie entirely within the western portion of the site, west of the San Francisquito Canyon SEA, and has been designed to preserve the majority of the biological resources on-site. The homes would be developed in a sideways "T" shape along three planned roadways; "A" Street will run north-south along the edge of the San Francisquito Canyon Creek and will connect to Stoney Creek Road in Tesoro del Valle to the south and with Las Tunas Trail to the north, "B" Street will run east-west and will connect "J" Lane in Tesoro del Valle with "A" Street, and "C" Street will connect "B" Street with a private property north of the project site.

Open Space Lots

Approximately 80 percent of the project site is designed to be preserved as open space within Lots 61, 62, and 63. The open space lots will be granted to the County of Los Angeles and will remain as open space in perpetuity. These open space lots will be maintained through a Homeowner's Association (HOA), consistent with the approved conditional use permit. The three open space lots include:

- Lot 61 4,510,386 square feet (103.5 acres)
- Lot 62 1,294,891 square feet (29.7 acres)
- Lot 63 666,421 square feet (15.3 acres)

Lot 61 includes the portion of SEA No. 19 along the eastern portion of the project site from north to south, as well as its associated floodplain. This lot also contains the two proposed County designated equestrian/hiking/biking trails. The Cliffie Stone Trail would be located adjacent to San Francisquito Canyon Road and the Butterfield Overland Stage Trail would be located further west, but would not impact SEA No. 19. In the northeast corner of Lot 61, a small portion of the existing dirt road extension of Lady Linda Lane would be paved from San Francisquito Canyon Road. This paved area would be approximately the length of a

driveway and would include approximately 3,370 square feet, or 0.08-acre. This small driveway would not impact the SEA No. 19 and would be located over the existing dirt road.

Lot 62 includes property in the southwest portion of the project site that contains holly-leaf cherry woodland. Lot 63 is located in the northwest corner of the site and includes the steeper hillsides and ridgetops. The large majority of these open space lots will be preserved in their natural state, although some portions of these lots will include fuel modification zones and manufactured slopes vegetated with native plants.

Debris Basin Lots

Three debris basins will be developed on the project site and are designated as Lots 64, 65, and 66. Debris basins are constructed earthen depressions that are designed to capture stormwater runoff and allow the debris and silt to settle out before entering natural drainages or storm drain systems. The accumulated debris and silt will require periodic removal in order to ensure the proper functioning of the basins. The three debris basin lots on the project site will be dedicated to the County of Los Angeles. Therefore, these lots will become the property of the County and will be maintained by the County in perpetuity.

Manufactured Slopes

Manufactured slopes would be developed on approximately 284,101 square feet (approximately 6.5 acres) of the project site. The manufactured slopes are designed along the outer edges of the property boundaries to transition the graded lots to the natural surrounding environment. Some slopes would be developed along the edges of the proposed roadways. The largest manufactured slope is located in the northern portion of the site behind Lots 30, 31, and 32. All manufactured slopes on the project site will be landscaped with native vegetation and irrigated and will be maintained by the Homeowner's Association.

The project would involve approximately 246,000 cubic yards (cy) of raw excavation, approximately 600,000 cy of alluvium removal, and approximately 86,000 cy of excavation for the bank stabilization levee (discussed below), for a total of approximately 932,000 cy of grading which would be balanced on-site. Soil stabilization activities would also be required in many areas of the site due to the loose alluvial soils underlying the majority of the project footprint. Considerable changes to topography due to grading activities would be avoided due to the compact development design that maintains the majority of the natural on-site features.

Below-Ground Bank Stabilization Levee

A below ground levee will be constructed to provide adequate flood protection for the project site. The levee would provide protection for the graded pads in case the braided stream of the San Francisquito Canyon Creek was to meander toward the development and erode the supporting soil during a 50-Year Capital Flood event.

Because the locations of the graded pads are significantly above the 50-Year Capital Flood for a bulked and burned flow, the bank stabilization levee would be located below the graded pads along the existing floodplain boundaries and would extend below ground. Figure 2.2-1B illustrates the boundaries of the proposed levee system, which would extend from the northern most project boundary near Lady Linda Lane southerly to Lot 46. Cross-sections A-A through H-H are depicted in Figure 2.2-1B and illustrate the location of the levee system in relation to the pad elevations. The levee system would contain the following components:

- 15 foot wide paved service road for flood control systems maintenance adjacent to the manufactured slopes of the graded pads (impervious surface)

- four foot wide portion of the levee that would be above ground and visible (two foot vertical and four foot horizontal at 2:1 slope), which would provide approximately two feet of free board during a 50-Year Capital Flood event

- 20 foot deep levee below ground (2:1 slope), which includes the two feet of vertically visible levee

- 15 foot wide horizontal area below ground for construction purposes

- 20 foot deep temporary backcut (towards the eastern boundary of SEA No. 19 to allow for levee construction below ground (2:1 slope)

Upon completion of the levee construction, the excavation would be entirely backfilled with existing creek soil and only the four horizontal feet of above ground levee "free board" space would be visible. The levee would be constructed with ungrouted rip-rap, which would allow for percolation of water, accumulation of transported soils, and establishment of plant life. The uneven nature of the rip rap would mimic the natural environment and would not increase the creek flow rates along the levee or facilitate erosion along the levee.

2.3.3 Project Circulation Design

Access to the project site is currently provided by Lady Linda Lane, which connects to San Francisquito Canyon Road in the northeast corner of the project site. Lady Linda Lane is a private dirt road that traverses the San Francisquito Canyon Creek to access two homes located along Las Tunas and Quail Haven Trail just north of the project site. Upon implementation of the proposed project, Lady Linda Lane would not provide access to the project site in order to avoid impacts to the San Francisquito Canyon SEA No. 19. However, there is an existing easement over this portion of the project site that would allow the property owners to the north to continue to use Lady Linda Lane to access their properties.

Access to the project site is designed to occur through two planned roadway connections from the Tesoro del Valle residential development (Tract Map 51644). Tesoro del Valle is part of a 1,795-acre, 1,791-dwelling unit master planned community. The first phase of the development is currently under construction. Figure 2.5-2 shows the proposed circulation design between the proposed project site and the neighboring Tesoro del Valle site, denoted by the red-dashed line.

Stoney Creek Road (from Tesoro del Valle) would connect with the proposed "A" Street in the southwest corner of the project site. "A" Street would traverse north and south and would eventually connect with Las Tunas Trail near Lady Linda Lane. "B" Street is proposed to connect to the central stretch of "A" Street and would travel east and west to connect with "J" Lane in the Tesoro del Valle project area. "C" Street would be a short street that would connect "B" Street to an existing residential property north of the project site. The only access to this private property is currently through the project site; therefore, this access would be maintained and improved as a part of the proposed project.

San Francisquito Canyon Road traverses the eastern edge of the project site. Direct access from San Francisquito Canyon Road to the proposed developed portion of the site would necessitate the construction of a roadway that would cross over the SEA, which could result in significant impacts to the wildlife corridor. Therefore, no access to or from the single-family homes on the project site via San Francisquito Canyon Road is proposed.

Although direct access to San Francisquito Canyon Road is not proposed as a part of the VTTM 53189, improvements to the roadway would be eventually required by the County of Los Angeles in order to comply with the County's Highway Plan. San Francisquito Canyon

Road is currently a two-lane corridor that is planned for future expansion. The new proposed alignment of the road would largely conform to its existing location, although it would be designed to avoid biological resources in the SEA and would be widened to meet County Secondary Highway Standards. The project includes a variation in the alignment of the road that is specified in the Master Highway Plan, which includes a 60-foot easement for the planned highway. A portion of the new alignment near the southeast corner of the project site would include the footprint of the existing roadway and would be located approximately 100 feet east of the existing right-of-way for the originally planned roadway alignment. Therefore, the new roadway alignment would be further away from the Flood Hazard Limits and biological resources within the San Francisquito Canyon Creek.

The timing of the development of the roadway is undetermined. However, the rehabilitation of the San Francisquito Canyon Road from a two-lane corridor into a highway would not be performed in conjunction with the development of the proposed project. The applicant would provide a payment to the County's "Valencia Bridge and Major Thoroughfare District" in lieu of constructing the roadway in order for the timing of the construction of the new San Francisquito Canyon Road to be in accordance with the local traffic demands and the County's schedule.

2.3.4 Recreation

Unimproved dirt roads and trails are located throughout the project site. These informal trails are predominately used for recreational equestrian activities. The existing trails are depicted on the tract map, Figure 2.2-1A. These trails constitute existing disturbances to the project site and are not a part of the County designated regional trail system.

Numerous ranches are located within proximity to the project site and trails are evident throughout the property. The Tesoro del Valle development located adjacent to the project site will incorporate a seven-mile equestrian trail into the project design, named the "Cliffie Stone Trail." An extension of the Cliffie Stone Trail has been incorporated into the proposed project design and would be located adjacent and parallel to the San Francisquito Canyon Road and east of San Francisquito Canyon Creek, as illustrated in Figure 2.2-1A. The connection of the Cliffie Stone Trail in Tesoro del Valle to the trail in the project site has yet to be determined and would be finalized by the County Department of Parks and Recreation. The trail is required by the County Department of Parks and Recreation to be a part of their regional trail system. The 12-foot wide trail will be constructed with a railing and will be within open space Lot 61, which will be owned and maintained by the County of Los Angeles.

In addition to the Cliffie Stone Trail, existing Butterfield Overland Stage Trail will be slightly widened to 12 feet for recreational horse riding, hiking, and biking. This trail is located within Lot 61 between San Francisquito Canyon Road and the eastern boundary of SEA No.19, as illustrated in Figure 2.2-1A. The southernmost leg of the Butterfield Overland Stage Trail would be moved slightly eastward of its current location in order to avoid impacts to the SEA.

The Los Angeles General Plan states that four acres per thousand population is required to satisfy the demand for local park facilities. The General Plan also states that Santa Clarita Valley requires six acres per thousand population in order to satisfy the regional demand for park facilities. As part of the project, the project applicant will provide the Quimby obligation of $91,917, as determined by the County, for payment in lieu of new recreational facilities. The requirement to fulfill the County's recreational facility needs will be satisfied by the payment of the Quimby obligation. It is then the County's responsibility to use these funds for the purchase or expansion of recreational facilities for future residents.

2.3.5 Infrastructure

No utilities are currently located within the project site. Development of the proposed project would require the construction of infrastructure systems including drainage, water, sewer, and utilities. The necessary on-site infrastructure would be constructed by the applicant to specifications of the County of Los Angeles Public Works and the respective utility companies.

Drainage System and Water Quality BMPs

The proposed drainage plan incorporates the use of Best Management Practices (BMPs) to comply with County of Los Angeles Standard Urban Stormwater Mitigation Plan (SUSMP) requirements. The ultimate size and location of drainage facilities would be determined during final design in coordination with the County of Los Angeles Flood Control District. During construction, the proposed project site would include sandbags that line the graded roadways and parkways in order to reduce sediment in the stormwater runoff from the site. Additionally, temporary desilting basins would be placed around stormwater outlets, creating a "check dam" of sandbags that would trap sediments and allow clearer water to be released through outlet pipes near the top of the check dam.

The current drainage flow on the property runs from the western hillsides towards the east into the San Francisquito Canyon Creek. The eastern portion of the property adjacent to San Francisquito Road drains to the west into San Francisquito Canyon Creek. The proposed project includes the construction of a storm drain system that drains the project site and deposits the runoff into the San Francisquito Canyon Creek. In order to protect the project site from flooding, maintain flood protection to the downstream properties, and protect water quality in the Creek, several BMPs are included in the project design.

Three debris basins are proposed on the project site and are labeled on the tract map (Figure 2.2-1A) as Lot 64, 65, and 66. These debris basins would be located north of Lot 10, west of Lot 26, and west of Lots 58 and 59. A debris basin is an earth-bottom basin that traps stormwater runoff from the surrounding hillsides and allows for the slow exfiltration of the water through the soil and through desilting inlets. Desilting inlets facilitate the sedimentation process and reduce bulk stormwater flows by preventing debris and silt from passing through to the storm drain with the stormwater. Catch basins with fossil filters would be located in the storm drains inlets to remove debris and pollutants from stormwater runoff originating from the developed portion of the site.

The storm drain system would be constructed under the streets of the project site and would deposit the stormwater runoff into the San Francisquito Canyon Creek through three storm drain outlets. Runoff from the open spaces would also be captured and either channeled into the storm drain system via debris basins or, in the case of the central drainage feature, would be channeled under the roadway and into the Creek as "bulked flow". At the end of the three proposed storm drain outlets, energy dissipaters, such as rip-rap, would be installed to slow down and diffuse the stormwater runoff entering San Francisquito Canyon Creek. The central drainage between Lot 42 and Lot 43 would likely involve the installation of a 60-inch pipe under the road and a 20 foot by 20 foot grouted rock energy dissipater. The other two storm drains would likely involve the installation of 30 inch pipes under the roadway and the construction of smaller rock energy dissipaters.

Water System

The proposed water system for the project site would connect to the water system of the Tesoro del Valle project. A 12-inch ductile iron pipe (D.I.P.) water line would connect with the project site from under Stoney Creek Road. Newhall County Water District would provide water service

to the project site. All water pipelines would be constructed underneath the proposed roadway system.

Wastewater System

Wastewater services would be provided by the County Sanitation Districts of Los Angeles County (District No. 32). The project site would need to be annexed into the Sanitation Districts' service area. The wastewater system infrastructure would be located underneath the proposed roadway system through the Tesoro del Valle tract for conveyance to the Rye Canyon Trunk Sewer, located in Rye Canyon Road at Newhall Ranch Road. The Saugus Water Reclamation Plant (WRP) and the Valencia WRP would treat the sewage from the project site.

A "Gravity Sewer Feasibility Study" was performed by B&E Engineers for VTTM 53189. The purpose of the study was to determine the feasibility of constructing the sewer system without constructing a new sewer lift station. The sewer system is currently designed to convey the project's sewerage to the downstream sewer trunk line in the Tesoro de Valle project site via a lift station that would be constructed at the southern end of the project site. Several alternatives were reviewed that would convey sewer discharges via gravity flow at the minimum allowable slope of 0.4 percent.

The analysis determined that all five of the alternatives under consideration would be impractical or infeasible. It was concluded that the construction of a sewer lift station would be required since attempts to design positive gravity sewer flow through the alternatives studied were unsuccessful. The lift station would be located south of Lot 51. The Gravity Sewer Feasibility Study is located in the technical Appendix J of this EIR.

2.3.6 Flood Zone Adjustment

The proposed project site is adjacent to the San Francisquito Canyon Creek, which is also designated as SEA No. 19. The Creek bed is wide and contains a braided stream system. The current flood hazard limits per the Los Angeles County Guidelines (based on FEMA Zone A designation), as depicted on the VTTM 53189, crosses three areas on the project site, including the northern portion of "A Street", Lot 33, and Lot 41. The Zone A line crosses Lots 33 through 41 and results in a minimal intrusion into the currently delineated flood zone. However, as a result of the hydrology evaluation on the project site by B & E Engineers, it has been determined that the westernmost FEMA Zone A line is incorrectly depicted on the project site. As currently depicted on the tract map in Figure 2.2-1A, the FEMA zone line crosses over the raised streambed bank; therefore, the FEMA line appears to be inaccurate based on the hydrology study.

The project applicant will file a Conditional Letter of Map Revision (CLOMR) with FEMA to correct the FEMA map and move the flood zone line easterly towards the creek bed in order to accurately reflect the current hydrology of the Creek. The CLOMR will be completed and approved prior to grading plan approval. Upon completion of the construction of the proposed project, a Letter of Map Amendment (LOMA) would be issued for the site, confirming the new alignment of the FEMA Zone A line.

2.3.7 Fuel Modification

A fuel modification plan is required to reduce the threat of wildfire because the project site is adjacent to natural open space areas and is located within a "Very High Fire Hazard Severity Zone" (VHFHSZ). The fuel modification program would require a 200-foot buffer zone, which includes a combination of a 20-foot wet zone (Zone A - landscaped and irrigated), an 80-foot irrigated zone of more native plants (Zone B), and a 100-foot thinning zone (Zone C) over most

of the project site. The thinning zone would include the removal of brush and dead plant materials, removal of non-native tree species, and periodic grass and weed cutting. The fuel modification plan will be submitted to the Los Angeles County Fire Department Forestry Division and would need to be approved prior to any construction activities.

As approved by the County Fire Department, fuel modification activities for Lots 33 through 51 would require a 100-foot fuel modification buffer rather than the maximum 200-foot buffer around the rest of the project site. The reduced fuel modification zones for this portion of the project site are due to the naturally sparse and low-lying vegetation within the adjacent SEA. The existing vegetation would not provide a substantial source of fuel for wildfires and does not warrant a 200-foot fuel modification buffer. Additionally, a 100-foot fuel modification buffer would not result in any vegetation thinning or other impacts to the adjacent SEA No. 19. Biological impacts associated with fuel modification activities are discussed in Section 4.3 of this EIR and in the Biological Resources Technical Report in Appendix E. Figure 4.3-2 in the Biota Section presents the proposed boundaries of the fuel modification zones on the project site.

2.4 PROJECT DEVELOPMENT

The project would be graded and developed in one phase. Grading is anticipated to take approximately six months and the construction activities associated with the homebuilding are anticipated to take approximately nine months.

2.5 PROJECT OBJECTIVES

The overall objectives of the project as defined by the project applicant are to:

1. Provide single-family housing within the Santa Clarita Valley that contributes to the local diversity of housing and lot sizes for existing and future residents and that is consistent with the type and size of housing satisfying the market demands in this area.

2. Provide high-quality housing that will help to meet the existing and future demand and help alleviate the housing shortage in the Santa Clarita Valley.

3. Provide a residential development that complies with the Santa Clarita Valley Area Plan land use designation and density requirements.

4. Incorporate design techniques, such as developing a compact project footprint that avoids sensitive biological resources and hilltop development and preserves open space, in order to create a visually harmonious project.

5. Preserve the natural drainage features of the San Francisquito Canyon SEA No.19 that transects the property.

The County of Los Angeles General Plan and the Santa Clarita Valley Areawide Plan have objectives for residential development that support the proposed project. These objectives include the following:

FIGURE 2.5-1
SCVAP LAND USE AND SLOPE DENSITY

FIGURE 2.5-2
AERIAL LOCATION AND SITE ACCESS

Los Angeles County General Plan

Land Use Element

1. Require that new developments in non-urban areas have adequate accessibility to paved roads and water lines of sufficient capacity.

15. Protect the character of residential neighborhoods by preventing the intrusion of incompatible uses that would cause environmental degradation such as excessive noise, noxious fumes, glare, shadowing, and traffic.

Conservation, Open Space, and Recreation

8. Preserve significant ecological areas by appropriate measures, including preservation, mitigation, and enhancement.

Santa Clarita Valley Areawide Plan

Land Use Element

1.1 Accommodate the year 2010 population and land use demand as projected for the Santa Clarita Valley, designating sufficient area for appropriate use and a reasonable excess to provide adequate flexibility.

5.1 Concentrate land use growth in and adjacent to existing urban, suburban, and rural communities. Within these areas, encourage development of bypassed lands designated and appropriate for development.

5.2 Direct future growth away from areas exhibiting high environmental sensitivity to development unless appropriate mitigating measures can be implemented.

Environmental Resources Management Element

2.1 Protect identified resources in Significant Ecological Areas by appropriate measures including preservation, mitigation and enhancement.

2.3 Require site level analysis of proposed development projects within Significant Ecological Areas to insure that adverse impacts upon resources within identified Significant Ecological Areas are minimized.

Trails

6.2 Encourage developers to accommodate trail needs within and between equestrian developments, including the construction of private feeder routes into the main trails system. The provision of local trails is particularly compatible with the hillside management and open space provisions of this plan.

2.6 BASIS FOR CUMULATIVE ANALYSIS

Pursuant to Section 15130 of the state CEQA Guidelines, the following elements are necessary for an adequate discussion of significant cumulative impacts, either "(A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency or, (B) A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document

which has been adopted or certified which described or evaluated regional or area-wide conditions contributing to the cumulative impact…". This EIR uses both methods for cumulative impacts analysis. The projects considered in the traffic report conducted by Linscott, Law and Greenspan, 2003, for cumulative impacts are presented in Table 2-1 below. These are the projects that are considered in the cumulative analysis for each section of this EIR, unless otherwise stated. The corresponding map locations are presented in Figure 2.6-1.

TABLE 2-1
CUMULATIVE PROJECTS FROM TRAFFIC ANALYSIS

FIGURE 2.6-1 NO.	PROJECT NUMBER	LOCATION	LAND USE	SIZE	STATUS
County of Los Angeles					
1	98170	Curtis Development Copper Hill Drive and Haskell Canyon Road	Single-Family Housing Condominium Commercial	421 DU 115 DU 39,200 SF (est.)	Approved Not Defined
2	88280	Seco Canyon Development North terminus of Boxwood Lane and Raintree Lane	Single-Family Housing	303 DU	Built
3	02-341	Davidon Homes North of Copper Hill drive and east of Hidden Hills Drive	Single-Family Housing	6 DU	Recommend Denial
4	88321	Valencia Company Northerly extension of McBean Parkway between Westerly extension Decoro Drive and San Francisquito Canyon Road	Single-Family Housing Condominium	701 DU 730 DU	Recorded
5	95075	Valencia Company North of Decoro Drive and east of Copper Hill Drive	Single-Family Housing Condominium	190 DU 268 DU	Built
6	97088	Lincoln Property Company North of Copper Hill Drive between San Francisquito Canyon Drive and extension of Raintree Lane	Single-Family Housing	11 DU	Approved
7	98016	The Newhall Land and Farming Company East side of McBean Parkway, between Copper Hill Drive and Northpark Drive	Apartment	330 DU	Recorded
8	99155	Valencia Company Copper Hill Drive approximately 500 feet east of Smyth Drive and Boskovich Drive	Light Industrial	83,334 SF	Approved
9	92074	Montalvo Properties - Tesoro De Valle West of San Francisquito Canyon Road and north of Copper Hill Drive	Single-Family Housing Condominium Commercial	1,601 DU 901 DU 75,000 SF	Area A Under Construction
10	98008	Valencia Company – West Creek West side of San Francisquito Canyon Creek	Single-Family Housing Condominium/Apt. Commercial	1,248 DU 1,297 DU 180,000 SF	Approved
11	88422	Maybell Bishop Copper Hill Drive, 1500 ft of Seco Canyon Road	Single-Family Housing	419 DU	Approved

TABLE 2-1 (Continued)
CUMULATIVE PROJECTS FROM TRAFFIC ANALYSIS

FIGURE 2.6-1 NO.	PROJECT NUMBER	LOCATION	LAND USE	SIZE	STATUS
12	94021	Cucamonga Development Company North of Copper Hill Drive 1300 ft west of Haskell Canyon Road	Single-Family Housing	194 DU	Approved
13	88044	Davidon Homes NWC of Copper Hill Drive and Haskell Canyon Road	Single-Family Housing	213 DU	Approved
14	88596	Seco Canyon Development #4 Northerly extension of Seco Canyon Road between Haskell Canyon Road and San Francisquito Canyon Road	Single-Family Housing	594 DU	Approved
15	88082	CJB Development Inc. North terminus of Haskell Canyon Road northeast of Copper Hill Drive	Single-Family Housing Condominium	421 DU 99 DU	Approved
16	93179	The Newhall Land and Farming Company West of McBean Parkway between Decoro Drive and Copper Hill Drive	Single-Family Housing Condominium	146 DU 244 DU	Approved
City of Santa Clarita					
17	03-154	Smyth Drive and Dickason Drive	Church	55,000 SF	Preliminary Review
18	03-170	NEC of Alta Vista and Constellation (Copper Hill Drive between Smyth Drive and Decoro Drive)	Industrial	132,000 SF	Approved
19	02-193	North Valencia II - Hidden Creek SWC of McBean Parkway and Copper Hill Drive	Senior Housing	275 DU	Approved
20	02-251	Greystone: North Valencia II - Alta Vista Copper Hill Drive and Alta Vista Drive, west of Valencia High School	Single-Family	160 DU	Approved
21	02-251	Standard Pacific: North Valencia II - Alta Vista Copper Hill Drive and Alta Vista Drive, west of Valencia High School	Single-Family Multi-Family	79 DU 90 DU	Approved
22	02-292	Warmington Homes: North Valencia II - The Willows SWC McBean Parkway and Decoro Drive	Single-Family	205 DU	Approved
23	02-335	Fountain Glen: North Valencia II Decoro Drive and Sunny Creek	Single-Family	226 DU	Proposed
24	02-442	William Lyons Homes: North Valencia II - Andora SWC of McBean Parkway and Cottonwood	Single-Family	141 DU	Proposed
25		KB Homes: North Valencia II West of McBean Parkway, South of Decoro Drive	Single-Family	155 DU	Proposed
26		Olsen Company: North Valencia II West of McBean Parkway, South of Decoro Drive	Single-Family	168 DU	Proposed

FIGURE 2.6-1
LOCATION MAP FOR CUMULATIVE ANALYSIS

SECTION 3.0 HAZARDS ANALYSIS

3.1 GEOTECHNICAL

This section describes the geotechnical hazards associated with implementation of VTTM 53189. Information provided in this section includes a summary of a Geotechnical Investigation performed by Geolabs-Westlake Village in April 2000 for a previous tract map design for the same property and a Geotechnical Investigation and Response to Review Sheets performed by A.G.I. Geotechnical, Inc. in October, 2003, which updates the 2000 Investigation according to the proposed project design. The A.G.I. Geotechnical, Inc. report is located in Appendix B.

The Geologic Map associated with the 2003 investigation is provided in Figure 3.1-1. The cross-sections A-A[1] through L-L[1] depicted in Figure 3.1-1 are enlarged to illustrate the existing grade versus the proposed grade in each cross-section in Figure 3.1-2 and Figure 3.1-3.

3.1.1 Existing Conditions

Project Site Characteristics

Elevations in the project site range from approximately 1,450 feet above mean sea level in the upper ridges in the northwestern corner site to 1,250 feet in the San Francisquito Canyon Creek bed in the southern-most portion of the site. The project site has significant variability in slope, from relatively flat in the central portion of the creek bed and in the central-western valley areas to steep slopes in the hillsides along the northwestern and southwestern edges of the project boundary.

The project site contains the following soil components and materials, which are depicted on Figure 3.1-1 by their symbols noted in parenthesis:

Artificial Fill (Af): Because the project site is undeveloped vacant land, artificial fill is only present underneath and adjacent to the San Francisquito Canyon Road on the eastern border of the project site.

Alluvial Deposits (Qal and Qal_1): These unconsolidated mixtures of gravel, sand, and silt were encountered within the canyon bottoms and floodplain of the San Francisquito Canyon Creek within the central portion of the site. Notable pebbles, cobbles, and boulders were found within the westerly canyon and are generally loose and dry at the surface, becoming slightly moist and medium dense to dense with increasing depth.

Colluvial Deposits (Qc): Colluvial deposits and slopewash materials mantle the natural slopes and reach the greatest thickness near the toe of the slopes. These materials are likely interlaced with alluvial deposits along the sides of the canyons and are comprised of poorly sorted sand, gravel, and cobbles, which have been shed by bedrock materials upslope.

Landslide Deposits (Qls): One small landslide was identified within the site, located along an existing unimproved road in the northern portion of the site. This failure appears to be a thin rotational slump-type failure within the Saugus Formation.

Saugus Formation (TQs): Within the project limits, the Pliocene to Pleistocene-age Saugus Formation consists of non-marine sandstone, conglomeratic sandstone with subordinate conglomerate, siltstone, and red sandy claystone. These materials are

generally poorly cemented and locally friable. Beds are typically several feet thick and exhibit gradational contacts as well as scoured, channelized contacts.

Castaic Formation (Tc): The late Miocene to Pliocene-age marine sandstones and siltstones underlie the Saugus Formation and crop out within the northwestern portion of the site. A small outcrop of Castaic Formation exists within the north-central portion of the site. These materials are generally very fine to fine-grained.

Groundwater exists within the Saugus Formation and the Castaic Formation. A discussion of the groundwater conditions below the project site is presented in Section 4.1, Water Quality.

Geologic Structure

The Saugus Formation is approximately 1.8 million years old. The Saugus Formation was deposited during a time of great geologic uplift in the region. Later uplift after the deposition of the Saugus beds caused the strata to be tilted. The canyon floors are composed of recently deposited alluvium from streams. The underlying geologic structure of the Saugus and Castaic Formations on the project site consists of broad, open folds, the axes of which have westerly to southwesterly trends. Broad anticline (a structure of bedded rocks that dip away from the axis on both sides) obscured by alluvium traverses throughout the San Francisquito Canyon.

Faulting and Seismicity

The two principal seismic considerations for most properties in southern California are surface rupturing of earth materials along fault traces, and damage to structures and foundations due to seismically induced ground-shaking. The fault classification system adopted by the State Mining and Geology Board, which delineates Special Studies Zones along active or potentially active faults (Alquist-Priolo Earthquake Zone Act), is used for habitable structures.

The project site contains no known active or potentially active faults, nor is it within an Alquist-Priolo Fault Rupture Hazard Zone. However, regionally active and potentially active faults have the potential to produce significant ground shaking at the project site. Nearby faults include the San Gabriel fault (approximately 3.5 kilometers south of the site), Holser fault (approximately 5 kilometers southwest of the site), and the San Andreas fault (approximately 24 kilometers northeast of the site). Figure 3.1-4 illustrates the locations of these faults in relation to the project site.

Liquefaction and Seismic Settlement

Liquefaction is a major cause of earthquake damage in Southern California. Liquefaction is a condition where the soil becomes unstable during earthquake-induced ground shaking. Under the stress of an earthquake, the soil collapses and acts in a liquid-like manner, causing ground displacement. The possibility of liquefaction occurring at any given site is dependent upon the occurrence of a significant earthquake in the vicinity, sufficient groundwater to cause high pore pressures, and on the grain size, relative density, and confining pressures of the soil at the site. Based on boring data gathered by Geolabs-Westlake Village, liquefaction is predicted to occur at some locations on the project site underlain by alluvium. One small landslide is known to exist on the northerly portion of the site.

The California Division of Mines and Geology in the Official Map of Seismic Hazard Zones of the Newhall 7.5 Min. Quadrangle dated February 1, 1998 has designated the hillside terrain within the project site as an area subject to earthquake-induced landsliding. Although the Official Map of Seismic Hazard Zones of the Newhall 7.5 Min. Quadrangle has also depicted the majority of

the site as within a liquefaction hazard zone, explorations documented by Geolabs-Westlake Village show that only portions of the site exhibit the necessary conditions for liquefaction.

Hydroconsolidation Potential

Hydroconsolidation is a condition where dry or moist soils undergo settlement upon being wetted. In many cases, no additional surface load is necessary to trigger the hydroconsolidation. The potential for this effect has been evaluated by Geolabs-Westlake Village based upon test results of excavated borings.

Near surface alluvial deposits (less than 20 feet below grade) were determined through testing to be potentially susceptible to settlement, while deeper alluvial materials (greater than 20 feet below existing grade) were not.

3.1.2 Project Impacts

Thresholds of Significance

The following thresholds were determined to indicate that potential geotechnical impacts could be significant for the proposed project:

- Location of the project site in an active or potentially active fault zone, Seismic Hazards Zone, or Alquist-Priolo Earthquake Fault Zone.
- Location of the project site in an area containing a major landslide(s).
- Project site conditions with high slope instability.
- Necessity of substantial grading and/or alteration of topography including slopes of more than 25 percent.

Impacts Analysis

In order to understand the potential impact of the proposed project on the geology of the site, GeoLabs-Westlake Village and AGI Geotechnical, Inc. conducted laboratory testing on undisturbed and bulk soil samples from the site. The tests conducted include the following: moisture-density, compaction and expansion tests, hydrometer and grain size distribution analyses, shear tests, load consolidation tests, corrosion potential, and soil corrosiveness. The results of these analyses were used to determine the appropriate mitigation measures for minimizing potential geotechnical impacts.

<u>Faulting and Seismiticity</u>

Because the project site contains no known active or potentially active faults, nor is it within an Alquist-Priolo Fault Rupture Hazard Zone, potential for ground rupture is considered to be very low. However, Southern California is a seismically active region and in the event of an earthquake, ground-shaking is likely to occur at the project site due to movement along nearby faults. A computer search of digitized historic California faulting was used to obtain a prediction of the peak horizontal accelerations that could be expected at the project site during an earthquake. The EQFAULT computer program was used for this analysis.

The results of the EQFAULT analysis determined that the San Gabriel Fault (approximately 3.5 kilometers south of the site) is capable of producing an on-site acceleration of about 0.705g from a maximum credible event with a magnitude of 7.0. The Holser Fault could produce an on-site acceleration of 0.788g from a maximum credible event with a magnitude of 6.5. The

San Andreas Fault could produce an on-site acceleration of 0.4g from a maximum probable event with a magnitude of 7.5.

These peak ground acceleration calculations are used to evaluate the probability that a ground motion value would be exceeded in a specific exposure period. This analysis, using the FRISKSP computer program, calculated the peak ground acceleration levels for a ten percent exceedance probability for an exposure time of 50-years. The results indicate a peak ground acceleration of 0.62g for a Uniform Building Code (UBC) level event, which includes a basis earthquake with a 475-year return period. A peak ground acceleration of 0.55g was obtained for the UBC level earthquake with a magnitude of 7.0 for the nearby San Gabriel fault.

Therefore, the UBC structural design requirements are adequate to account for the possible impacts to structures under five stories on the proposed project site. With the incorporation of the standard UBC requirements, potential impacts from seismic activity are less than significant, because all homes on the project site would be less than five stories.

Liquefaction and Seismic Settlement

The proposed project would involve approximately 246,000 cubic yards (cy) of raw excavation, approximately 600,000 cy of alluvium removal, and approximately 86,000 cy of excavation for the bank stabilization levee (discussed below), for a total of approximately 932,000 cy of earthmoving/grading that would be balanced on-site. No import or export of soils would be required. However, the majority of the proposed project would be constructed over alluvial deposits, which tend to be highly susceptible to liquefaction-induced ground displacement. In the event of earthquake related ground shaking events, there is a high probability of liquefaction at some locations in the project site that are underlain by alluvium. In order to minimize potential liquefaction hazards, those slopes that are anticipated to expose alluvial or colluvial soils would be reconstructed during project grading as engineered fill. This process involves the removal, stabilization, and re-compaction of the soils in need of mitigation. Figure 3.1-5 presents a graphic depiction of the estimated locations and depth of alluvium removal and stabilization. TT presents the estimated seismic settlement for each boring and cone penetration test (CPT) location after the removal and re-compaction of the impacted soils. The location of the boring and CPT test sites are depicted in Figure 3.1-1.

The historic high water mark; as presented in Table 3-1 is a required parameter for analysis of liquefaction. Because the actual ground water level fluctuates over time and is generally lower than the historic high water mark, this data provides a “worst case scenario” for the liquefaction analysis.

Because the CPT is more sophisticated and reliable than conventional drilling and sampling methods, the settlements derived from the CPT sites are considered to be more representative of actual settlement than would be expected under the design earthquake and groundwater conditions. Therefore, maximum total settlements are estimated to be approximately 2.1 inches, with up to 2/3 of that as differential settlement, or 1.5 inches.

However, because the alluvial deposits have a gentle slope (approximately six percent) and there are no steeply descending slopes nearby, the risk of significant lateral spread movement or surface manifestation associated with the predicted seismic settlements is considered very small. In order to further ensure that the project site would not be impacted by seismic settlement, post-tensioned slab foundation designs are recommended as a part of the A.G.I technical report.

TABLE 3-1
ESTIMATED SEISMIC SETTLEMENT

Excavation Location	Nearest Lot Number	Average Anticipated Removal Depth (feet)	Historic High Water Mark	Seismic Settlement		
				Liquefaction	Dry Sand	Total
CPT 1	7	12	40	0.0	0.0	0.0
CPT 2	18	12	20	1.3	0.4	1.7
CPT 3	East of 50	12	20	0.4	0.0	0.4
CPT 4	58	25	20	2.1	0.0	2.1
CPT 5	East of 28	25	20	0.1	0.0	0.1
Boring 1	South of 52	25	20	2.0	0.0	2.0
Boring 2	49	25	20	3.9	0.0	3.9
Boring 3	East of 44	12	20	1.6	0.0	1.6
Boring 4	South of 13	12	40	0.0	0.0	0.1
Boring 5	South of 23	12	20	2.5	0.1	2.5
Boring 6	East of 29	25	20	0.0	0.0	0.0
Boring BH7	South of 17	12	30	2.0	0.3	2.3
Source: A.G.I. Geotechnical, Inc. March 11, 2004						

As illustrated in Table 3-1, the average anticipated removal depths in certain locations on the project site would be below the historic high water mark for grading activities. However, it is highly unlikely that the historic high water mark would represent the actual depth of groundwater under the site. For instance, exploratory borings performed in 2000 were conducted to determine the depth of groundwater within the project site. Table 3-2 presents the depth of the groundwater table encountered in the soil boring tests in 2000. As illustrated by the data, the groundwater table is deep enough below the surface that it is not anticipated to be encountered during construction and would not complicate grading operations.

TABLE 3-2
GROUNDWATER DEPTH

Location	Depth (feet)	Elevation (feet)
Boring 1	33	1,228
Boring 2	33	1,230
Boring 3	48	1,230
Boring 4	-	-
Boring 5	43 (perched)	1,259
Boring 6	27 (perched on Castaic Formation)	1,257
Boring 7	46	1,249
Source: A.G.I. Geotechnical Inc. October, 2003		

The proposed project is anticipated to excavate to maximum depths of approximately 25 feet, and actual removal depths would be determined during grading activities. Additionally, grading activities would be generally avoided during times of heavy rain (when groundwater levels would be highest). Therefore, it is unlikely that any groundwater would be encountered during grading activities. However, if groundwater is encountered, grading activities could not proceed and

would be temporarily stopped until conditions were favorable. Therefore, groundwater quality would not be negatively impacted by grading activities.

The majority of the project design avoids development in the hillsides. The largest manufactured slope would be located northwest of Lots 30, 31, and 32. In order to ensure maximum stability on the cut slope, it would be constructed at a gradient of 3:1, horizontal to vertical. The manufactured slope adjacent to Lot 10 would also be constructed at a gradient of 3:1 and all manufactured slopes would be contoured to conform with the natural topography to the greatest extent feasible. If friable, weathered, or other unsuitable bedrock is encountered in the planned cut slopes, stabilization would be required. The need for such stability fills would be determined during the grading activities and would be based on the quality of the bedrock materials exposed. The potential for slope instability during a seismic event is a significant impact that would be mitigated through standard design and engineering techniques, such as manufactured slopes and re-engineered fill, to a less than significant level.

Hydroconsolidation Potential

Because the potential for hydroconsolidation (soil collapse) may occur in the surface alluvial deposits (less than 20 feet below grade), these materials will require removal, reconstitution, and re-compaction prior to development. After removal and re-compaction of the alluvial soils, the potential for collapse would be less than significant.

Slope Stability

The footprint of the proposed project avoids development within most of the hillside terrain of the project site in order to avoid hazards associated with earthquake-induced landsliding and to minimize earth-moving activities. Cross sections through the project site were analyzed for slope stability and are depicted on Figure 3.1-1 and include cross sections A-A' through K-K'. The pertinent cross sections for the purpose of the slope stability analysis are summarized below.

Cross Section C-C' A small landslide is located near the rear of Lots 28 and 29. Cross section K-K' also depicts this area. The most critical failures along this section were found to occur within the Saugus Formation. This area would be completely removed and re-compacted in order to ensure stability.

Cross Section E-E' This cross section depicts proposed 3:1 cut slopes associated with Lots 9 and 13. Bedding is anticipated to be laterally supported with respect to the approximately 40 foot high cut slope between the lots. The slope along the north side of Lot 10 will be trimmed back at a gradient of 3:1.

Cross Section H-H' A 3:1 cut slope is proposed at the rear of Lots 30 through 32. The bedding is anticipated to be laterally supported with respect to the slope face with the syncline axis near the top of the ridge. A 2.10 static factor of safety and a 1.46 pseudostatic factor of safety were obtained for this area through the project design. Factors of safety against slope failure are greater than the code requires in this area of concern between the Saugus and Castaic Formation.

Three detention basins are proposed on the site. The tallest slopes are near the detention basin north of Lot 10 (Lot 64), which is designed to have a maximum height of 11 feet. Alluvial soils in this area would be removed and replaced with engineered fill material. This would allow a 1.95 static factor of safety and a 1.42 pseudostatic factor of safety. The construction of

manufactured slopes would be conducted according to the recommendations provided in the A.G.I. Geotechnical reports to ensure adequate slope stability. Slopes at a gradient of 3:1 would be constructed at the rear of Lot 9 and Lots 30 through 32 to ensure slope stability and potential impacts would be less than significant.

Debris Flow

A tall swale containing colluvial soils is located above Lot 29. The lot lines for Lot 29 do not include the steep portion of the swale. The buildable pad of Lot 29 is roughly 70 feet from the location where debris flow could be deposited in rain events. Therefore, Lot 29 is not at risk from debris flows. Drainage devices (i.e. interceptor drain/concrete swale) would be constructed at the mouth of this swale to convey drainage around Lot 28 and Lot 29 to the appropriate storm drain inlets and potential impacts would be less than significant.

3.1.3 Cumulative Impacts

Generally, geotechnical issues are site-specific and are usually limited to areas within the development boundaries of the project site. Any incremental contribution of the proposed project to soils and geological impacts is not considered cumulatively considerable because: development of the project site is allowed by the General Plan; the proposed project would comply with the applicable requirements of the Uniform Building Code; and, the mitigation requirements identified below would be implemented. These requirements would avoid any cumulative geotechnical impacts that may occur on the project site.

3.1.4 Project Design Features and Mitigation Measures

Project Design Features

- The compact footprint of the project design has reduced the extent of remedial alluvial removals anticipated as well as minimized the total graded area.

- Drainage devices (i.e. interceptor drain/concrete swales) shall be constructed at the mouth of the swale behind Lot 28 and Lot 29 to convey drainage and sediment to appropriate storm drain inlets.

- Manufactured slopes shall be contoured to conform to the natural topography to the greatest extend feasible.

- The project shall comply with the Uniform Building Code (UBC) and compliance shall be verified by the Department of Public Works prior to issuance of grading permits. Development on the project site shall comply with the applicable provisions of the UBC, which regulate the design and construction of excavations, foundations, retaining walls and other elements to control the effects of seismic ground shaking and adverse soil conditions.

Mitigation Measures

MM 3.1-1 During construction, all grading and earthwork shall be conducted in conformance with the recommendations set forth in the geotechnical investigation and review sheets from A.G.I. Geotechnical, Inc.; shall be performed under the observation of a registered geotechnical engineer in order to achieve proper sub-grade preparation, selection of satisfactory materials, and placement and compaction of all engineered fill; and shall be verified by the Department of Public Works.

MM 3.1-2 Removal of alluvial and colluvial soils shall be required during grading and prior to fill replacement. The removed soil shall be re-compacted as engineered fill in accordance with the recommendations in the Geotechnical Investigation and Response to Review Sheets by AGI Geotechnical, Inc.; shall be performed under the observation of a registered geotechnical engineer; and shall be verified by the Department of Public Works. The specific depth and extent of removals shall be determined during grading based upon observation and testing. Removal of compressible materials shall be required in areas planned for development.

Level of Significance after Mitigation

Implementation of the mitigation measures identified above would reduce potential geologic and soils impacts to a level less than significant.

FIGURE 3.1-1
GEOLOGIC MAP

FIGURE 3.1-2
CROSS SECTIONS OF GEOLOGIC MAP – A THRU F

FIGURE 3.1-3
CROSS SECTIONS OF GEOLOGIC MAP – G THRU L

FIGURE 3.1-4
FAULT LOCATIONS

FIGURE 3.1-5
DEPTH OF ALLUVIUM REMOVAL AND STABILIZATION

3.2 FLOOD

This section describes the flood hazards and hydrological impacts associated with implementation of VTTM 53189. Information provided in this section includes a summary of the Drainage Concept and Standard Urban Stormwater Mitigation Plan (SUSMP) prepared by B & E Engineers on March 29, 2004. This document is located in Appendix C.

The water surface profile and flood boundaries of the San Francisquito Canyon Creek were calculated using data supplied by the County of Los Angeles, including a Manning's N-Value of 0.060, which describes the roughness or resistance to water flow, and a Q of 28,124 cubic feet per second (cfs), which describes the amount of discharge or runoff.

3.2.1 Existing Conditions

The proposed project site contains a portion of San Francisquito Canyon Creek and its associated floodplain. Several drainage paths run from west to east through the project site and convey stormwater runoff from within the project site, as well as from areas outside the boundaries of the project site, into the Creek. These minor drainage paths are contained within three subwatersheds that drain into the San Francisquito Canyon Creek, indicated as subwatersheds A, B, and C for the purposes of this analysis.

These three subwatersheds are further broken down into eight subareas. The existing drainage patterns for the project site and off-site areas are shown in Table 3-3. This table illustrates the number of acres for each subarea and the Q (runoff rate) for each subarea in the first two columns. The second two columns include a running total, resulting in a total acreage and Q for the three subwatersheds (A, B, and C) presented in bold type. The last column presents the total Q for the three subwatersheds with a bulking factor of 1.36 to account for the movement of sediment and debris-laden runoff into the San Francisquito Canyon Creek. Bulking factors are typically used for projects that are within hillside or mountainous areas that are subject to wildfires and/or soil erosion.

TABLE 3-3
EXISTING STORMWATER FLOWS
50-YEAR STORM FREQUENCY

Sub Area Number	Acres	Sub Area Q (cfs)	Total Acres in Drainage Area	Total Q (cfs) in Sub Area and Drainage Area	Total Q with Bulking Factor in Drainage Area
1A	28	28	28	58	
2A	17	37	45	94	
3A	33	53	78	140	
4A	26	85	64	169	
5A	10	19	**114**	**182**	**240.2**
6B	18	29	18	29	
7B	19	27	**37**	**53**	**72.1**
8C	16	33	16	33	
9C	21	38	**37**	**70**	**95.2**
Source: B & E Engineers, March 2004					

The project site does not contain any existing stormwater facilities because the site is vacant and undeveloped. Figure 3.2-1 illustrates the existing drainage patterns of the project site. The water surface limit line per the Water Pressure Surface Gradient (WPSG) model, using the County of Los Angeles data Q = 28,124 cfs, is indicated by a dashed line. This line is the calculated line of the water edge during a flood, based on a water flow rate of 28,124 cfs. The Flood Hazard Limits represents a safety factor, calculated according to the County of Los Angeles Guidelines, that illustrates the appropriate distance to be maintained from the flood line. This line is depicted just outside of the surface water limits.

The Federal Emergency Management Agency (FEMA) zone for the San Francisquito Canyon Creek within the project area is Zone A. Zone A is the flood insurance rate zone that corresponds to the 100-year floodplain that is determined in the Flood Insurance Study. Because detailed hydraulic analyses are not performed for such areas, no base flood elevations or depths are shown within this zone. Mandatory flood insurance purchase requirements would apply to this zone.

3.2.2 Project Impacts

Thresholds of Significance

The following thresholds were determined to indicate that impacts to hydrology could be significant for the proposed project:

- Presence of a major drainage course, as identified on USGS quad sheets by a dashed line on the project.
- Location of the project site either within or containing a floodway, floodplain, or designated flood hazard zone.
- Project grading that would substantially alter the existing drainage pattern of the site or area.

Impacts Analysis

Project Design Features

The proposed project includes three debris basins (Lots 64, 65, and 66) with desilting inlets to minimize sediment and bulked flows in storm water runoff. These debris basins and desilting inlets would be located north of Lot 10, west of Lot 26, and west of Lot 59. A debris basin is an earth-bottom basin that traps stormwater runoff from the surrounding hillsides and allows for the slow exfiltration of the water through the soil and through the desilting inlet, which facilitates the sedimentation process and reduces bulk stormflows. All other inlets would be bulked flow inlets, which would allow for the passage of bulked flows (sediment/burned runoff) through to the San Francisquito Canyon Creek.

The project design also includes energy dissipaters (such as rip-rap), as required by the Los Angeles County Department of Public Works. At the end of the three proposed storm drain outlets, energy dissipaters would be installed to diffuse the stormwater runoff entering San Francisquito Canyon Creek, thereby minimizing erosion potential within the Creek bed. The energy dissipaters would be sized and configured according to County standards. The central drainage between Lot 42 and Lot 43 would likely involve the installation of a 60 inch pipe under the road and a 20 foot by 20 foot grouted rock energy dissipater downstream of its outlet. The other two storm drains would involve the installation of 30 inch pipes under the roadway and the construction of smaller rock energy dissipaters. The size and ultimate configuration of these energy dissipaters would be determined during final project design.

The project also includes a below-ground levee to provide adequate flood protection for the project site. The levee would provide protection for the graded pads in case the braided stream of the San Francisquito Canyon Creek was to meander toward the development and erode the supporting soil during a 50-Year Capital Flood event.

Storm Water Peak Flows

Table 3-4 presents the pre-development acreage and Q, as previously provided in Table 3-3, as well as the post-development acreage and Q. The difference between the pre- and post-development is presented in the last two columns of Table 3-4.

TABLE 3-4
PRE AND POST DEVELOPMENT STORM WATER FLOWS
50-YEAR STORM FREQUENCY

Subarea Drainage Feature	Pre-Development		Post-Development		Difference	
	Total Area (Acres)	Total Q with Bulking Factor	Total Area (Acres)	Total Q with Bulking Factor	Total Area (Acres)	Total Q with Bulking Factor
A	114	240.2	128	320.9	14	80.7
B	37	72.1	16	31.8	-21	-40.3
C	37	95.2	48	104.5	11	9.3
TOTAL	**188**	**407.5**	**192**	**457.2**	**4**	**49.7**

Source: B & E Engineers, March 2004

With the implementation of the proposed project, the post development drainage area would increase from 188 acres to 192 acres. The drainage pattern would remain separated into three subwatersheds; however, some of the flow in the internal drainage areas would be redirected internally after grading. The four acre increase from pre-development to post-development conditions is due to the adjacent development southwest of the project site (in subarea 26C) that drains onto "A" Street. Figure 3.2-2 illustrates the post-development hydrology of the project site as well as the SUSMP requirements.

The proposed project would create impervious surfaces such as roads, sidewalks, homes, and driveways. The replacement of the currently undeveloped and exposed ground with impervious surfaces would reduce stormwater infiltration. As a result, the Total Q from the project site is projected to increase. As illustrated by Table 3-4, the Q in subarea A would increase by 80.7 cfs; subarea B would decrease by 40.3 cfs; subarea C would increase by 9.3 cfs. However, this 49.7 cfs increase in the Total Q would not be considered a significant impact.

The current Q for San Francisquito Canyon Creek within the project boundaries is 28,124 cfs. Therefore, the post-development Q represents an approximately 0.18 percent increased contribution to the overall Q for San Francisquito Canyon Creek. This negligible increase would not constitute a significant impact and the minute increased storm water flows would not result in erosion or sedimentation impacts downstream. The storm water flow from the developed project site would be released to the natural drainage on-site and would remain tributary to the San Francisquito Canyon Creek, the Santa Clara River, and ultimately, the Pacific Ocean, and would not impact downstream developed property. Furthermore, the Creek is protected in the County as SEA No. 19, which is designed to preserve the stream flow in the Creek for the unarmored threespine stickleback; therefore, development would not be allowed to occur within the Creek that could potentially be impacted by the slight increase in flow from the project site. Downstream storm drain facilities and properties would not be impacted by storm water flows from the proposed project.

Additionally, the Los Angeles County Department of Public Works (DPW) has reviewed the Drainage Concept and SUSMP for compliance with the County requirements and standards for flood and erosion control. The current design has been accepted by the DPW as being in compliance with applicable County requirements. Therefore, potential site drainage and erosion impacts would be less than significant.

Floodplain Boundaries

The boundary line for FEMA Zone A is labeled on the Figure 3.2-2. The Zone A line crosses Lots 33 through 41 and results in a minimal intrusion of the project footprint into the currently delineated flood zone. However, as a result of the hydrology evaluation on the project site by B & E Engineers, the FEMA Zone A line has been determined to be inaccurately depicted on the project site. As currently depicted, the FEMA zone line crosses over the raised streambed bank; therefore, the FEMA line appears to be inaccurate based on the hydrology study.

The project applicant will file a Conditional Letter of Map Revision (CLOMR) with FEMA to correct the FEMA map and move the flood zone line easterly towards the creek bed in order to accurately reflect the current hydrology of the creek. The CLOMR will be completed and approved prior to grading plan approval. Upon completion of the construction of the proposed project, a Letter of Map Amendment (LOMA) would be issued for the site, confirming the new alignment of the FEMA Zone A line. The proposed project would not be constructed in the 100-year floodplain, and potential impacts from flood hazards are therefore less than significant.

Flood Control Measures

The proposed project site is adjacent to the San Francisquito Canyon Creek, which is wide and contains a braided stream flow. The current Flood Hazard Limits per the Los Angeles County Guidelines, as depicted on the VTTM 53189, is close to or crosses three areas on the project site, including the northern portion of “A” Street, Lot 33, and Lot 41. Prior to mitigation, this minor intrusion onto or near the edge of these properties could result in significant impacts to the graded pads along the San Francisquito Canyon Creek in a major storm event. Therefore, the project design has incorporated a bank stabilization levee system. Because the locations of the graded pads are located significantly above the 50-Year Capital Flood for a bulked and burned flow, the bank stabilization levee would be located below the graded pads along the existing floodplain boundaries and would extend below ground. The levee system would be constructed when the San Francisquito Canyon Creek is dry. Therefore, the construction of the levee system would avoid impacts to the hydrology of the flowing creek and temporary construction-related impacts would be less than significant.

Upon completion of the levee construction, the excavation would be entirely backfilled with existing creek soil and only the four horizontal feet of above ground levee “free board” space would be visible. The levee would be constructed with ungrouted rip-rap, which would allow for percolation of water, accumulation of transported soils, and establishment of plant life. The uneven nature of the rip rap would mimic the natural environment and would not increase the creek flow rates along the levee or facilitate erosion along the levee. Therefore, the underground levee system would have less than significant impacts on the long-term hydrology of the San Francisquito Canyon Creek.

3.2.3 Cumulative Impacts

The Q from the project site would be slightly increased by 49.7 cfs from pre- to post-development conditions. This represents an approximate increase of 0.18 percent to the overall flow of the San Francisquito Canyon Creek. However, this negligible increase would not negatively impact private property downstream. The proposed project site would not connect to

any existing storm drain system; therefore, the proposed project would not contribute to cumulative impacts on the capacities of downstream storm drain facilities to accommodate storm flows.

Future development that would be tributary to San Francisquito Canyon would also be required to comply with the County Flood Control standards and requirements, and potential impacts to the hydrology of the San Francisquito Canyon would need to be mitigated. For example, the Tesoro del Valle project's storm water runoff would be tributary to several watersheds, including San Francisquito Canyon. As described by the 1995 EIR for the project, the post-development Q (2,870 cfs) would be slightly less than the pre-development Q (2,924 cfs). Therefore, potential hydrologic/flooding impacts for the Tesoro del Valle project were less than significant. Since the proposed project would not represent a significant change in the quantity of flow in the Creek; the largest adjacent development (Tesoro del Valle) would also not result in a significant impact to flow in the creek; and it can be assumed that all other future developments tributary to the San Francisquito Canyon Creek would be subject to the same County Flood Control requirements, the proposed project's contribution to cumulative impacts would be negligible.

3.2.4 Project Design Features and Mitigation Measures

Project Design Features

- Energy dissipaters will be constructed at every storm drain outlet that drains into San Francisquito Canyon Creek in order to slow the flow velocity and to minimize potential erosion. The ultimate size and design of the energy dissipaters will be determined in the final design stages of the project according to the Los Angeles County Public Works Department standards.

- An underground bank stabilization levee system will be constructed below the graded pads along the existing floodplain boundary from the northern project boundary near Lady Linda Lane and southerly to Lot 46. The levee system would extend approximately 20 vertical feet below the ground and would be constructed with ungrouted rip-rap. Upon completion of the levee construction, the excavation would be entirely backfilled with existing creek soil and approximately four horizontal feet (two vertical feet) of above ground levee "free board" space would be visible.

Mitigation Measures

MM 3.2-1 Prior to the approval of a grading permit, the project applicant shall submit a CLOMR to FEMA and receive a notice of approval from FEMA for the adjustment to the Zone A flood limits.

Level of Significance after Mitigation

With the implementation of the mitigation measures, potential impacts from flood hazards and site drainage would be less than significant.

FIGURE 3.2-1
EXISTING CONDITIONS - HYDROLOGY

FIGURE 3.2-2
POST-DEVELOPMENT HYDROLOGY

3.3 FIRE

This section describes the potential fire hazard for the proposed project site and immediate vicinity and discusses impacts that could result from implementation of VTTM 53189. Information provided in this section includes an analysis of the County of Los Angeles Code and the application of the County of Los Angeles Fire Department "Fuel Modification Plan Guidelines" from the Fuel Modification Unit of the Forestry Division, as well as on-site visits and discussions with Mr. Ron Durbin of the County of Los Angeles Fire Department.

3.3.1 Existing Conditions

The proposed project site is currently vacant undeveloped land located within the unincorporated County of Los Angeles near the City of Santa Clarita. The project site contains a portion of the San Francisquito SEA No.19, which has vegetation types that include Riversidean alluvial fan sage scrub, non-native grassland, and ruderal. The vegetation types on the hillsides of the project site include non-native grassland, a mix of non-native grasses and chamise chaparral, mixed chaparral and mainland holly leaf cherry woodland, coastal sage scrub, eucalyptus woodland, and non-native grassland. Photographs that depict the current state of the project site and surrounding areas are presented in the various figures included in Section 4.5, Visual Qualities.

Hillside management areas are considered to be prone to wildfires due to the topography, vegetation susceptible to fires, and distance from fire safety measures. The proposed project site is within a hillside management area with open space directly to the north and west, sparsely developed ranchland to the east, and the Tesoro del Valle residential development (under construction) to the south. San Francisquito Canyon Creek bisects the eastern portion of the project site from north to south and eventually connects with the Santa Clara River. The western side of the project site, which would contain the proposed residential development, is largely vegetated with non-native grasses and mostly flat topography near San Francisquito Canyon Creek. The western and northwestern portions of the project site are more steeply sloped with ridges and valleys.

The Los Angeles County Fire Department Vegetation Management Division maintains a database of wildfires in Los Angeles County. Since 1960, there have been 160 documented wildfires in Santa Clarita and/or immediately adjacent areas. Of these fires, 23 were larger than 1,000 acres and six were larger than 10,000 acres. The largest fire burned 115,538 acres in 1970. The number and size of wildfires in the greater Santa Clarita area from 1990 through 2002 are presented in Table 3-5 below.

Fire Code Designation

The Los Angeles County Fire Department provides fire services to the project area. Regional Fire Prevention Unit Section II serves two regions of Los Angeles County; the Central Region, including Carson, Hawthorne, Malibu, and West Hollywood, and the North Region, including vast areas of Los Angeles County designated as "Very High Fire Hazard Severity Zone" (VHFHSZ) (Lancaster/Palmdale and Santa Clarita). This office inspects and approves all single-family dwelling units located in wildland areas. The proposed project is located within the area described by the County Forester and Fire Warden as a VHFHSZ, which designates areas that are considered to have a high fire potential.

TABLE 3-5
WILDFIRES IN THE SANTA CLARITA AREA (1990-2002)

Year	Fire Name	Acres Burned	Year	Fire Name	Acres Burned
1990	CALGROVE FIRE	89	1997	PLACERITA FIRE	0
1990	*N/A*	5	1997	PLACERITA FIRE	1
1991	POLK FIRE	135	1997	PLACERITA FIRE	3
1991	SYLMAR FIRE	702	1997	PLACERITA FIRE	455
1992	BOUQUET FIRE	120	1997	LINDA FIRE	216
1992	MADD FIRE	72	1997	FENTON	73
1992	REFINERY FIRE 28 AC	26	1997	SOLEDAD	44
1993	SAN FERNANDO FIRE	177	1998	WAYSIDE FIRE	19
1994	SCHERZINGER	30	1998	DERBY FIRE	362
1995	FREEWAY FIRE NO II	1,233	1999	WEST END	25
1995	TOWSLEY FIRE	818	2001	STABLES FIRE	6,402
1996	HASKELL FIRE	85	2001	BOUQUET FIRE	194
1996	BOUQUET FIRE NO. II	100	2002	FREEWAY FIRE I	65
1997	FREEWAY IC FIRE	45	2002	PLACERITA FIRE	359
1997	SIERRA FIRE	523	2002	COPPER FIRE	19,102

Source: Los Angeles County Fire Department Vegetation Management Division, October 2003

The County of Los Angeles Building Code (Section 6402) describes the structural building requirements for homes within a VHFHSZ to minimize the potential for wildfire damage to property. The VHFHSZ is defined in Appendix VIII of the County of Los Angeles, Title 32, Fire Code. Title 32 is intended to provide minimum standards to safeguard the public's safety and welfare. Section 1117.2.1 describes requirements for fuel modification plans in VHFHSZ. The section states:

> "A fuel modification plan, a landscape plan and an irrigation plan prepared by a registered landscape architect, landscape designer, landscape contractor, or an individual with expertise acceptable to the forestry division of the fire department shall be submitted with any subdivision of land or prior to any new construction, remodeling, modification or reconstruction of a structure where such remodeling, modification or reconstruction increases the square footage of the existing structure by 50% or more within any 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. Every fuel modification plan, landscape plan and irrigation plan shall also be reviewed and approved by the forestry division of the fire department for reasonable fire safety. After such final plan has been approved by the forestry division of the fire department a signed copy of the Covenant and Agreement shall be recorded at the Registrar-Recorder/County Clerk's Office."

The County of Los Angeles Fire Department Forestry Division provides several environmental and vegetation management services, including fuel modification planning. The purpose of fuel modification is to provide a transition between urban and suburban land uses and undisturbed native areas. The "Fuel Modification Plan Guidelines" were created by the Forestry Division to set forth landscape criteria for all new construction to help reduce the threat of fires in VHFHSZ.

A fuel modification program typically consists of three zones that are subject to partial or total replacement of the native or ornamental vegetation with drought tolerant and fire retardant plants or the thinning of native plants. Zone A is a minimum 20-foot setback zone that is measured outward from the habitable structure. Most of the vegetation in this zone is limited to groundcovers, green lawns, and selected ornamental plants. This zone requires regular

vegetation trimming, continual removal and/or thinning of combustible vegetation, a well maintained irrigation system, and the removal and replacement of dead/dying fire retardant vegetation.

Zone B includes an additional 30-foot irrigation zone that provides defensible space for fire suppression forces. Some native or existing vegetation may remain if spaced according to the "Fuel Modification Plan Guidelines" and are free of dead wood. The maintenance requirements are the same as for Zone A. Zone A and Zone B are both irrigated and may be referred to as a "wet zone".

Zone C includes a 150-foot thinning zone and is designed to slow the rate of wildfire spread, reduce flame lengths, and minimize the intensity of the fires prior to reaching irrigated areas. This zone allows for predominantly existing vegetation with the removal of undesirable plant species. Natural vegetation is thinned by reduced amounts as the zone moves away from the development. The combination of Zones A though C may extend up to 200-feet from the habitable structures, depending on specific instructions from the County of Los Angeles Fire Department.

Fire Department Resources

The project site is approximately four miles from the nearest Los Angeles County Fire Station No. 111, Battalion 6. This station is located at 26869 Seco Canyon Road in Valencia and is approximately seven minutes from the project site (based on non-emergency drive-time). This fire station contains one fire engine and two squad vehicles. All fire stations in Battalion 6, which serves the Santa Clarita Valley area, are listed below.

Station 73	24875 San Fernando Rd., Newhall 91321-1520 (Battalion Headquarters)
Station 75	23310 Lake Manor Dr., Chatsworth 91311-6418
Station 76	27223 Henry Mayo Dr., Valencia 91355-1009
Station 77	46833 Peace Valley Rd., Gorman 93243-0002Mail: P.O. Box 2
Station 107	18239 W. Soledad Canyon Road, Canyon Country 91351-3521
Station 111	26829 Seco Canyon Rd., Valencia 91350-2217
Station 123	26321 N. Sand Canyon Rd., Canyon Country 91351-4020
Station 124	25870 Hemingway Ave., Stevenson Ranch 91381-1604
Station 126	26320 Citrus Drive, Santa Clarita 91355
Station 149	31770 Ridge Route, Castaic 91384-3300

The Santa Clarita Emergency Communication Team operates a program called "Santa Clarita Fire Watch," which is a program designed to prevent or reduce the number of fires in the area by activating patrols during "Red Flag Alert" days. These patrols are conducted by volunteers and are limited to the City of Santa Clarita, surrounding unincorporated areas of Los Angeles County, and the Angeles National Forest. Red Flag Alert days are determined by the local fire authorities and the National Fire Weather Service and the program includes mass media bulletins and increased patrols in designated areas to provide early detection and reporting of fires.

3.3.2 Project Impacts

Thresholds of Significance

The following threshold was determined to indicate that fire hazards were potentially significant for the proposed project:

- Location of the project site in a Very High Fire Hazard Severity Zone.
- Distance from project site to nearest fire station.

Impacts Analysis

VHFHSZ Impacts

Development of the proposed project would convert currently undeveloped land to residential land uses. The project site is within a designated VHFHSZ area and potential exposure to fire hazards is a concern due to the open space hillsides and history of fire in the region. The portion of SEA No.19 included within the project boundaries (Lot 61) is 103.5 acres in size and would remain undeveloped. Lot 61 is adjacent to the backyards of proposed residential Lots 33 through 51.

Other open spaces preserved on the project site include 29.7 acres (Lot 62) and 15.3 acres (Lot 63). Lot 62 is located in the western portion of the project site and contains the holly-leaf cherry woodland and a natural drainage feature that flows to the San Francisquito Canyon. This woodland was recently burned in a wildfire, damaging many of the trees. Lot 63 is located in the steeply sloped northwestern portion of the project site. The proposed homes on the project site would be surrounded by these three open space lots and the hillsides and each of the proposed residential lots would have at least one edge of the property adjacent to open space.

However, the project site will eventually be surrounded on the north, west, and south by development associated with the Tesoro del Valle project. This development includes approximately 1,795 acres of residential development, which would significantly reduce the amount of open space that surrounds the project site. Open space will remain between the Tesoro development (TR 51644) and the proposed project (TR 53189); however, a large buffer would be established around the project site and the open hillsides to the west. Ranches and residential subdivisions are located to the east of the project site, providing an existing buffer between the project site and the hillsides to the east. To the northeast, the proposed project is within 0.25 mile of the Angeles National Forest, which will remain as open space.

Fire hazards are increased when private property is adjacent to natural vegetation. Stringent requirements are placed on any development within a designated VHFHSZ area to ensure that fuel modification measures are taken to reduce the risk associated with wildland fires. Fuel modification of the vegetation directly surrounding the developed homes will be required. In the Biota Section 4.3, Figure 4.3-2 presents the boundary of the proposed fuel modification zone.

Fuel Modification for Internal Lots

Fuel modification for fire prevention would occur up to 200 feet around the perimeter of the project development, with the exception of graded pads located along the SEA, which will require 100 feet of fuel modification. For the majority of the project site, the first 20 feet from the residential structure outward would be in the Zone A, which would be entirely contained within the graded pads and would consist of irrigated lawn and landscaping flora. The next 30 feet would be within Zone B, which is also a “wet zone” that requires regular irrigation and

low-growing landscaping or vegetation. Much of Zone B would also be within the graded pads, depending on the width of the lot and the exact location of the home within the pad area.

Zone C would extend approximately 150 feet from the edge of Zone B. The combination of Zones A through C would total a maximum of 200 feet. Zone C would involve selective trimming and/or thinning of the vegetation, including the removal of highly-flammable non-native species and the mowing, trimming, and/or thinning of non-native vegetation so that the root structures would remain intact. This selective removal of hazardous "fuel" sources as well as the removal of dead debris for fuel modification activities would minimize the fuel available for a wildfire and reduce the likelihood of damage to the property. Natural vegetation is thinned by reduced amounts as the zones moves away from the development.

Due to the proximity of Lots 1 through 8 to the project boundary, these lots would not be able to maintain all of Zone C within the project boundaries. In cases where off-site fuel modification would be required to accommodate the 200-foot buffer zone, the adjacent landowner is legally responsible for maintaining the fuel modification buffer that extends into their property for the protection of neighboring properties. However, another option for these lots would be to develop an alternative means of fire protection, such as the development of a fire wall. In an effort to avoid off-site fuel modification, a six-foot solid fire wall will be located along the backyard property boundary of Lots 1 through 8 to provide adequate fire protection for these lots. This fire wall would negate the need for the off-site Zone C.

Additionally, construction of Tesoro del Valle adjacent to the southwest portion of the proposed project site is currently underway. Upon completion of the Tesoro project, the property to the north, west, and south of the project site will be developed. The development of the Tesoro project includes a fuel modification program that is or will be in compliance with the County of Los Angeles Fire Department requirements. Therefore, this development would provide an additional buffer from wildfire hazards for the project site. Potential hazards associated with the project's location within a VHFHSZ would be less than significant to residential structures with the implementation of the mitigation measures.

Fuel Modification for SEA-Adjacent Lots

Fuel modification behind Lots 33 through 42 along the SEA would require a 100-foot buffer zone, per Mr. Ron Durbin of the County of Los Angeles Fire Department on a site visit on July 6, 2004. The reduced fuel modification zone length is due to the fact that the vegetation within the SEA consists of naturally sparse, low-lying shrubs that would not amount to a significant fuel load in the event of a wildfire. The majority of irrigated Zone A and Zone B (approximately 45 of the 50-foot "wet zone") would be located within the graded pads of these lots. In addition to the required 50 feet of irrigated land, the manufactured slopes behind these lots will also be irrigated; thereby extending the irrigation beyond the required 50 feet an additional 10 to 15 feet. This extended "wet zone" in conjunction with vegetation thinning Zone C would total a minimum of 100 feet from the home structure.

No other flammable structures would be allowed in the backyards of these lots in order to ensure that the 100-foot fuel modification zone is not extended into the SEA. As currently planned, vegetation thinning associated with fuel modification would not impact the SEA. The 100-foot fuel modification area will provide adequate wildfire protection for Lots 33 through 42. Further south of Lot 42, the fuel modification zone would be gradually extended to coincide with the SEA boundary until the 200-foot buffer is able to be accommodated without impacting the SEA. This fuel modification boundary is depicted on Figure 4.3-2 in the Biological Resources section of this EIR. The proposed project would also comply with all County Fire Department requirements for fuel modification and landscaping specified in the County Fire Code, Title 32.

Potential hazards associated with the project's location within a VHFHSZ would be less than significant to residential structures with the implementation of the mitigation measures.

Fire Department Resources

As previously stated, the project site is approximately four miles from the nearest fire station, which is located at 26869 Seco Canyon Road in Valencia. The Los Angeles County Fire Department is planning for the development of a new Fire Station No. 138 within the Tesoro del Valle project area. The fire station will either be located within the Tesoro development or along San Francisquito Canyon Road. This station would provide fire protection service for the proposed project, in addition to the fire services already in existence in Battalion 6. August 1, 1990, the County Board of Supervisors adopted a Resolution pursuant to Chapter 22.68 of the County Code that allows for the levying of fees for fire protection services. In order to mitigate for the additional fire protection that would be required by the proposed project, the County requires the payment of a development fee assessed at $0.3716 per square foot of construction. Payment of this fee is intended to ensure that the project would have no impact on fire protection services.

3.3.3 Cumulative Impacts

This cumulative analysis takes into consideration development projects listed in Section 2.6, as well as the proposed project and the existing ranches along San Francisquito Canyon Road. Projects listed in Section 2.6, which include planned as well as developed properties near the project site, includes approximately 6,000 residential homes in the area.

The introduction of residential development into VHFHSZ areas increases the risk of exposing people and property to wildland fires along the interface between development and naturally vegetated open space areas, as well as increasing the probability of wildfires due to more frequent human contact with adjacent natural open spaces. The rapid growth of the Santa Clarita Valley region has resulted in considerable residential development within VHFHSZ areas, which translates into increased risks of exposure to wildfire for homeowners who live along this wildland interface. However, the rapid development of Santa Clarita and the surrounding areas is also facilitating the urbanization of much of the property surrounding the project site and decreasing the amount of open space that would be subject to wildfires. The increased urbanization also removes areas from being classified as VHFHSZ.

The development of the Tesoro del Valle and the West Creek projects would substantially reduce the amount of undeveloped land in the vicinity of the project site. Additionally, all new projects in the VHFHSZ must comply with County's fuel modification and landscaping requirements. Therefore, the significant amount of residential development existing, underway, and planned for the area surrounding the project site, which is subject to fuel modification requirements, would result in a reduced risk of danger from wildland fires for the entire area. Consequently, the proposed project would not contribute to a cumulatively considerable risk of wildland fire exposure.

3.3.4 Project Design Features and Mitigation Measures

Project Design Features

- In an effort to avoid off-site fuel modification, a six-foot solid fire wall will be located along the backyard property boundary of Lots 1 through 8 to provide adequate fire protection for these lots. This fire wall would negate the need for the off-site fuel modification Zone C.

Mitigation Measures

MM 3.3-1 As required by Section 1117.2.1 of the County of Los Angeles Fire Code (Title 32), a fuel modification plan, landscape plan, and an irrigation plan shall be submitted to the Forestry Division and the County Department of Regional Planning and must be approved prior to the issuance of a grading permit. The project shall comply with the all applicable requirements of Los Angeles County Code Title 32, Fire Code.

MM 3.3-2 The CC&Rs of the Homeowner's Association shall state that structures constructed with flammable materials are prohibited in the backyards of Lots 33 through 42 in order to maintain the 100-foot fuel modification buffer without impacting the SEA. The HOA shall enforce this requirement.

MM 3.3-3 Prior to issuance of a grading permit, the project applicant shall pay the required fire mitigation fee for fire services provided by the County of Los Angeles.

Level of Significance after Mitigation

With the incorporation of the mitigation measures described above, impacts associated with location of the project within the Very High Fire Hazard Severity Zone and the distance from the project site to the nearest fire station would be less than significant.

SECTION 4.0 RESOURCES ANALYSIS

4.1 WATER QUALITY

This section describes the potential impacts to water quality associated with implementation of VTTM 53189. This analysis is based on the results of the Drainage Concept and SUSMP for VTTM 53189 report prepared by B&E Engineers in August 2003. A detailed discussion of this report is provided in the Flood Section 3.2 and the full report is located in Appendix C.

4.1.1 Existing Conditions

Surface Water Characteristics

The Los Angeles region encompasses all coastal drainages flowing to the Pacific Ocean between Rincon Point and the eastern line of Los Angeles County. It is subdivided into several hydrologic units, areas and sub-areas. The project site lies within the "Santa Clara – Calleguas" Hydrologic Unit. This Hydrologic Unit covers the northwestern portion of Los Angeles County and majority of Ventura County. The area has a mix of urbanized land uses and national forest. The main drainage courses in the Unit are the Santa Clara River and Calleguas Creek. The proposed project is in the Santa Clara River watershed. The project's runoff would drain from the San Francisquito Canyon Creek into the Santa Clara River, thereafter to the Pacific Ocean.

The proposed project site contains a portion of San Francisquito Canyon Creek and its associated floodplain. As discussed in the Section 2.3, Project Description, the project site is currently vacant and undeveloped land with no paved surfaces. Several drainages run west to east and drain the project site during storms and deposit the runoff in the San Francisquito Canyon Creek. Runoff from hillsides outside of the project boundary also drains through the project site and into the creek. These minor drainages are contained within three subwatersheds that drain into the San Francisquito Canyon Creek, indicated in the Drainage Concept and Standard Urban Stormwater Mitigation Plan (SUSMP) report as A, B, and C. San Francisquito Canyon Creek drains into the Santa Clara River south of Avenue Scott just west of the McBean Parkway overpass. This portion of the Santa Clara River is defined as Reach 8 by the United States Environmental Protection Agency (USEPA), and defined as Reach 6 by the Los Angeles Regional Water Quality Control Board (RWQCB). For the purposes of this analysis, the USEPA reaches will be used.

Surface Water Quality

Under Section 303(d) of the 1972 Clean Water Act (CWA), all states are required to develop a list of water quality impaired water bodies. Water bodies must be included on the list if they do not meet water quality standards, even after the minimum required levels of pollution control technology have been installed on point sources. The law requires that priority rankings are established for waters on the lists and action plans, called Total Maximum Daily Loads (TMDL), are developed to improve water quality. A TMDL is defined by the Environmental Protection Agency as "a calculation of the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards, and an allocation of that amount to the pollutant's sources. A TMDL is the sum of the allowable loads of a single pollutant from all contributing point and non-point sources". The San Francisquito Canyon Creek is not listed as a 303(d) impaired water body.

San Francisquito Canyon Creek drains into Reach 8 of the Santa Clara River. This Reach is defined by the USEPA as being from W. Pier Highway 99 (now Interstate 5) to Bouquet Canyon Road Bridge and is listed as an impaired water body on the 2002 CWA Section 303(d) List.

This portion of the Santa Clara River is listed for chloride and high coliform count. The Los Angeles RWQCB has approved a TMDL of 100 milligrams per liter (mg/L) for chloride for this reach of the Santa Clara River. Approval of this TMDL is pending with both the California State Water Resources Control Board (SWRCB) and the USEPA. A TMDL has not been determined for coliform in the Santa Clara River.

Sewage generated in the Santa Clarita Valley area is treated at the Valencia and Saugus Water Reclamation Plants (WRP). Reach 7 is downstream of Reach 8 and receives the effluent discharge of the Valencia WRP. The Saugus WRP discharges near the boundary of Reach 8 and Reach 9 just upstream of the San Francisquito Canyon Creek confluence. In addition to the 303(d) listing of chloride and high coliform content for Reach 7, the Los Angeles RWQCB established a TMDL for nitrate/nitrite in Reach 7 of the Santa Clara River, which was recently approved by the SWRCB and the USEPA. For non-point sources discharging into Reach 7, the combined "ammonia, nitrate, nitrite" load is nitrogen is 8.5 mg/L. Reach 8 of the Santa Clara River is included on the State Monitoring List for organic enrichment/dissolved oxygen, which may be caused by excessive nitrogen.

Agricultural runoff, stormwater discharges, and groundwater discharge may contribute to nitrate loads; however, the principal source of ammonia, nitrite, and nitrate to the Santa Clara River is from WRP discharges. The TMDL for nitrogen for the Saugus WRP is 7.1 mg/L and for the Valencia WRP is 6.8 mg/L.

Chloride

Chloride is a component in sodium chloride (table salt) and potassium chloride. The main source of chloride in the Santa Clara River comes from the Saugus and Valencia Water Reclamation Plants. Approximately 47 percent of the chloride sources in the Santa Clarita Valley come from residential land uses. Approximately 69 percent of the chloride from residential land uses is the result of self-regenerating water softener systems; approximately 16 percent is from human waste; and approximately 12 percent is from laundry detergents and chlorine bleach.

A special treatment process (microfiltration and reverse osmosis) is required to remove chloride from wastewater. These processes are expensive and are not currently available in the treatment plants that treat the sewage from the Santa Clarita Valley. In an effort to reduce chloride in the wastewater without constructing additional treatment systems, County Sanitation District No. 32 passed an ordinance that prohibits the installation of residential self-regenerating water softening appliances.

Coliform Bacteria

The presence of coliform bacteria is used as an indicator for the presence of fecal wastes from warm-blooded animals, including humans. Coliform bacteria themselves are not necessarily pathogenic, but they indicate the likelihood that more dangerous organisms, such as the organisms that cause salmonellosis, cholera or hepatitis, are present. Although contamination of waters by human wastes is especially serious, animal wastes can also transmit disease. Consequently, high levels of fecal coliform bacteria, regardless of the source, imply a high risk of disease transmission. Los Angeles RWQCB has not developed a TMDL for coliform for the Santa Clara River. However, as a general rule, waters designated for recreation uses, e.g., swimming, should not average above 200 colony forming units (CFU)/100 mls.[1]

[1] http://www.uncwil.edu/cmsr/waterq/WQuality.htm

Nitrate/Nitrite

Nitrate (NO_3) is highly soluble in water and is easily transported in streams and groundwater. Nitrates feed plankton (microscopic plants and animals that live in water), aquatic plants, and algae, which are then eaten by fish. Nitrite (NO_2) is relatively short-lived in water because it is quickly converted to nitrate by bacteria. Excessive concentrations of nitrate and/or nitrite can be harmful to humans and wildlife. Nitrate is of most concern for humans because it reacts with hemoglobin in human blood to produce methemoglobin, which limits the ability of red blood cells to carry oxygen. High nitrate and nitrite levels can also cause a similar condition in livestock and other animals. If excessive amounts of nitrates are added to the water, algae and aquatic plants can be produced in large quantities. When these algae die, bacteria decompose them and use up oxygen in a process called eutrophication. Dissolved oxygen concentrations then can drop too low for fish to breathe, leading to fish kills.[2]

Groundwater Quality

The Alluvial Aquifer and the Saugus Formation are the two groundwater sources within the Santa Clarita Valley. The Alluvial Aquifer system lies beneath the Santa Clara River and its tributaries, including the Castaic Creek, San Francisquito Canyon Creek, and Bouquet Canyon, and consists primarily of the land beneath the stream channel and floodplain. Recharge to this aquifer is predominantly from percolation of stream-flow. The Alluvial Aquifer serves as a large source of the local water supply because the groundwater is easier to access than the deeper Saugus Formation and is capable of rapid water level recovery and storage in wet periods.

The Alluvial Aquifer has historical fluctuations in the concentrations of total dissolved solids (TDS); however, these groundwater quality variations generally correlate to precipitation and stream flow. Wet periods produce recharge of higher quality water. Therefore, the presence of long-term consistent water quality fluctuations that are affected by wet and dry cycles are not indicative of a trend toward groundwater quality degradation. In 2002, perchlorate was detected in one Alluvial Aquifer well located near the former Whittaker-Bermite facility. The well was subsequently inactivated for municipal use. All other Alluvial wells have continually tested negative for perchlorate contamination.

The Saugus Formation is a large, deep aquifer that extends over an 84-square-mile area. The primary source of recharge for this aquifer is precipitation on exposed outcrops and direct infiltration from the Alluvial Aquifer located just above the Saugus Formation. Although this aquifer is larger and has much more groundwater storage capacity, it has historically been used only as a back-up source of water during dry years.

Long-term water quality data are not available for the Saugus Formation, which has only been used as a source of water since the 1970s. However, based on the most complete historical record, groundwater quality in the Saugus Formation has remained generally constant and there is no evidence of groundwater quality degradation that could be indicative of water overdrafts. However, perchlorate was discovered in four Saugus Formation wells in 1997 located near the former Whittaker-Bermite facility. All four wells are currently inactive and the water purveyors in the Santa Clarita Valley have entered into an agreement with the State Department of Toxic Substance Control (DTSC) to ensure review and oversight of the response activities related to perchlorate remediation.

[2] http://bcn.boulder.co.us/basin/data/NUTRIENTS/info/NO3+NO2.html

Water Quality Regulations

Basin Plan

The State of California Water Resources Control Board (SWRCB) delegates to the various Regional Water Quality Control Boards (RWQCB), the responsibility for the protection of water quality in watershed basins throughout the state. The Los Angeles RWQCB "Basin Water Quality Plan" objective is to preserve and enhance water quality and protect the beneficial uses of all regional waters. The Basin Plan designates beneficial uses for surface and ground waters, sets narrative and numerical objectives that must be attained (or maintained) to protect the designated beneficial uses and describes implementation programs to protect all waters in the region.

National Pollutant Discharge Elimination System (NPDES) Requirements

The State Water Resources Control Board (SWRCB), Division of Water Quality issues NPDES stormwater permit for general construction activities. The Los Angeles Regional Water Quality Control Board (LARWQCB) enforces the NPDES program for the State of California within it's jurisdiction (including all of Los Angeles and Ventura Counties), which includes the CLWA service area. Dischargers whose projects disturb one or more acres of soil are required to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit, 99-08-DWQ). Coverage under the Construction General Permit is accomplished by completing and filing a Notice of Intent with the SWRCB and by preparing and implementing a Storm Water Pollution Prevention Plan (SWPPP) prior to grading. The primary objective of the SWPPP is to identify, construct, implement, and maintain Best Management Practices (BMPs) to reduce or eliminate pollutants in stormwater discharges from the construction site. The SWPPP must include BMPs the discharger will use to protect storm water runoff during construction and the placement of those BMPs. Additionally, a SWPPP must include a site map, a visual monitoring program, and a chemical monitoring program for "non-visible" pollutants to be implemented if there is a failure of a BMP.

Standard Urban Storm Water Mitigation Plan (SUSMP) Requirements

The NPDES permit for municipal storm water issued to Los Angeles County in 1996 requires the development of a program to address storm water pollution issues. In response to this mandate, the SUSMP was developed to mandate the incorporation of Best Management Practices (BMPs) into new development and redevelopment projects in the County. Developers must incorporate appropriate BMPs per SUSMP requirements into the project design to effectively prohibit non-storm water discharges and reduce the discharge of pollutants from storm water conveyance systems to the maximum extent practicable.

All single-family hillside home developments in Los Angeles County of one acre or more require SUSMPs. SUSMP requirements include the following:

- Storm water runoff discharge rates shall not exceed the estimated pre-development rate where the increased rate will result in increased potential for downstream erosion.
- Conserve natural areas.
- Minimize storm water pollutants of concern.
- Protect slopes and channels.
- Provide storm drain system stencilling and signage.
- Properly design outdoor material storage areas/trash storage areas.

- Provide proof of ongoing BMP maintenance.
- Meet the design standards for structural or treatment control BMPs.

4.1.2 Project Impacts

Thresholds of Significance

The following thresholds were determined to indicate that impacts to water quality could be significant for the proposed project:

- Potential for project construction activities to significantly impact the quality of groundwater and/or storm water runoff to the storm water conveyance system and/or receiving water bodies.

- Post-development activities on the project site potentially degrading the quality of storm water runoff, and/or post-development non-storm water discharges contributing potential pollutants to the storm water conveyance system and/or receiving bodies.

Short-Term Construction Related Impacts

The proposed project could result in short-term construction impacts to surface water quality from grading activities, construction of structures, roadways, and infrastructure improvements, and other construction-related activities. Construction activities would result in disturbance of soils on the project site. Stormwater runoff from the project site during construction could contain soils and sediments from these activities. Spills or leaks from heavy equipment and machinery, construction staging areas, or building sites can also enter runoff. Typical pollutants used during construction could include petroleum products such as fuel, oil and grease, and heavy metals from equipment; detergents; plaster; acids; lime; glues; paints; cleaning agents; and curing compounds that could contain hazardous constituents.

The project construction activities would be directly adjacent to the San Francisquito Canyon Creek. Pollutants from construction activities that enter the surface runoff have the potential to seep into the Alluvial Aquifer. Therefore, adverse water quality impacts could result if polluted runoff entered downstream receiving waters.

The Federal Clean Water Act establishes a framework for regulating potential water quality impacts from construction activities through the NPDES program. Construction activities that involve more than one acre are required to obtain a NPDES permit from the Regional Water Quality Control Board. SWPPPs are required for issuance of a construction NPDES permit and typically include both source control and treatment BMPs to reduce water quality impacts.

BMPs that are most often used during construction include sand bags, temporary desilting basins, and timing grading to avoid the rainy season (November through April). The proposed project site would include sandbags along the graded roadways and parkways. Temporary desilting basins would be placed around stormwater outlets, creating a “check dam” of sandbags that would trap sediments and allow clearer water to be released through outlet pipes near the top of the check dam. Additionally, manufactured slopes would be revegetated with native plants as soon as feasible upon completion of grading activities in order to minimize potential wind/rain erosion and sedimentation downstream. In addition to the requirements of the NPDES program, provisions of the Uniform Building Code, grading permit requirements, and Fire Code provisions include elements that also require reduction of erosion and sedimentation impacts. Full compliance with applicable local, state, and federal water quality standards by the applicant will reduce construction impacts to a less than significant level.

Long-Term Operational Impacts

General Pollutants

Conversion of a portion of the site from vacant land to residential uses would increase the pollutant load in the surface runoff from storm events. The runoff would include various pollutants from non-point sources, including automotive leaks and spills, pesticides and herbicides, dust debris, litter, lawn clippings, animal waste, and other organic matter. This pollutant load would eventually be transported downstream in the San Francisquito Canyon Creek to the Santa Clara River during storms. As previously discussed, SUSMP requirements are designed to minimize the impact of storm water pollutants from the operation of the proposed project.

As discussed in the Drainage Concept Plan presented in Appendix C, the project incorporates three types of storm water treatment BMPs. The Drainage Concept Plan was developed to be in compliance with all Los Angeles County SUSMP requirements. Three debris basins would be located north of Lot 10, west of Lot 25, and west of Lot 58 and 59. Debris basins are earth-bottomed depressions that use the natural filtering abilities of the soil to remove debris and sediment from off-site stormwater prior to entry into the storm drain system. Stormwater would be stored in the debris basin until it gradually infiltrates into the soil or exits through the desilting inlet.

Desilting inlets are included in the debris basins to provide for the sediment of removals prior to discharge into the storm drain system. These facilities require periodic maintenance to remove sediment accumulations. Maintenance of the debris basins and the desilting inlets would be performed by the County of Los Angeles Flood Control District.

Catch basins with fossil filters would be installed in all storm drain inlets on the project site. Catch basins are designed to capture coarse solids and prevent storm drain blockages. The “first-flush” is trapped in the basin, which tends to contain the most sediment and debris, and the larger flows are allowed to bypass the catch basin and enter the storm drain system. Regular maintenance is critical (usually twice per year and/or before the rainy season begins) to ensure that solids and other pollutants are prevented from clogging the storm sewer or being washed into receiving waters. Maintenance of the catch basin and fossil filters would be the responsibility of the County of Los Angeles Flood Control District.

In addition to the water treatment BMPs, the project has design features incorporated that are intended to further minimize impacts from stormwater runoff. For example, the project site preserves large areas of open space, has concentrated development, and has reduced lot sizes from previous project designs. The preservation of trees and other natural vegetation has been maximized and drought tolerant plants will be used for revegetation activities on manufactured slopes.

The potential for other urban pollutants entering the storm drain system could be significant prior to mitigation. Specifically, the use of herbicides and pesticides on landscaped areas could enter the San Francisquito Creek via stormwater or irrigation runoff. In order to ensure that pesticides and herbicides do not significantly impact the Significant Ecological Area (SEA), the HOA will be restricted from using pesticides or herbicides along the irrigated manufactured slopes that front the SEA, including areas adjacent to Lots 33 through 51. These restrictions will be detailed in the CC&Rs of the HOA. In order to further minimize the potential for pollutants entering the storm drain system, all storm drain inlets and catch basins within the project area will be stenciled with prohibitive language (such as: NO DUMPING- DRAINS TO OCEAN), and/or graphical icons to discourage illegal dumping. The combination of the debris basins, desilting

inlets, catch basins, and mitigation measures would reduce project impacts to surface water quality to a level less than significant.

303(d) Listed Pollutants

The San Francisquito Canyon Creek is not listed as a 303(d) impaired water body. However, because the Creek is tributary to the Santa Clara River, which is listed as a 303(d) impaired water body for three constituents, an analysis of potential water quality impacts to the Santa Clara River must be performed.

Chloride

As previously mentioned, the Santa Clara River Reaches 7 and 8 are listed on the State 303(d) list for chloride. The discharges from wastewater treatment facilities are known to be the main source of chloride in the Santa Clara River. Residential land uses are the main contributor of chloride into the sewer flow via water softener systems (largest source), chloride in the drinking water, and laundry (chlorine disinfectants). According to the Los Angeles RWQCB, imported water from the State Water Project has an average of 79 milligrams per liter (mg/L) of chloride. Water that would be supplied to the proposed project through the Newhall County Water District would consist of approximately 58 percent imported water and 42 percent groundwater. Groundwater supplies for the NCWD contain an average of 63 mg/L of chloride. Therefore, the chloride content in the potable water supplied to the proposed project site would contain an average of 72.3 mg/L of chloride.

Water that is supplied to the project site that is used for indoor purposes would be discharged into the public sewer system for treatment at the Saugus and Valencia water reclamation plants. However, the proposed project site would require annexation into County Sanitation District No. 32. Due to the regional concern over high levels of chloride in the water discharged from the treatment plants, District No. 32 has an ordinance prohibiting the installation of self-regenerating water softener systems. Because the homes constructed within the project site would not be equipped with these systems, the project site's contribution of chloride to the Santa Clarita Valley's wastewater would be negligible. The prohibition of self-regenerating water softener systems will be included in the Homeowner's Association CC&Rs.

Chloride could also enter the Santa Clara River through surface runoff, via the San Francisquito Canyon Creek, through the use of potable water for lawn/garden irrigation purposes. In order to calculate the estimated contribution of chlorides to the San Francisquito Canyon Creek, the total acreage of irrigated land was determined (using the gross lot acreage less the development footprint, equaling approximately 675,000 square feet of irrigated lawn), 83,816 square feet of manufactured slope area in Lot 61, and an evapotranspiration factor of 40 inches per year, which is the average for California.

Using the data stated above, the proposed project (all 60 lots) would require approximately 18,830,218 gallons of water per year, or 57.8 acre-feet per year, for irrigation. The average rainfall for the Santa Clarita area is approximately 19.5 inches per year. This would result in a reduction of 1.63 acre-feet per year and leave a demand for irrigation water of 56.2 acre-feet per year, to be supplied by the NCWD.

Water conservation techniques are a high-priority for the Santa Clarita Valley due to the common droughts in the area and general civic awareness of the need to conserve water. For the purposes of this analysis, a scenario is used that assumes 15 percent of the irrigation water would not infiltrate into the soil and would runoff into the San Francisquito Canyon Creek via the storm drain system. In this scenario, approximately 652,243 grams of chloride per year, or 1,787 grams of chloride per day, would enter the San Francisquito Canyon Creek.

The San Francisquito Canyon Creek is not listed as an impaired water body on the 303(d) list, but it is tributary to the Santa Clara River, which is listed for chloride. Water that enters the San Francisquito Canyon Creek from the proposed project site would travel approximately four miles along the soft-bottom creek bed before contacting the Santa Clara River. This is a considerable distance that would allow ample time for the infiltration of the project site's runoff into the coarse, alluvial soils of the Creek.

Although the amount of infiltration is not readily quantifiable, it is apparent that a significant portion of the project site's irrigation runoff would be absorbed into the soil bottom of the Creek before ever reaching the Santa Clara River. This concept is further supported by the observation that most landscape irrigation occurs in the hot and dry summer months when there is no water flow in the Creek and, therefore, no means for the irrigated runoff to be transported to the Santa Clara River. Additionally, as previously discussed, irrigation water used on the project site would contain approximately 72.3 mg/L of chloride from the mixture of SWP water and groundwater. This amount is well below the 100 mg/L TMDL for chloride in the Santa Clara River and runoff from the project site would have lower concentrations of chloride than required by the TMDL. Therefore, the proposed project would not result in a significant impact to surface water related to chloride levels.

Coliform

Another pollutant of concern is the amount of coliform bacteria in the stormwater runoff from the project site and its potential impact on coliform levels in the Santa Clara River. The main sources of coliform bacteria in stormwater runoff are animal waste, including wildlife, domestic pets, and horse activity. The area surrounding the project site is largely ranch land used for equestrian activity and contains trails that are commonly used by horseback riders. These activities and land uses are presumed to be large contributors of bacteria to the San Francisquito Canyon Creek, and may contribute to coliform loads in the Santa Clara River.

The proposed project would direct equestrian riders to designated trails (Cliffie Stone Trail and Butterfield Overland Stage Trail) on the eastern edge of the property and out of the SEA No. 19. These designated trails would reduce the likelihood that riders would continue to use the central portions of the site within SEA No. 19, which is currently unrestricted to equestrian activity. However, access to the existing trails in the SEA would not be eliminated by the development of this project. Ultimately, the County of Los Angeles will own the open space lots, which include the existing and planned trails, and the regulation of equestrian activities will be subject to County discretion. Depending on the usage patterns of equestrians on the designated trails, the development of the proposed project and trails may actually serve to reduce the overall coliform bacteria load in the San Francisquito Canyon Creek, as well as from the project site. The trails would be maintained by the County Department of Parks and Recreation.

Domestic pet waste would be generally limited to private properties (fenced yards) and would likely be removed by homeowners on a regular basis, thereby minimizing opportunities for additional coliform bacteria in stormwater runoff. The County of Los Angeles has an ordinance that requires pet owners to pick up and remove pet waste from the ground in order to prevent the waste from washing down storm drains. Additionally, catch basin fossil filter inserts on the project site would be designed to prevent or reduce pollutants in stormwater discharges from the developed project in order to satisfy SUSMP requirements and would reduce water quality impacts associated with coliform to a level less than significant.

Nitrate/Nitrite

The Saugus WRP discharges its effluent upstream of the confluence between San Francisquito Creek and the Santa Ana River and into Reach 8. The Valencia WRP discharges its effluent

downstream of the connection between the Creek and the River into Reach 7. These two treatment plants are known to be major contributors of nitrate/nitrite to the Santa Clara River. Reach 7 is listed as impaired (303(d)) for nitrate/nitrite. A TMDL of 9.0 milligrams of nitrate/nitrite per liter (N/L) was recently established for Reach 7. Nitrogen forms that are important in wastewater include organic nitrogen, nitrate (NO_3), nitrite (NO_2), ammonia (NH_4) and nitrogen gas (N_2), all of which are biochemically able to be converted from one form to another.

An estimated average amount of total nitrogen in wastewater generated by residential land uses is 40 mg/L per household. This average amount of total nitrogen in the sewage from the proposed project would be channeled directly to the wastewater treatment plant(s), which would facilitate the breakdown of nitrogen through nitrification/denitrification in the wastewater treatment process. Denitrification is a process that removes nitrate from treated wastewater that is available in some wastewater treatment plants.

The proposed project would contribute to the amount of nitrogen in the sewage flow to the treatment plants, which ultimately discharge into the Santa Clara River. The sewage flow is then treated according to applicable federal and state regulations for water quality. The wastewater treatment facilities must comply with the TMDL water quality requirements for nitrate/nitrite. As noted in Section 5.2.1, a two-phased expansion of the Valencia WRP has been approved that will increase treatment capacity of the Santa Clarita Valley Joint Sewerage System (SCVJSS) by 15 million gallons per day. The first phase involves a 9 mgd expansion, which will be completed in 2004 and is expected to meet the Regional Growth Management Plan forecasted demand through 2010. The second phase, scheduled to be completed in early 2010, will consist of an additional 6 mgd expansion and will increase the SCVJSS treatment capacity to 34.1 mgd, which will be sufficient to meet the demand until 2015. The SCVJSS currently processes an average flow of 18.3 million gallons per day of sewage. The proposed project would contribute approximately 15,600 gallons per day, or 0.015 million gallons per day of sewage. This relatively minor contribution of nitrogen into the total sewage flow treated by the SCVJSS is not expected to create a significant impact regarding the WRP's ability to meet the TMDL requirements.

Stormwater discharge may also contribute to nitrate loads in downstream receiving waters and groundwaters, including the Santa Clara River. According to data from the Stormwater Manager's Resource Center, the average concentration for total nitrogen (mg/L) in residential runoff is 2.2 mg/L and roadway runoff is 3.0 mg/L. Sources of nitrate include fertilizer applications to lawns and landscaping, animal waste, and the atmospheric deposition of automobile emissions to impervious surfaces.

A reduction in equestrian activities within the SEA boundaries could substantially reduce the amount of nitrate/nitrite in stormwater runoff from horses and development on the site. Although, the increase in urban land uses, including fertilizers on landscaping and increases in impervious surfaces would adversely impact the amount of nitrate/nitrite in stormwater runoff, the implementation of BMPs per County SUSMP requirements would reduce potential impacts to less than significant.

Groundwater

The proposed residential development would be constructed adjacent to the San Francisquito Canyon Creek, which infiltrates surface water into the Alluvial Aquifer below. Pollutants from residential activities, including non-point sources such as automotive leaks, pesticides and herbicides, animal waste, and other organic matter would be contained within the surface runoff from the site during storm events. This runoff would flow into the San Francisquito Canyon Creek and would have the potential to seep into the Alluvial Aquifer.

The contribution of chloride to surface water runoff from irrigation activities, and subsequently to groundwater via infiltration, would be minimal due to the relatively small amount of irrigation required relative to the acreage of the site. However, due to the proximity of the proposed development to the San Francisquito Canyon Creek and the nature of the Alluvial Aquifer, potential water quality impacts to groundwater due to site runoff could constitute a significant impact prior to mitigation. With the implementation of the BMPs included in the project design, including a debris basins, desilting inlets, and catch basins, potential impacts to groundwater would be reduced to a level less than significant. These BMPs would be maintained by the Homeowner's Association and the County Flood Control District. Additionally, the prohibition of pesticides and herbicides from the manufactured slopes along the SEA will reduce impacts to stormwater flows, and subsequently to the local groundwater table.

The percolation of surface water into the groundwater basin would not be significantly impacted by the proposed project. The impervious surfaces created by the project design would prevent stormwater from infiltrating within the footprint of the project. However, since the project design releases stormwater from the storm drains into the earth-bottom San Francisquito Canyon Creek, infiltration is only slightly delayed. Runoff from the project site would still fully infiltrate into the ground either within the project's open space, desilting inlets, or within the San Francisquito Canyon Creek bed. Therefore, the development of the proposed project would have no impact on the amount of percolation into the groundwater basin.

4.1.3 Cumulative Impacts

The cumulative analysis for water quality is based on the existing and proposed development within the San Francisquito Canyon Creek Watershed, which is tributary to the Santa Clara River. Development within the watershed along the eastern side of San Francisquito Canyon Creek is much less dense and is largely composed of ranches and Tract 52302, which includes 11 single family homes currently under construction. Substantial development is planned or is under construction along the west side of the San Francisquito Canyon Creek, including the Tesoro del Valle (TM 51644) project and the West Creek project (TTM 52455).

The proposed project, in conjunction with the existing development and planned development, would result in a cumulatively considerable impact to surface water runoff due to construction activities and post-development runoff. However, all construction projects larger than one acre are subject to the NPDES permit requirements for the implementation of BMPs. Additionally standard project BMPs required by Los Angeles County (SUSMP requirements) are included in project designs to ensure long-term operational compliance with water quality goals.

The pollutants generated by the proposed project would be mitigated on-site through the use of debris basins, desilting inlets, and catch basins/fossil filters, as well as the use of BMPs during construction activities as outlined in the SWPPP. Therefore, on a cumulative basis, with the implementation of the project's mitigation measures, the project's contribution to cumulative water quality impacts would not be cumulatively considerable. Based on the requirements of local, state, and federal regulations, the cumulative (planned and under construction) projects would also be required to mitigate potential water quality impacts through the preparation of a SWPPP and implementation of SUSMP requirements.

The proposed project's cumulative impact on the quality of the regional groundwater basin would not be cumulatively considerable due to the installation of the BMPs, which would minimize pollutants in runoff from the project site. Additionally, the project would not contribute to any regional decreases in the amount of water that percolates into the groundwater basin.

4.1.4 Project Design Features and Mitigation Measures

Project Design Features

- The project design includes three debris basins, desilting inlets, and fossil filter catch basins inserts to satisfy the Los Angeles County Department of Public Works SUSMP requirements.

- Energy dissipaters will be installed at stormwater discharge locations to minimize erosion in the San Francisquito Canyon Creek.

- Manufactured slopes shall be landscaped with native, drought tolerant vegetation as soon as practicable after completion of grading to reduce potential erosion and sediment discharges.

Mitigation Measures

MM 4.1-1 Prior to the issuance of a grading permit, the project applicant shall be responsible for filing a Notice of Intent and the appropriate fees to the State Water Quality Control Board in order to obtain coverage under the NPDES General Construction Permit for construction activities. Pursuant to the permit requirements, the project applicant shall develop a Stormwater Pollution Prevention Plan that incorporates Best Management Practices, including sandbags along roadways and temporary desilting basins, for minimizing construction related pollutants in the site runoff.

MM 4.1-2 Prior to issuance of a grading permit, the project applicant shall apply for annexation into the service area of the Los Angeles County Sanitation District No. 36. The proposed project will comply with the Los Angeles County Sanitation District No. 36 requirements that prohibit the installation of self-regenerating water softeners. The Homeowner's Association CC&Rs shall specifically prohibit the use of self-regenerating water softeners.

MM 4.1-3 All storm drain inlets and catch basins with the project area shall be stenciled with prohibitive language (such as: NO DUMPING – DRAINS TO OCEAN) and/or graphical icons to discourage illegal dumping. Signs and prohibitive language shall be posted at public access points along the San Francisquito Canyon Creek within the project area and all signs and stenciled shall be maintained by the Homeowner's Association.

MM 4.1-4 The use of herbicides and pesticides will be prohibited from use on the manufactured slopes adjacent to the rear of Lots 33 through 51 along the SEA. The CC&Rs of the HOA will specifically prohibit the use of such chemicals by the landscape contractors hired by the Homeowner's Association to maintain the common areas on the site.

Level of Significance after Mitigation

Potentially significant water quality impacts would be reduced to levels less than significant with the implementation of the mitigation measures.

4.2 AIR QUALITY

This section addresses the potential short-term (construction-related) and long-term air quality impacts resulting from the proposed project. This section includes a summary of the air quality technical report prepared by JHA Environmental Consultants in September 2004, and the report is included in its entirety in Appendix D.

4.2.1 Existing Conditions

California is divided by the California Air Resources Board (CARB) into air basins which share similar meteorological and topographical features. Los Angeles County is in the South Coast Air Basin (SCAB), a 6,600 square mile area comprised of all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. The Basin's climate and topography are highly conducive to the formation and transport of air pollution. Over the last two decades, peak ozone concentrations in the Basin have occurred at the base of the mountains around Azusa and Glendora in Los Angeles County and at the Crestline in the mountain area above the City of San Bernardino. Throughout the 1990's, both peak ozone concentrations and the number of exceedances decreased everywhere in the Basin. Carbon monoxide concentrations have also dropped significantly throughout the Basin as a result of strict new emission controls and reformulated gasoline sold in the winter months.

Regulatory and Planning Requirements

Both the federal, through the USEPA, and state governments (through the CARB) have established ambient air quality standards to protect public health. These standards are presented in Table 4.2-1.

Federal Attainment Status

National ambient air standards are set by the USEPA, as required by the Clean Air Act, which also established deadlines for attainment and penalties for non-attainment by the specified deadlines. The SCAB, which was the nation's only "extreme" O_3 non-attainment area until the EPA recategorized the San Joaquin Valley Air Basin from "severe" to "extreme" in October 2001, has until 2010 to achieve the national one-hour ozone standard. That deadline has been recently superceded by the new deadline of 2017 for achieving the national 8-hour ozone standard. Deadlines for CO and PM_{10} attainment in the SCAB are 2000 and 2005, respectively. The deadline for achieving the 8-hour CO standard was not met in 2000.

Although no CO standard was exceeded anywhere in the Basin in 2001, the 8-hour federal standard was exceeded twice in 2000 in the South Central Los Angeles County Source-Receptor Area. The 2003 Air Quality Management Plan (AQMP) states that all federal CO attainment requirements were met in 2002. EPA regulations specify that an area has attained the CO standard when there are two years of data with no more than one exceedance at any one station. The Basin is currently the only CO non-attainment area in California and was the only area in the nation still designated an NO_2 non-attainment area until 1998 when it was redesignated "attainment" by the EPA.

In 2004, the EPA promulgated a new 8-hour standard for ozone and a new standard for fine particulate matter ($PM_{2.5.}$) On April 15, 2004, the EPA released its list of 8-hour ozone non-attainment areas, together with the deadline for each non-attainment area to attain the standard. Areas with the highest 8-hour concentrations and the greatest number of days exceeding the new standard were given the longest time to reach attainment. The South Coast Air Basin is in the most severely degraded ozone category and was given 17 years, or until 2021, to reach the new 8-hour standard.

The EPA declared on June 29, 2004 that 13 California counties, including all of the South Coast Air Basin, are non-attainment areas for the federal $PM_{2.5}$ standard. The two worst areas, according to the EPA, were the San Joaquin Valley and the greater Los Angeles area. The EPA designations are preliminary and will not become final until the completion of a public comment period. Until the designations are final, the existing national PM_{10} standards are the particulate standards of reference for determining attainment.

State Standards

California standards are established by the CARB, and although they are stricter than national standards, they have no penalty for non-attainment. California and national ambient air standards are shown on Table 4.2-1.

TABLE 4.2-1
AMBIENT AIR QUALITY STANDARDS

Air Pollutant	State Standard	National Standards		Health Effect
		Primary	Secondary	
Ozone (O_3)	0.09 ppm, 1-hr. avg. 0.070 ppm, 8-hr avg. (effective in early 2006)	0.12 ppm, 1-hr. avg. 0.08 ppm, 8-hr. avg.	0.12 ppm, 1-hr. avg. 0.08 ppm, 8-hr. avg.	Aggravation of respiratory and cardiovascular diseases; Impairment of cardiopulmonary function
Carbon Monoxide (CO)	9.0 ppm, 8-hr. avg. 20 ppm. 1-hr. avg.	9 ppm, 8-hr. avg. 35 ppm, 1-hr. avg.	None	Aggravation of respiratory diseases (asthma, emphysema)
Nitrogen Dioxide (NO_2)	0.25 ppm, 1-hr. avg.	0.0534 ppm, annual avg.	0.0534 ppm, annual avg.	Aggravation of respiratory illness
Sulfur Dioxide (SO_2)	0.25 ppm 1-hr. 0.04 ppm, 24-hr. avg.	0.03 ppm, annual avg. 0.14 ppm, 24-hr. avg.	0.50 ppm, 3-hr. avg.	Aggravation of respiratory diseases (asthma, emphysema)
Respirable Particulate Matter (PM_{10})	50 $\mu g/m^3$, 24-hr. avg. 20 $\mu g/m^3$ AGM	150 $\mu g/m^3$, 24-hr. avg. 50 $\mu g/m^3$ AAM	150 $\mu g/m^3$, 24-hr avg.; 50 $\mu g/m^3$ AAM	Increased cough and chest discomfort; Reduced lung function; Aggravation of Respiratory and cardio-respiratory diseases
Fine Particulate Matter ($PM_{2.5}$)	No 24-hr. State std. 12 $\mu g/m^3$ AGM	65 $\mu g/m^3$, 24-hr. avg. 15 $\mu g/m^3$ AAM	65 $\mu g/m^3$, 24-hr.avg. 15 $\mu g/m^3$ AAM	
Sulfates (SO_4)	25 $\mu g/m^3$, 24-hr. avg.	N/A	N/A	Increased morbidity and mortality in conjunction with other pollutants
Lead (Pb)	1.5 $\mu g/m^3$, monthly avg.	1.5 $\mu g/m^3$, calendar quarter	1.5 $\mu g/m^3$	Impaired blood and nerve function; Behavioral and hearing problems in children
Hydrogen Sulfide (H_2S)	0.03 ppm, 1-hr. avg.	N/A	N/A	Toxic at very high concentrations
Vinyl Chloride	0.010 ppm, 24-hr. avg.	N/A	N/A	Carcinogenic
Visibility-Reducing Particles	Sufficient to reduce prevailing visibility to less than 10 miles at relative humidity less than 70%, 1 observation	N/A	N/A	

TABLE 4.2-1 (Continued)
AMBIENT AIR QUALITY STANDARDS

Air Pollutant	State Standard	National Standards		Health Effect
		Primary	Secondary	
Notes: ppm = parts per million by volume $\mu g/m^3$ = micrograms per cubic meter AAM = annual arithmetic mean AGM = annual geometric mean *Source: California Air Resources Board, May 6, 2005*				

Regional Planning to Meet Standards

Regionally, the South Coast Air Quality Management District (SCAQMD) and the Southern California Association of Governments (SCAG) prepare the South Coast AQMP, which contains measures to meet state and federal requirements. When approved by CARB and the federal EPA, the AQMP becomes part of the State Implementation Plan (SIP).

The agencies adopted new plans in 1989 to meet national standards and in 1991 to meet state standards. The SCAQMD revised these attainment plans in 1994 and 1997. As permitted by the federal Clean Air Act for "extreme" ozone non-attainment areas, the 1994 AQMP relied on future technology to project attainment of the national ozone standard by 2010. The EPA approved the 1994 AQMP in 1996 as part of the SIP. The SCAQMD revised the 1997 AQMP in 1999 after the EPA had raised concerns. The revised plan, now known as the 1999 AQMP, was approved by the EPA on May 10, 2000 and replaced the 1994 AQMP as the federally enforceable ozone SIP for the Basin.

The CO portion of the plan was not approved by the EPA and there is currently no approved CO attainment or maintenance SIP for the Basin. The 2003 Revision, adopted by the SCAQMD Governing Board on August 1, 2003, demonstrates that the national CO standards have been attained. The 2003 AQMP will serve as both the CO attainment and maintenance SIP when approved by the EPA.

Existing Air Quality Setting

The SCAQMD, in conjunction with the California Air Resources Board, is responsible for monitoring air quality in the Basin as well as for adopting controls to improve air quality. The SCAQMD has divided the Basin into Source-Receptor Areas (SRAs), based on similar meteorological and topographical features. The proposed project is located in SRA-13, the Santa Clarita Valley.

Overall air quality has improved considerably throughout the Basin during the 1990's, despite the extensive population growth. In 1990, the peak ozone concentration in the Santa Clarita Valley was 0.23 ppm and the state ozone standard was exceeded 115 times. In 2000, the peak ozone concentration was 0.13 ppm and the state standard was exceeded 31 times.

Currently the SCAQMD is monitoring levels of both 8-hour concentrations of ozone and of $PM_{2.5}$. The U.S. EPA has adopted new standards for 8-hour ozone and fine particulates ($PM_{2.5}$); however, neither standard is operational in the basin until the 1-hour ozone standard is completed and the EPA completes its database on existing $PM_{2.5}$ concentrations. Readings for SRA 13 for the past five years, in addition to the applicable state and national standards are show in Table 4.2-2.

TABLE 4.2-2
SUMMARY OF AIR QUALITY DATA – SANTA CLARITA VALLEY (SRA 13)
AIR MONITORING STATION

Pollutant Standards	2000	2001	2002	2003	2004
Ozone (O_3)					
State standard (1-hr. avg. 0.09 ppm)					
National standard (1-hr avg. 0.12 ppm)					
National standard (8-hr avg. 0.08 ppm)					
Maximum 1-hr concentration (in ppm)	0.13	0.18	0.17	0.19	0.16
Maximum 8-hr concentration (in ppm)	0.11	0.13	0.145	0.15	0.13
Number of days state (1-hr) standard exceeded	31	49	81	89	69
Number of days national 1-hr standard exceeded	1	9	32	35	13
Number of days national 8-hr standard exceeded	16	27	56	69	52
Carbon Monoxide (CO)					
State standard (1-hr. avg. 20 ppm)					
National standard (1-hr avg. 35 ppm)					
State standard (8-hr. avg. 9.0 ppm)					
National standard (8-hr avg. 9 ppm)					
Maximum concentration 1-hr period (in ppm)					
Maximum concentration 8-hr period (in ppm)	6	6	3	3	5
Number of days state/nat'l 1-hr standards exceeded	4.9 0	3.14 0	1.9 0	1.7 0	3.7 0
Number of days state/nat'l 8-hr standard exceeded	0	0	0	0	0
Nitrogen Dioxide (NO_2)					
State standard (1-hr avg. 0.25 ppm)					
National standard (0.0534 AAM in ppm)					
Annual arithmetic mean (in ppm)	0.0246	0.0239	0.0200	0.0221	0.0204
Percent national standard exceeded	0	0	0	0	0
Maximum 1-hr concentration	0.10	0.10	0.10	0.12	0.09
Number of days state 1-hr standard exceeded	0	0	0	0	0
Fine Particulates (PM_{10})					
State standard (24-hr. avg. 50 $\mu g/m^3$)					
National standard (24-hr avg. 150 $\mu g/m^3$)					
Maximum 24-hr concentration	64	62	61	72	54
Percent samples exceeding state standard	7	7	11.7	16.4	3.3
Percent samples exceeding national standard	0	0	0	0	0
Respirable Particulates ($PM_{2.5}$)					
National standard (24-hr avg. 65 $\mu g/m^3$)					
Maximum 24-hr concentration	NM	NM	NM	NM	NM
Percent samples exceeding national standard					

ppm = parts per million
$\mu g/m^3$ = micrograms per cubic meter
NM = Not Monitored

Source: SCAQMD Air Quality Data--2000 through 2004

4.2.2 Project Impacts

Thresholds of Significance

The County relies on significance thresholds recommended by the SCAQMD in its California Environmental Air Quality Act (*CEQA) Air Quality Handbook*, as revised in November 1993 and approved by the SCAQMD's Board of Directors. The SCAQMD is currently in the process of preparing a new Air Quality Handbook, to be titled the "AQMD Air Quality Analysis Guidance Handbook." Chapters 2, 3 and 4 related to air quality background information and the roles of regulatory agencies are available on the SCAQMD's web page at www.aqmd.gov. Other chapters will be posted on the web page as they become available. Revisions at the time this analysis was prepared do not include new significance thresholds or analysis methodologies. However, the SCAQMD in October 2003 issued guidance requesting that EIR preparers not use

the emission factors, screening tables, and certain models listed in the 1993 Handbook because they are now obsolete. The guidance specified web pages where updated information is available. The SCAQMD's emission thresholds apply to all federally regulated air pollutants except lead, which is not exceeded in the Basin. Construction and operational emissions are considered by the SCAQMD to be significant if they exceed the thresholds shown in Table 4.2-3.

TABLE 4.2-3
EMISSION THRESHOLDS OF SIGNIFICANCE

Pollutant	Construction		Operations
	Pounds/day	Tons/quarter	Pounds/day
Carbon Monoxide (CO)	550	24.75	550
Sulfur Oxides (SO_x)	150	6.75	150
Particulate Matter (PM_{10})	150	6.75	150
Nitrogen Oxides (NO_x)	100	2.5	55
Volatile organic compounds (ROC)	75	2.5	55
Source: South Coast Air Quality Handbook, 1993			

Carbon monoxide concentrations in an area that already exceeds national or state CO standards are also considered significant if the increase exceeds one part per million (ppm) averaged over one hour or 0.45 ppm averaged over eight hours. In addition, the SCAQMD considers potential air quality impacts identified by the CEQA Guidelines to also be significant if the project 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 non-attainment under an applicable federal or state ambient air quality standard (including release in emissions which exceed quantitative thresholds for ozone precursors).
- Expose sensitive receptors to substantial pollutant concentrations.
- Create objectionable odors affecting a substantial number of people.

Ambient air standards are established to protect the average person from health effects associated with air pollution. The standards include an "adequate margin of safety." However, some people are particularly sensitive to some pollutants. These sensitive people include persons with respiratory illnesses or impaired lung function because of other illnesses, the elderly, and children. Facilities and structures where these sensitive people live or spend considerable amounts of time are known as sensitive receptors. Chapter 4 of the SCAQMD's new Air Quality Analysis Guidance Handbook defines land uses considered to be sensitive receptors as long-term health care facilities, rehabilitation centers, convalescent centers, retirement homes, residences, schools, playgrounds, child care centers and athletic facilities.

Impacts Analysis

Air quality impacts of a project may occur during construction and operation on both a regional and local scale. Construction impacts include airborne dust from grading, demolition and dirt hauling and gaseous emissions form heavy equipment, delivery and dirt hauling trucks, employee vehicles, and paints and coatings. Operational impacts occur from utility usage and vehicles traveling to and from the completed site. These impacts may affect regional pollutants, such as ozone, or localized pollutants, such as carbon monoxide, where the impacts occur very close to the source.

Short-term Construction Related Impacts

Construction impacts were assessed in accordance with procedures contained in the SCAQMD *CEQA Air Quality Handbook* (1993), updated with current California Air Resource Board emission factors. Both construction and operation emissions were analyzed with the URBEMIS 2002 model. Construction of the proposed project would begin in the fourth quarter of 2005. Default assumptions were used to assess truck and worker emissions in the peak period. Peak day and peak quarter emissions are shown in Table 4.2-4 and Table 4.2-5, respectively.

TABLE 4.2-4
PEAK DAY CONSTRUCTION EMISSIONS PRIOR TO MITIGATION

Source Category	Pollutant (pounds per day)				
	Carbon Monoxide (CO)	Volatile Organic Compounds (VOC)	Oxides of Nitrogen (NOx)	Oxides of Sulfur (SOx)	Particulate Matter (PM_{10})
Earthmoving/ Grading (Fugitive Dust)	0	0	0	0	1,184
Diesel-Powered Equipment	174	22	149	0	7
Worker Trips	4	0	0	0	0
PEAK DAY CONSTRUCTION EMISSIONS	178	22	149	0	1,191
SCAQMD Significance Thresholds for Construction	550	75	100	150	150
Significant?	**NO**	**NO**	**YES**	**NO**	**YES**

Source: California Air Resources Board Model: URBEMIS 2002

TABLE 4.2-5
PEAK QUARTER CONSTRUCTION EMISSIONS PRIOR TO MITIGATION

Source Category	Pollutant (tons per quarter)				
	Carbon Monoxide (CO)	Volatile Organic Compounds (VOC)	Oxides of Nitrogen (NOx)	Oxides of Sulfur (SOx)	Particulate Matter (PM_{10})
Earthmoving/ Grading (Fugitive Dust)	0	0	0	0	39.07
Diesel-Powered Equipment	5.74	0.73	4.92	0	0.23
Worker Trips	0.13	0.01	0.01	0	0

TABLE 4.2-5 (Continued)
PEAK QUARTER CONSTRUCTION EMISSIONS PRIOR TO MITIGATION

PEAK QUARTER CONSTRUCTION EMISSIONS	5.87	0.74	4.93	0	39.30
SCAQMD Significance Thresholds for Construction	24.75	2.5	2.5	6.75	6.75
Significant?	**NO**	**NO**	**YES**	**NO**	**YES**
Source: California Air Resources Board Model: URBEMIS 2002					

Grading/Excavation – Soil may be disturbed during grading and excavation or while storing project-related equipment. The grading and excavation phase is anticipated to take approximately 93 working days, beginning in 2006. The analysis assumes that the 37 acres that would be developed on the project site would be disturbed during grading on the peak day and throughout the peak quarter. The project would require 246,000 cubic yards (cy) of raw excavation, 600,000 cy of alluvium removal and re-engineering for fill, and 86,000 cy for grading along the edge of the Significant Ecological Area. The total 932,000 cy of cut and fill would be balanced on site; therefore, the transport of cut-and-fill material off-site will not be required Table A9-9 of the SCAQMD CEQA Handbook states that there would be 26.4 pounds of PM_{10} for each acre of graded surface.

Exhaust Emissions From Construction Equipment – The grading equipment will include one water truck, one dozer, one compactor, and four to five scrapers. The analysis assumes that five scrapers would be operating during the peak day and peak quarter. The water truck is assumed to operate four hours each day; the other equipment is assumed to operate seven hours each day of the 66-day peak quarter. As illustrated by Table 4.2-4 and Table 4.2-5, construction equipment would generate 7.0 pounds per day of PM_{10} on the peak day and 0.23 tons of PM_{10} in the peak quarter, prior to mitigation.

Architectural Coatings – The peak period for VOC emissions would occur during building construction. The amount of these emissions would depend on the painting schedule and duration, in addition to the season in which painting occurs. Because architectural coatings will not occur during the peak construction period, which is the grading phase, they are not shown on Table 4.2-4 and Table 4.2-5. All coatings must be in compliance with SCAQMD regulations.

Odors – There are no known sources of odors on-site that would be released during construction. Although diesel equipment would emit some odors in their exhaust, these odors would not be sufficient to create a significant adverse impact. The project does not propose development of any uses that would generate adverse odors.

Particulate Emissions

Particulate emissions during construction in the South Coast Air Basin are regulated by SCAQMD Rule 403, which was most recently amended on April 2, 2004. The SCAQMD's Rule 403 Implementation Handbook assists project applicants comply with the rule. Specific requirements are contained on pages 2-26 and 2-27. At a minimum, persons conducting active operations within the boundaries of the South Coast Air Basin shall utilize one or more of the applicable best available control measures to minimize fugitive dust emissions from each fugitive dust source type that is part of the active operation. A person conducting such operations shall not cause or allow PM_{10} levels to exceed 50 micrograms per cubic meter as determined by calculating the difference between simultaneous upwind and downwind samples

collected on high volume particulate matter samplers or by other EPA-approved methods for sampling.

Large operators, those with an exposed area exceeding 50 acres, are required to file a Large Operation Notification Form (Form 403N) with the SCAQMD prior to initiating grading. Since the proposed project totals more than 50 acres, it qualifies as a Large Operation under the rule, and would have to file a Form 403N. Under any classification, sufficient mitigation identified in the Handbook measures must be followed to insure that there are no visible dust emissions beyond the project boundaries.

A number of mitigation measures were assumed by the URBEMIS model to be applicable to the proposed project, as discussed in the Mitigation Measures in Section 4.2.4. Peak daily and quarterly construction emissions after mitigation are presented in Table 4.2-6 and Table 4.2-7, respectively.

The model estimates the mitigation measures would reduce PM_{10} fugitive dust emissions by more than 90 percent. However, NO_X emissions would remain significant in both the peak day and in the peak quarter after mitigation. All other emissions would be less than significant.

TABLE 4.2-6
PEAK DAILY CONSTRUCTION EMISSIONS AFTER MITIGATION

Source Category	Pollutant (lbs per day)				
	Carbon Monoxide (CO)	**Volatile Organic Compounds (VOC)**	**Oxides of Nitrogen (NO_X)**	**Oxides of Sulfur (SO_X)**	**Particulate Matter (PM_{10})**
Total Daily Emissions (Before Mitigation)	178	22	149	0	1,191
Earthmoving/Grading (Emissions After Mitigation)	0	0	0	0	105
Diesel-Powered Equipment (Emissions After Mitigation)	160	20	134	0	6
Vehicle Emissions (Emissions After Mitigation)	4	0	0	0	0
MAXIMUM DAILY CONSTRUCTION EMISSIONS	164	20	134	0	111
SCAQMD Significance Thresholds for Construction	550	75	100	150	150
Significant?	**NO**	**NO**	**YES**	**NO**	**NO**

TABLE 4.2-7
PEAK QUARTER CONSTRUCTION EMISSION AFTER MITIGATION

Source Category	Pollutant (lbs per day)				
	Carbon Monoxide (CO)	Volatile Organic Compounds (VOC)	Oxides of Nitrogen (NO_X)	Oxides of Sulfur (SO_X)	Particulate Matter (PM_{10})
Total Peak Quarter Emissions (Before Mitigation)	5.87	0.74	4.93	0	39.30
Earthmoving/Grading (Emissions After Mitigation)	0	0	0	0	3.47
Diesel-Powered Equipment (Emissions After Mitigation)	5.16	0.66	4.43	0	0.21
Vehicle Emissions (Emissions After Mitigation)	0.13	0.01	0.01	0	0
MAXIMUM QUARTERLY CONSTRUCTION EMISSIONS	5.29	0.67	4.44	0	3.68
SCAQMD Significance Thresholds for Construction	24.75	2.5	2.5	6.75	6.75
Significant?	**NO**	**NO**	**YES**	**NO**	**NO**

Operational Impacts

The proposed project site would eventually be developed into 60 single-family residential units. The primary source of operational emissions would be vehicle travel to and from the project site. The proposed project was evaluated with the URBEMIS 2002 model for both summer and winter conditions in 2006. The model analyzes both traffic emissions and area source emissions. No emissions were included for wood stoves or fireplaces. Where concentrations differ slightly between seasons, the higher concentration is shown on Table 4.2-8 below.

TABLE 4.2-8
OPERATIONAL EMISSIONS

Source Category	Pollutant (lbs per day)				
	Carbon Monoxide (CO)	Volatile Organic Compounds (VOC)	Oxides of Nitrogen (NO_X)	Sulfur Dioxide (SO_2)	Particulate Matter (PM_{10})
Traffic Emissions	73	6	9	0	6
Area Source Emissions	0	3	1	0	0
TOTAL PROJECT EMISSIONS	73	9	10	0	6
SCAQMD Significance Thresholds for Operation	550	55	55	150	150
Significant?	**NO**	**NO**	**NO**	**NO**	**NO**
Source: Emissions calculated with CARB model, URBEMIS 2002.					

The project would result in daily operational emissions of CO (73 pounds per day), VOC (nine pounds per day), NO_x (10 pounds per day), SO_2 (zero pounds per day) and PM_{10} (six pounds per day). There are some odors, such as from cooking and gardening, associated with residential uses, but these are not considered significant on a regional or local scale.

Based on the significance thresholds for operations established by the SCAQMD, operation of the project would not result in significant emissions of any pollutant on a regional scale. The project is consistent with the regional AQMP and therefore would not have a significant adverse impact on regional air quality.

The Traffic Consultant for the project estimates there would be a daily total of 574 trips. These trips would be distributed throughout the day. Carbon monoxide concentrations in the vicinity are very low; therefore, the very small increment of trips generated at any intersection would not be sufficient to cause an exceedance of any state or federal CO standard, even when background conditions are added to project-induced concentrations. Although the EPA has not reclassified the SCAB as an attainment area for all CO standards, the SCAB has met requirements for re-designation and is project to maintain this status in the future. The proposed project would not have a significant impact on local air quality.

4.2.3 Cumulative Impacts

Fugitive dust emissions during construction, which would be reduced to less than significant with mitigation, could be worsened at the local level and be cumulatively considerable in the short-term if there are projects under construction simultaneously in the immediate vicinity. The Tesoro del Valle project, which is located south, west, and north of the project site, would likely be under construction at the same time as the proposed project. According to the EIR for the Tesoro del Valle project, Planning Areas A, B, and C are proposed to be constructed sequentially during a six-year period. Planning Area D would either be constructed concurrently with Planning Areas B or C, or sequentially following completion of Planning Area C, which would extend the completion of the project build-out to an eight-year period.

The Tesoro del Valle EIR concluded that short-term construction emissions for NO_X, ROC, and PM_{10} would be above the SCAQMD thresholds and would result in significant and unavoidable impacts both on a project-specific and a cumulative basis. It also determined that SO_X would be cumulatively significant.

As previously discussed, the proposed project's NO_X construction emissions would be significant on a project-basis; NO_X emissions would also be cumulatively significant given the likely simultaneous construction with the Tesoro del Valle project. Although PM_{10} emissions are not significant for the proposed project in the peak day or quarter, the estimated construction PM_{10} emissions for Tesoro del Valle are far above the SCAQMD thresholds for the peak day (1,121 lbs/day compared to the threshold of 150 lbs/day for Planning Area A). The contribution of PM_{10} from construction activities on the proposed project site could cumulatively contribute to significant fugitive dust emission during construction, if the two projects were to be underway simultaneously. However, grading for the Tesoro del Valle project Area A is completed and there are no plans to begin grading of Areas B through D over the next two years. Therefore, the proposed project will not cumulatively contribute to significant fugitive dust emissions.

At the regional level, operational emissions from new growth in the subregion have been modeled by the SCAG and the results are incorporated into the 2003 AQMP, adopted on August 1, 2003. SCAG considers that any project which is within the population and employment growth projections for the year 2015 for the subregion is mitigated by the AQMP at the regional level. The project would contribute incrementally to regional air pollution through operational emissions from additional vehicles; however, emissions from the completed project would not add cumulatively considerable emissions to the region or the subregion. Therefore, the proposed project would not result in cumulative regional air quality impacts. There would be no significant cumulative impacts from operation of the project at a local level. Emissions from background conditions were included in the project analysis and no significant impacts would result.

4.2.4 Project Design Features and Mitigation Measures

Project Design Features

None.

Mitigation Measures

MM 4.2-1 Per the SCAQMD Rule 403 Implementation Handbook, the project applicant shall implement the following BMPs to minimize fugitive dust emissions. This requirement shall be included in the construction plans and verified by the County Engineer.

- Visible roadway dust tracked from the project site to public paved roadways as the result of active operations shall be removed at the conclusion of each workday.
- Gravel or a comparable substance shall be placed at the entrance to the project site to remove excess dust and debris from the tires of construction vehicles.
- Bulk material tracked onto paved public roadways should either be prevented or removed within one hour.

MM 4.2-2 The project applicant will require that all coatings are SCAQMD-compliant and will use pre-coated materials to the extent feasible.

MM 4.2-3 The following mitigation measures used in the URBEMIS 2002 model will reduce PM_{10} fugitive dust emissions and equipment gaseous emissions.

- Apply soil stabilizers to inactive areas.
- Replace ground cover in disturbed areas quickly.
- Water exposed surfaces three times daily.
- Cover all stockpiles with tarps.
- Water all haul roads three times daily.
- Reduce speed on unpaved roads to 15 miles per hour.
- Turn off equipment when not in use for longer than 5 minutes.

Level of Significance after Mitigation

After mitigation, emissions of NO_x during construction activities would remain significant for the peak day and the quarter, but emissions of PM_{10} would be less than significant. Significant cumulative impacts are not anticipated for NO_X and PM_{10}. Operational impacts would be less than significant.

4.3 BIOTA

This section describes the potential impacts to biota associated with implementation of VTTM 53189. The analysis presented in this section is based on the results of a Biota Report conducted by BonTerra Consulting in March 2004 and updated in 2005, located in Appendix E. The biological resources on this site were previously described in *Biological Constraints Analysis Report San Francisquito Canyon Project – VTTM No. 53189 Los Angeles, California*

prepared by Rincon Consultants, Inc. and dated March 2000 and is incorporated into the BonTerra Consulting report by reference. A *Delineation of Jurisdictional Waters Outside of the Significant Ecological Area and Update of the Preliminary Biological Constraints Map San Francisquito Canyon Property* prepared by Rincon Consultants, Inc. (January 2000), as well as a Jurisdictional Delineation of Jurisdictional Waters, prepared by RBF Consulting (November 2005) are also included as an appendix to the Biological Study conducted by BonTerra Consulting.

4.3.1 Existing Conditions

Setting

The project site is located on the Newhall U.S. Geological Survey 7.5 minute quadrangle map at Township 5 North, Range 16 West, in portions of Sections 33 and 34. Site topography ranges from 1,250 feet above mean sea level (msl) within the San Francisquito Creek to 1,480 above msl in the northwestern edge of the property. The majority of the project site can be characterized as being relatively flat and becoming more steeply sloped around the northwestern edges of the site. Land adjacent to the project site to the north and west contains steep slopes and ridges that drain into San Francisquito Canyon Creek.

San Francisquito Canyon runs north to south through the eastern half of the project site and contains an intermittent stream that drains hillside areas in the Angeles National Forest and upper Santa Clarita Valley. With the exception of the landslide area described in Section 3.1 Geotechnical Hazards, and San Francisquito Canyon itself, no unusual or significant landforms or geologic features have been identified on the site.

San Francisquito Canyon is classified as SEA No.19 by the County of Los Angeles. The canyon is part of the San Francisquito Canyon Creek watershed, which possesses two populations of the unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*), a state- and federally listed endangered species. The San Francisquito Canyon Creek floodplain is included in SEA No. 19 in order to preserve unarmored threespine stickleback habitats. Until remanded in November 2002, the project site was included within U. S. Fish and Wildlife Service (USFWS) designated Critical Habitat for the California red-legged frog (*Rana aurora draytonii*) and the arroyo toad (*Bufo californicus*).

The project site currently supports the following vegetation types: ruderal, eucalyptus woodland, chamise chaparral, non-native grassland/chamise chaparral, coast live oak woodland, coastal sage scrub, wash, mixed chaparral/holly-leaf cherry woodland, non-native grassland, and alluvial sage scrub. The upland vegetation types in non-developed areas and slopes in the areas around the site are typically similar to those observed on-site before the Copper Fire (described later) and include coastal sage scrub, chamise chaparral, and mixed chaparral occasionally interspersed with non-native grassland. Canyon bottoms and drainages are vegetated with oak woodland, holly-leaf cherry woodland, alluvial sage scrub, and riparian scrub.

The majority of the project site, approximately 149.5 acres or 80 percent, will be preserved as open space. The three open space lots include:

- Lot 61 (approximately 103.5 acres)
- Lot 62 (approximately 29.7 acres)
- Lot 63 (approximately 15.3 acres)

Lot 61 includes the portion of the San Francisquito Canyon SEA No. 19 that traverses the eastern portion of the project site from north to south, which includes parts of the San Francisquito Canyon Creek and its associated floodplain. This lot also will include two equestrian/hiking/biking trails, the Cliffie Stone Trail and the Butterfield Overland Stage Trail. The Cliffie Stone Trail would be located adjacent to San Francisquito Canyon Road and the Butterfield Overland Stage Trail would be located further west, but would not impact SEA No. 19. In the northeast corner of Lot 61, a small portion of the existing dirt road extension of Lady Linda Lane would be paved from San Francisquito Canyon Road. This paved area would be approximately the length of a driveway and would include approximately 3,370 square feet, or 0.08-acre. This small driveway would not impact the SEA No. 19 and would be located over the existing dirt road.

Lot 62 includes property in the southwest portion of the project site that contains holly-leaf cherry woodland, damaged by the "Copper Fire" in June 2002. Lot 63 is located in the northwest corner of the site and includes the steeper hillsides and ridgetops.

Manufactured slopes would be developed on approximately 83,816 square feet in Lot 61, 132,556 square feet in Lot 62, and 67,729 square feet in Lot 63, totaling approximately 284,101 square feet, or approximately 6.5 acres of the project site. The manufactured slopes are designed to transition the graded lots to the natural surrounding environment. Limited grading in the SEA may occur between Lots 35 and 36 to accommodate storm drain infrastructure (i.e., rip-rap). This small impact on the SEA could not be avoided due to the location of the floodbank and the need to convey stormflows from the northernmost drainage to San Francisquito Creek. This would be one of two small impacts on the SEA No. 19 along the western bank of San Francisquito Creek in order to prevent or control possible future erosion of the bank.

A below ground levee has also been incorporated into the proposed project to provide adequate flood protection for the project site. The levee would provide protection for the graded pads in case the San Francisquito Creek was to meander toward the development and erode the supporting soil during a 50-Year Capital Flood event. Because the locations of the graded pads are already significantly above the 50-Year Capital Flood for a bulked and burned flow, the bank stabilization would be located below the graded pads along the existing floodplain boundaries and would extend below ground. The boundaries of the proposed levee system would extend from the northern-most project boundary near Lady Linda Lane southerly to Lot 46.

As a project design feature, levee construction will be conducted outside of the rainy season and will avoid any ponded water potentially present on the project site. Upon completion of the levee construction, the excavation would be entirely backfilled with existing creek soil and only the four horizontal feet of above ground levee "free board" space would be visible. The levee would be constructed with ungrouted rip-rap, which would allow for percolation of water, accumulation of transported soils, and establishment of plant life. The uneven nature of the rip-rap would mimic the natural environment and would not increase the creek flow rates along the levee or facilitate erosion along the levee.

Jurisdictional Waters

The entire project site is located within the boundaries of the San Francisquito Canyon Creek watershed. Watershed boundaries and drainage patterns on the site are described in *Delineation of Jurisdictional Waters Outside of the Significant Ecological Area and Update of the Preliminary Biological Constraints Map San Francisquito Canyon Property* prepared by Rincon Consultants, Inc. (January 2000), and the *Delineation of Jurisdictional Waters* prepared by RBF Consulting (2005), which are provided as an appendix to the Biological Report located in Appendix E.

The investigation to determine the amount and type of jurisdictional "waters of the United States" was conducted based on methods described in the *Corps of Engineers Wetland Delineation Manual (1987)*. A total of six drainage features (A through F) that have the potential to be impacted by the proposed project were identified for delineation purposes. San Francisquito Canyon Creek is not included in this delineation because no jurisdictional areas in the creek would be impacted by the project. These drainage features, as mapped by RBF Consulting in 2005, are presented in Figure 4.3-1. The six drainage features are summarized below:

Drainage A This drainage is located in the northwestern portion of the project site in a valley with upland vegetation. The upland habitats consist primarily of chamise chaparral, non-native grasses, and mixed chaparral/holly-leaf cherry woodland. The drainage flows approximately west to east.

Drainage B This drainage flows parallel to and north of Drainage A. The upland habitat surrounding this drainage is largely mixed chaparral/holly-leaf cherry woodland and non-native grasses.

Drainage C This drainage is southeast of Drainage A in the western portion of the site and flows in a southeasterly direction towards an existing dirt road and the San Francisquito Canyon Creek. The primary vegetation in this drainage consists of mixed chaparral/holy-leaf woodland and non-native grassland.

Drainages D/E These drainages are located in the northwestern portion of the site, east of drainage "B" and adjacent to an existing dirt road. The primary vegetation surrounding this drainage is non-native grassland. These two drainages flow approximately west to east.

Drainage F This drainage is located at the northern boundary of the site and west of the existing dirt road leading southwest into the site. Vegetation in this drainage consists of ruderal species. The drainage flows from west to east towards the roadway.

None of these six drainages concurrently meet the federal jurisdictional criteria (i.e., presence of hydrophytic vegetation, hydric soils, and wetland hydrology) that are required for delineation as an U.S. Army Corps of Engineers (USACE) jurisdictional wetland. However, the on-site drainages are ephemeral, containing water flow during storm events. Approximately 0.93 acres of USACE "waters of the U.S." are located within the boundaries of the project site. In addition to the presence of USACE jurisdictional areas, the on-site drainages/streambeds are considered jurisdictional by the California Department of Fish and Game (CDFG). Because no riparian or hydrophytic vegetation is present on the site, the CDFG jurisdiction also totals approximately 0.93 acres. The current drainage flows from the project site run through these intermittent drainages from the western hillsides towards the east into the San Francisquito Creek, which comprises the eastern portion of the project site.

Significant Ecological Area No. 19

SEAs were established in 1976 by Los Angeles County to designate areas with sensitive environmental conditions and/or resources in order to preserve biological diversity. The County recently re-evaluated the biological conditions of these SEAs in 2000. The update expanded the objective of the original SEAs to include the future sustainability of biological diversity through the application of current practices in conservation planning, primarily by consolidation into larger interconnected SEAs. The 2000 SEA update study has not been adopted by the County. SEA boundaries are general in nature, and broadly outline the biological resources of

concern. The Los Angeles County General Plan allows development in SEAs as long as development is "highly compatible" with the identified resources.

The San Francisquito Canyon SEA No. 19 was identified in 1976 as a regionally significant biological resource for the inherent value of its wetland habitat and associated species, for its function as a regional wildlife corridor and because of the threat of loss of suitable habitat for the unarmored threespine stickleback. The vegetation within SEA No. 19 includes freshwater marsh, alluvial sage scrub, coastal sage scrub, oak woodland, and riparian woodland vegetation types. The broad wash of the creek bed is unlike that found in steeper mountain canyons and similar habitats are increasingly difficult to locate in the Santa Clarita Valley.

Vegetation Types

Site visits to describe the on-site vegetation and evaluate the potential of the habitats to support special status plant and wildlife species were conducted by BonTerra Consulting in 2003, 2004, and 2005. The results of theses analyses are presented in *the Biota Report for Vesting Tentative Tract No. 53189 in San Francisquito Canyon Northern Los Angeles County California* prepared by BonTerra Consulting, dated November 2005 and incorporated herein by reference.

Vegetation types on the site were previously mapped by Rincon Consultants, Inc. during May and early June 1999 and are presented in their constraints report dated March 2000 (located in Attachment B of the Biological Technical Report, Appendix E). During June 2002, the majority of the upland vegetation west of the San Francisquito Canyon drainage was burned during the 20,000-acre Copper Fire. The Copper Fire resulted in a change in the mosaic of the vegetation types currently identifiable on the site when compared to those areas mapped previously by Rincon Consultants, Inc. in the spring of 2000.

BonTerra Consulting mapped ten vegetation types on the project site, including ruderal, ornamental, chamise chaparral, non-native grassland/chamise chaparral, coast live oak woodland, coastal sage scrub, wash, mixed chaparral/holly-leaf cherry woodland, non-native grassland, and alluvial sage scrub. Figure 4.3-2 presents the existing vegetation types on the project site. The various vegetation types found on the project site are described below.

Ruderal (includes Developed)

The ruderal areas consists of areas including graded and paved roads in addition to areas associated with existing development in the project area, particularly along San Francisquito Canyon Road and Lady Linda Lane. Ruderal vegetation was mapped on approximately 15 acres of the site in various soils. The ruderal vegetation contains primarily non-native species or native species that occur in highly disturbed areas.

Ornamental

Ornamental vegetation occurs in the north-central portion of the project site and includes approximately one acre of gum trees (*Eucalyptus sp.*). Gum trees were typically planted in old ranch areas in southern California.

Chamise Chaparral

Patches of chamise chaparral occur on the slopes of the project site comprising approximately four acres. These areas are dominated by chamise (*Adenostoma fasciculatum*) and appear to be associated with Saugus soils on the project site. Other species that occur in this vegetation type include white sage (*Salvia apiana*) and shrub mallow (*Malacothamnus marrubioides*).

Non-native Grassland/Chamise Chaparral

An area of approximately three acres of chamise chaparral ecotone with non-native grassland was observed in the northern portion of the project site. Common non-native grassland species within this vegetation type include brome grasses (*Bromus diandrus, B. hordeaceus*) and wild oat (*Avena fatua*). The chaparral component of this vegetation type, consisting of chamise, would be expected to increase in the absence of further disturbances during natural post-fire recovery.

Coast Live Oak Woodland

Coast live oak woodland occurs in the northeastern portion of the project site, near the junction of San Francisquito Canyon Road and Lady Linda Lane. This vegetation type is dominated by coast live oak trees (*Quercus agrifolia*), and has an understory of non-native grassland species including brome grasses and wild oats. Coast live oak woodland was mapped on approximately three acres of the site. This vegetation type is considered sensitive by the CDFG, and individual oak trees are protected by the County of Los Angeles Ordinance 22.56.2050.

Coastal Sage Scrub

Coastal sage scrub occurs within a portion of the upland terrace of San Francisquito Creek in the southern portion of the project site affected by the Copper Fire. Coastal sage scrub was mapped on approximately two acres of the project site and would be expected to increase in area in the absence of further disturbances during natural post-fire recovery on the project site.

Small patches of coastal sage scrub were also identified within alluvial sage scrub vegetation within the San Francisquito Creek floodplain. These areas were not mapped as coastal sage scrub due to their small size and the prevalence of scalebroom (*Lepidospartum squamatum*). Dominant species in the coastal sage scrub vegetation type include California buckwheat (*Eriogonum fasciculatum*) and deerweed (*Lotus scoparius*). Similarly, bush sunflower (*Encelia californica*) was observed on a non-native grassland slope in the northwestern portion of the project site but was not mapped due to its small size.

Wash

Wash comprises approximately 14 acres within the project site. Vegetation is generally absent from within the wash; however, a sparse, generally open cover of scattered herbs and annual grasses, such as red brome (*Bromus madritensis ssp. rubens*), is present. Small, scattered mule fat (*Baccharis salicifolia*) and subshrubs, such as California buckwheat, were observed within sand bars, banks, and adjacent floodplain. San Francisquito Creek, within the project site, conveys water for a limited amount of time after rain events. During significant periods of inundation, the wash has the potential to meander.

Mixed Chaparral/Holly-Leaf Cherry Woodland

Holly-leaf cherry woodland is described by the presence of holly-leaf cherry (*Prunus ilicifolia*). This vegetation type occurs within a single main drainage on the western side of the project site. Although tree-sized holly-leaf cherries were scattered within the drainage, the Copper Fire burned all of the cherry trees except for a few at the mouth of the drainage. Since the Copper Fire, the damaged cherry trees, as well as other species that are more indicative of mixed chaparral [i.e., bigberry manzanita (*Arctostaphylos glauca*), chaparral nightshade (*Solanum xanti*), and spiny redberry (*Rhamnus crocea*)], have begun to recover or crown sprout. Sprouting of these shrubs was also observed within the remaining interstitial areas covered by non-native grassland forming an early seral mixed chaparral/holly-leaf cherry woodland

ecotone. This ecotone was mapped within approximately ten acres of the project site. The holly-leaf cherry woodland and chaparral vegetation would be expected to increase during natural post-fire recovery on the project site. Holly-leaf cherry woodlands are considered sensitive by the CDFG.

Non-Native Grassland

Non-native grassland is typically the result of disturbances such as grading, discing, off road vehicle use, agricultural practices, or fire. The Copper Fire burned or severely damaged the upland vegetation types west of San Francisquito Creek. Consequently, the dominant upland vegetation type currently remaining on the project site is non-native grassland. Non-native grassland was mapped within approximately 72 acres of the project site.

Common plant species within this vegetation type include brome grasses, wild oat, black mustard (*Brassica nigra*), red-stemmed filaree (*Erodium cicutarium*), doveweed (*Eremocarpus setigerus*), tree tobacco (*Nicotiana glauca*), chaparral nightshade, western ragweed (*Ambrosia psilostachya*), telegraph weed (*Heterotheca grandiflora*), and common fiddleneck (*Amsinckia menziesii*).

Alluvial Sage Scrub

Alluvial sage scrub occurs along the banks and benches of the drainage above the active channel within San Francisquito Canyon. The dominant plant species of this vegetation type is scalebroom. Other plant species occurring at a lower density include thick-leaf yerba santa (*Eriodictyon crassifolium*), chaparral yucca (*Yucca whipplei*), Great Basin sagebrush (*Artemisia tridentata*), and California buckwheat. Non-native grasses have invaded some portions of this vegetation type; however, much of the habitat east of the active channel has not been invaded by non-native grasses and is considered high quality. Alluvial sage scrub was mapped within approximately 65 acres of the project site. Fremont's cottonwood (*Populus fremontii*) also occurs in this vegetation type and on the boundary of this type with non-native grassland.

Fauna

Fish

The herbaceous cover in most creeks and waterways in southern California varies by season from little to no cover during periods of high water flow to high coverage in late summer and fall. Native fish species that potentially inhabit this area, have adapted to living in the naturally fluctuating conditions. However, additional stressors such as alteration of habitat and introduced species have contributed to the decline of native fish populations in southern California. Although the Copper Fire substantially altered vegetation within the project region (i.e., San Francisquito Canyon watershed), the effects on fish species within the watershed were not considered significant further up the watershed in the Angeles National Forest by the U.S. Forest Service.

The project site was dry during site visits and no fish species were observed; however, flood conditions would allow for movement of fish species across the project site. This movement would be important to maintain populations of these species, and severing connectivity between upstream and downstream populations could have a long-term effect on these populations.

Native and non-native fish species are present in San Francisquito Canyon Creek. Non-native fish species that may occasionally occur within San Francisquito Canyon during high water conditions include the mosquito fish (*Gambusia affinis*). The special status native unarmored

threespine stickleback and Santa Ana sucker (*Catostomus santaanae*), and arroyo chub *(Gila orcutti)* also are expected to occur on the project site during flood conditions.

Amphibians

Although most of the project site is dry for much of the year, a number of amphibians species occur or are expected to occur. There are a number of terrestrial species that may or may not require standing water for reproduction. These species are able to survive in dry areas by remaining beneath the soil in burrows or under logs or leaf litter, emerging only when temperatures are appropriate and humidity is high, emerging to breed once the rainy season begins. Soil moisture conditions can remain high throughout the year within some habitat types, depending on factors such as amount of vegetation cover, elevation, and slope aspect.

The project site provides suitable habitat for several common amphibian species including the western toad (*Bufo boreas*) and Pacific treefrog (*Hyla regilla*). Other species that may occur include the black-bellied slender salamander (*Batrachoseps nigriventris*) and California treefrog (*Hyla cadaverina*).

The project site is within the potential range of the arroyo toad (*Bufo californicus*), California red-legged frog (*Rana aurora draytonii*), and western spadefoot (*Spea hammondii*). Western spadefoot toads have been detected on the project site (see Exhibit 4.3-2). Recent general and focused amphibian surveys performed within the general project vicinity have had negative results within or proximal to the project site for the arroyo toad and red-legged frog; nonetheless, these species have been documented within the project region, including Castaic Creek and San Francisquito Canyon.

Reptiles

Reptilian diversity and abundance typically varies with vegetation type and substrate characteristics. Many species occur in only one or two vegetation types; however, most will forage in a variety of habitats. Most species occurring in open areas use rodent burrows or other cavities for cover, protection from predators, and extreme weather conditions. Although the Copper Fire substantially altered vegetation within the project region (i.e., San Francisquito Canyon watershed), the effects on reptile species within the watershed were not considered significant up the watershed in the Angeles National Forest by the U.S. Forest Service. Common reptile species observed or expected to occur in the project site include the western fence lizard (*Sceloporus occidentalis*), side-blotched lizard (*Uta stansburiana*), western skink (*Eumeces skiltonianus*), southern alligator lizard (*Elgaria multicarinata*), gopher snake (*Pituophis catenifer*), red coachwhip (*Masticophis flagellum*), California whipsnake (*Masticophis lateralis*), western rattlesnake (*Croatalus vidirdis*) and common kingsnake (*Lampropeltis getula*). Other species that may occur include the western blind snake (*Leptotyphlops humilis*), night snake (*Hypsiglena torquata*), and glossy snake (*Arizona elegans*).

Birds

Although the Copper Fire substantially altered vegetation within the project region (i.e., San Francisquito Canyon watershed), the effects on bird species within the watershed were not considered significant up the watershed in the Angeles National Forest by the U.S. Forest Service. Common bird species observed on the project sites during the site visit include common raven (*Corvus corax*), American crow (*Corvus brachyrhynchos*), California quail (*Callipepla californica*), mourning dove (*Zenaida macroura*), lesser nighthawk (*Chordeiles acutipennis*), western scrub-jay (*Aphelocoma californica*), song sparrow (*Melospiza melodia*), white-crowned sparrow (*Zonotrichia leucophrys*), house finch (*Carpodacus mexicanus*), lesser goldfinch (*Carduelis psaltria*), Costa's hummingbird (*Calypte costae*), northern mockingbird

(*Mimus polyglottos*), spotted towhee (*Pipilo maculatus*), phainopepla (*Phainopepla nitens*), and hooded oriole (*Icterus cucullatus*).

Birds of prey (raptors) observed on the project site during the site visits include turkey vulture (*Cathartes aura*), sharp-shinned hawk (*Accipiter striatus*), Cooper's hawk (*Accipiter cooperii*), red-shouldered hawk (*Buteo lineatus*), red-tailed hawk (*Buteo jamaicensis*), American kestrel (*Falco sparverius*), barn owl (*Tyto alba*), and great horned owl (*Bubo virginianus*). Others having the potential to occur onsite include the golden eagle (*Aquila chrysaetos*), merlin (*Falco columbarius*), and western screech owl (*Megascops kennicottii*). Large, mature trees such as the scattered Fremont cottonwood trees in San Francisquito Canyon and coast live oaks in the northeastern portion of the site provide potentially suitable nesting habitat for raptors on the project site.

Mammals

Common terrestrial mammal species or evidence of their presence observed during the survey include the desert cottontail (*Sylvilagus audubonii*), California ground squirrel (*Spermophilus beecheyi*), Botta's pocket gopher (*Thomomys bottae*), Pacific kangaroo rat (*Dipodomys agilis*), raccoon (*Procyon locator*), Virginia opossum (*Didelphis virginiana*), striped skunk (*Mephitis mephitis*), coyote (*Canis latrans*), and mule deer (*Odocoileus hemionus*). Several others that may occur as residents or transients include the long-tailed weasel (*Mustela frenata*), bobcat (*Felis rufus*), and mountain lion (*Felis concolor*).

Bats occur throughout southern California and may use any portion of the project site as foraging habitat. Should hollows or cavities occur in some of the older cottonwood or oak trees, particularly within the coast live oak woodland, this could provide roosting habitat for bat species. Most of the bats that potentially occur in the project site are either inactive during the winter (hibernate) or migrate south of the region to warmer climates. Bats potentially foraging in the project site include long-legged myotis (*Myotis volans*), California myotis (*Myotis californicus*), western pipistrelle (*Pipistrellus hesperus*), big brown bat (*Eptesicus fuscus californicus*), long-eared myotis (*Myoits evotis*), fringed myotis (*Myotis thysanodes*), and the Mexican free-tailed bat (*Tadarida brasiliensis*).

Wildlife Movement

Wildlife corridors link together areas of suitable wildlife habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. The fragmentation of open space areas by urbanization creates isolated "islands" of wildlife habitat. In the absence of habitat linkages that allow movement to adjoining open space areas, various studies have concluded that some wildlife species, especially the larger and more mobile mammals, will not likely persist over time in fragmented or isolated habitat areas because they prohibit the infusion of new individuals and genetic information.

Corridors mitigate the effects of this fragmentation by: 1) allowing animals to move between remaining habitats, thereby permitting depleted populations to be replenished and promoting genetic exchange; 2) providing escape routes from fire, predators, and human disturbances, thus reducing the risk that catastrophic events, such as fire or disease, will result in population or local species extinction; and 3) serving as travel routes for individual animals as they move in their home ranges in search of food, water, mates, and other necessary resources.

Wildlife movement activities usually fall into one of three movement categories: 1) dispersal (e.g., juvenile animals from natal areas, or individuals extending range distributions); 2) seasonal migration; and 3) movements related to home range activities (e.g., foraging for food or water, defending territories, or searching for mates, breeding areas, or cover). A

number of terms such as "wildlife corridor," "travel route," "habitat linkage," and "wildlife crossing" have been used in various wildlife movement studies to refer to areas in which wildlife move from one area to another. Once open space areas become constrained and/or fragmented as a result of urban development, including roads and highways, the remaining landscape features or travel routes that connect the larger open space areas can "become" corridors as long as they provide adequate space, cover, food, and water, and do not contain obstacles or distractions (e.g., man-made noise, lighting) that would generally hinder wildlife movement.

The San Francisquito Canyon Creek drainage is a natural conduit for wildlife movement whether in a natural setting or surrounded by development. Where it is surrounded by development, it serves as a wildlife movement corridor in the sense described above. When wildlife movement corridors provide connections between protected open space areas that have no other linkages, then they become locally or even regionally important. The San Francisquito Canyon Creek drainage is recognized as a regionally important wildlife movement corridor because it is provides linkages between upstream areas in the Angeles National Forest and downstream areas in the Santa Clara River.

Special Status Species and Vegetation Types

The following section addresses special status biological resources observed, reported, or having the potential to occur in the proposed project area (e.g., San Francisquito Canyon and the Santa Clarita Valley). These resources include plant and wildlife species that have been afforded special status and/or recognition by federal and state resource agencies, as well as private conservation organizations. In general, the principal reason an individual taxon (species, subspecies, or variety) is given such recognition is the documented or perceived decline or limitations of its population size or geographical extent and/or distribution resulting in most cases from habitat loss. In addition, special status biological resources include vegetation types and habitats that are either unique, of relatively limited distribution in the region, or of particularly high wildlife value. These resources have been defined by federal, state, and local government conservation programs.

Special Status Vegetation Types

Three of the vegetation types described earlier are “considered rare and worthy of consideration” by the California Natural Diversity Database (CNDDB). These include the following: holly-leaf cherry woodland, alluvial sage scrub, and wash. These three vegetation types may occur together in a dynamic mosaic with riparian habitats (e.g., southern willow scrub, mule fat scrub, freshwater marsh) and upland habitats (e.g., coastal sage scrub and various chaparral series) in canyon bottoms, floodplains, and streambeds fluctuating with changes in hydrology, fire, and other disturbances over time. Regularly scoured areas (described previously as wash) are generally almost devoid of vegetation. Washes and streams are dynamic systems that create the conditions that result in the mosaic of upland and potential wetland habitats in a natural riparian system in southern California.

In San Francisquito Canyon Creek and other riparian systems in southern California, as the wash meanders within the floodplain, areas through which the wash previously flowed may develop into alluvial sage scrub. These areas may develop into a wetland scrub (such as mule fat scrub or southern willow scrub) if inundation is frequent and/or soil saturation is persistent. If soil saturation or inundation becomes more persistent, then riparian scrubs may develop into riparian woodlands or riparian forests (e.g., southern cottonwood-willow riparian forest). These vegetation types are generally considered a high priority for preservation, due to their growing scarcity throughout southern California and their capacity to support several Threatened, Endangered, or other special status species.

Special Status Plant Species

Several special status plant species are known to occur in the project area. Those plant species listed as Threatened or Endangered that are known to occur in the project area are discussed below and summarized in Table 4.3-1.

TABLE 4.3-1
THREATENED AND ENDANGERED PLANT SPECIES POTENTIALLY OCCURRING IN THE PROJECT AREA

Species	Status[1]			Likelihood of Occurrence
	USFWS	CDFG	CNPS	
Astragalus brauntonii Braunton's milk-vetch	FE	SE	List 1B	Limited potential to occur; not observed on the project site during surveys.
Berberis [Mahonia] nevinii Nevin's barberry	FE	SE	List 1B	Limited potential to occur; not observed on the project site during surveys.
Chorizanthe parryi var. *fernandina* San Fernando Valley spineflower	FC	SE	List 1B	Limited potential to occur; not observed on the project site during surveys.
Dodecahema leptoceras Slender-horned spineflower	FE	SE	List 1B	Limited potential to occur; not observed on the project site during surveys.
Navarretia fossalis Spreading navarretia	FT	—	List 1B	Not observed on project site; no suitable habitat.
Orcuttia californica California Orcutt grass	FE	SE	List 1B	Not observed on project site;; no suitable habitat.

[1] **Status Definitions**

USFWS
FE: Federally Listed As Endangered
FT: Federally Listed As Threatened
FC: Candidate Species for Federal Listing As Threatened or Endangered

CDFG
SR: State-listed As Rare
ST: State-listed As Threatened
SE: State-listed As Endangered

CNPS
List 1A Plants Presumed Extinct in California
List 1B Plants Rare, Threatened, or Endangered in California and Elsewhere
List 2 Plants Rare, Threatened, or Endangered in California But More Common Elsewhere
List 3 Plants About Which We Need More - A Review List
List 4 Plants of Limited Distribution - A Watch List

Braunton's Milk-vetch (Astragalus brauntonii)

Braunton's milk-vetch is a federally listed Endangered species and a CNPS List 1B species. This perennial milk-vetch typically blooms from March through July. It is often associated with limestone soil or found in down-wash sites associated with chamise, chaparral yucca, Tecate cypress (*Cupressus forbesii*), and chaparral beargrass (*Nolina cismontana*). This species is found from ten to 2,100 feet above msl, and needs fire or other site perturbations for its survival. This species is known from fewer than ten occurrences, with less than 300 total plants in Los Angeles, Orange, and Ventura counties. This species has a limited potential to occur in the project site. Rincon Consultants, Inc. and BonTerra Consulting did not locate this species during the focused surveys. This species is not known to occur within the Liebre Mountains. Braunton's milk-vetch was not observed during the focused surveys performed within the proposed project impact area following the Copper Fire and the species has limited potential to occur elsewhere on the project site.

Nevin's Barberry (Berberis [Mahonia] nevinii)

Nevin's barberry is a federally listed Endangered, state-listed Endangered, and CNPS List 1B species. This species is a large and conspicuous evergreen shrub occurring in sandy and gravelly soils in chaparral cismontane woodland, coastal scrub, and riparian scrub in Los Angeles, Riverside, San Bernardino, and San Diego counties. Its nearest known occurrence is several miles north within U.S. Forest Service land in San Francisquito Canyon proximal to Los Angeles Department of Water and Power (LADWP) Power Plant No. 2 where it occurs on a slope between electric transmission Tower 7A1G and San Francisquito Canyon Road. The Nevin's barberry is readily observable at any time of year, but was not observed by either Rincon Consultants, Inc. or BonTerra Consulting. Nevin's barberry was not observed within the proposed project impact area during the focused survey and the species has a limited potential to occur elsewhere in the project site.

San Fernando Valley Spineflower (Chorizanthe parryi var. fernandina)

San Fernando Valley spineflower is a federal Candidate for listing as Threatened or Endangered, state-listed Endangered, and a CNPS List 1B species. This annual herb blooms from April to June. This species occurs in sandy soils along drainages from 490 to 4,000 feet above msl. This species was historically known from the San Fernando Valley, Newhall, Castaic, and Elizabeth Lake areas but was presumed extinct until it was rediscovered at Ahmanson Ranch in Ventura County. This species is currently known from Newhall Ranch and Ahmanson Ranch. San Fernando Valley spineflower was not observed within the proposed project impact area during the focused surveys and the species has a limited potential to occur elsewhere in the project site.

Slender-horned Spineflower (Dodecahema leptoceras)

Slender-horned spineflower is federally listed Endangered, state-listed Endangered, and a CNPS List 1B species. This low-growing annual species typically flowers from April to June. This species typically occurs in mature alluvial fan sage scrub in sandy to gravelly soil between approximately 655 and 2,495 feet above msl, but is also known to occur in association with chaparral and coastal sage scrub vegetation types. It is generally found in small isolated areas lacking evidence of frequent surface disturbance. This species occurs in Los Angeles, Riverside, and San Bernardino counties including the confluence of Bee Canyon and Soledad Canyon, the San Fernando Valley, the Santa Ana River Wash, the San Jacinto River floodplain near Hemet, and Temescal Canyon near Elsinore. This spineflower was known to historically occur in Mint Canyon and in Newhall in the project region. Focused surveys were conducted for this species on adjacent properties and the species was not located. Slender-horned spineflower was not observed on the project site during the focused surveys and the species has a limited potential to occur in the project site.

Spreading Navarretia (Navarretia fossalis)

Spreading navarretia is a federally listed Threatened species and a CNPS List 1B species. This species typically blooms between April and June. This annual herb occurs in chenopod scrub, assorted shallow freshwater marshes and swamps, playas, and vernal pools from 100 to 4,265 feet above msl. This species occurs in the Liebre Mountains and Sierra Peloma (Cruzan Mesa and Plum Canyon) in Los Angeles County, and in Riverside and San Diego counties. (Boyd 1999). Spreading navarretia was not observed during the focused surveys in the project site and the species is not expected to occur on the project site due to lack of suitable habitat or substrate.

California Orcutt Grass (Orcuttia californica)

California Orcutt grass is a federally listed Endangered species, state Endangered species, and a CNPS List 1B species. This species typically flowers between April and August. This annual herb occurs in vernal pools from 50 to 2,165 feet above msl. This grass species historically occurred in Los Angeles, Riverside, San Diego, and Ventura counties, and in Baja California, Mexico. This species is known to occur in vernal pools on Cruzan Mesa and Plum Canyon in the project region (Boyd 1999). California Orcutt grass was not observed during the focused survey on the project site and the species is not expected to occur on the project site due to lack of suitable habitat or substrate.

Plant species not currently listed as either Threatened or Endangered, but which have the potential to be elevated to a higher status in the future are listed below.

CNPS List 1A Plant Species

A single plant species recorded from the project region is currently designated by the CNPS as List 1A species: the Los Angeles sunflower (*Helianthus nuttallii* ssp. *parishii*). This species is not expected to occur within the project site due to the lack of suitable habitat or substrate.

CNPS List 1B Plant Species

The following plant species are currently designated by the CNPS as List 1B species: Plummer's mariposa lily (*Calochortus plummerae*), slender mariposa lily (*Calochortus clavatus* var. *gracilis*), Greata's aster (*Aster greatae*), mesa horkelia (*Horkelia cuneata* ssp. *puberula*), Davidson's bush mallow (*Malacothamnus davidsonii*), and Robinson's pepper grass (*Lepidium virginicum* var. *robinsonii*). These species all have some potential to occur in the project site due to the presence of suitable habitat or substrate.

CNPS List 2 Plant Species

A single plant species recorded from the project region is currently designated by the CNPS as List 2 species: the rayless ragwort (*Senecio aphanactis*). This species has limited potential to occur on the project site due to the presence of suitable habitat or substrate.

Special Status Wildlife Species

Several special status wildlife species are known to occur in the project region. Those wildlife species listed as Threatened or Endangered are discussed below and summarized in Table 4.3-2.

TABLE 4.3-2
THREATENED AND ENDANGERED WILDLIFE SPECIES POTENTIALLY OCCURRING IN THE PROJECT AREA

Species	Status[1]		Likelihood of Occurrence
	USFWS	CDFG	
Fish			
Catostomus santaanae Santa Ana sucker	FT	CSC	Expected to occur when water is flowing in San Francisquito Creek, but suitable habitat is not likely to persist within project site.
Gasterosteus aculeatus williamsoni unarmored threespine stickleback	FE	SE/FP	Expected to occur when water is flowing in San Francisquito Creek, but suitable habitat is not likely to persist within project site.

TABLE 4.3-2 (Continued)
THREATENED AND ENDANGERED WILDLIFE SPECIES POTENTIALLY OCCURRING IN THE PROJECT AREA

Amphibians			
Bufo californicus arroyo toad	FE	CSC	Limited potential to occur; potentially suitable foraging habitat, but no breeding habitat.
Rana aurora draytonii California red-legged frog	FT	CSC	Not expected to occur; no suitable habitat.
Spea hammondii Western spadefoot	SOC	CSC/P	Observed; suitable habitat.
Birds			
Buteo swainsoni Swainson's hawk	SOC	ST	Observed on project site in 1999. This and other reports from area considered to have been migrants. Limited potentially suitable foraging and breeding habitat, but the Swainson's hawk occurs in region only as rare migrant and is not expected to breed on project site.
Coccyzus americanus occidentalis western yellow-billed cuckoo	FC	SE	Not expected to occur; no suitable habitat.
Empidonax traillii extimus southwestern willow flycatcher	FE	SE [2]	Not expected to occur; no suitable habitat.
Vireo bellii pusillus least Bell's vireo	FE	SE	Not expected to occur; no suitable habitat.
Polioptila californica californcia coastal California gnatcatcher	FT	CSC	Limited potential to occur; not observed during 2004 focused surveys.

[1] **Status Definitions**

USFWS

FE: Federally Listed as Endangered
FT: Federally Listed as Threatened
FC: Candidate Species for Listing as Threatened or Endangered
SOC: Species of Concern

CDFG

SE: State-listed as Endangered
ST: State-listed as Threatened
FP: Fully Protected
P: Protected
SA: Special Animal
CSC: Species of Special Concern

[2] The state listing included all subspecies of willow flycatcher that breed in California.

Fish

Santa Ana Sucker (*Catostomus santaannae*)

Santa Ana sucker is a federally listed Threatened species (outside of the Santa Clara River watershed) and is a California Species of Special Concern. The Santa Ana sucker prefers clear, cool, rocky, and gravelly streams where it feeds on algae, diatoms, detritus, and small insect larvae. The historic range of this species includes low-elevation streams in the Los Angeles, San Gabriel, and Santa Ana river systems. Extant native populations appear to be concentrated within the east, north, and west forks of the San Gabriel River, and Big Tujunga Creek. Introduced populations of the Santa Ana sucker are present in the Santa Clara River, Sespe Creek, Piru Creek, and San Francisquito Creek. It has a patchy distribution along the Santa Clara River. Persistent surface water was not observed during project surveys. The morphology of the wash indicates that inundation within San Francisquito Canyon consists of relatively rapid flows of relatively short duration. The Santa Ana sucker is expected to occur when water is flowing in San Francisquito Creek.

Unarmored Threespine Stickleback (*Gasterosteus aculeatus williamsoni*)

Unarmored threespine stickleback is a federally listed Endangered, state-listed Endangered, and a CDFG Fully Protected species. The stickleback occurs in weedy permanent pools or backwaters, and in slow moving water along the margins of the stream. It primarily occurs in cool and clear water with mud or sand substrates. The unarmored threespine stickleback was once abundant throughout the Los Angeles Basin and is now only known in the upper Santa Clara River system and in San Antonio Creek in northern Santa Barbara County. In the Santa Clara River in Los Angeles County, this species is found from Soledad Canyon downstream to about a mile upstream of the confluence with Piru Creek in Ventura County, whenever there is surface flow. It is also known from Bouquet Creek. In addition, the species is a periodic seasonal resident of San Francisquito Creek, a tributary to the Santa Clara River, particularly upstream from the project site near the confluence with Clearwater Canyon Creek. The morphology of the wash indicates that inundation within San Francisquito Canyon consists of relatively rapid flows of relatively short duration. The unarmored threespine stickleback is expected to occur when water is flowing in San Francisquito Creek.

Amphibians

Arroyo Toad (Bufo californicus)

Arroyo toad is a federally listed Endangered species and a California Species of Special Concern. This toad only occurs in streams of southwestern California and northwestern Baja California, Mexico. In California, it primarily occurs along the Coast Ranges from San Luis Obispo County south to San Diego County, but also occurs at a few locations on the western edge of the desert. The arroyo toad is generally found in semi-arid regions near washes or intermittent streams. This species has highly specialized habitat requirements. It requires breeding pools within 330 feet of juvenile and adult habitat, which consists of shoreline with stable, sandy terraces.

The arroyo toad is known to be present along Castaic Creek, both above and below the dam at Castaic Lake, on LADWP land, and in the Angeles National Forest. In 1994, this species was observed in the Santa Clara River, approximately 750 to 1,000 feet east of I-5 and in 2003 two adult male arroyo toads were observed in the Santa Clara River at its confluence with San Francisquito Creek. These records are the nearest known occurrences of arroyo toad to the project site and both are located several miles south of the project site. An arroyo toad habitat assessment at the adjacent Tesoro del Valle site and adjacent areas (including the proposed project site) in 2000 determined the best potential arroyo toad habitat within San Francisquito Creek occurs upstream near LADWP Power Plant No. 1, however, the whole wash all the way down through the project site is potential habitat. This species has a limited potential to occur on the project site due to the presence of potentially suitable foraging habitat, but is not expected to breed on the project site due to the absence of potential breeding habitat.

California Red-legged Frog (*Rana aurora draytonii*)

California red-legged frog is a federally listed Threatened and a California Species of Special Concern. This species requires riparian areas with deep ponds, or slow-moving waters that support dense stands of emergent vegetation such as cattails at the edge of the banks. Adults feed primarily on aquatic and terrestrial invertebrates. The nearest extant population of this species is located upstream within San Francisquito Canyon between the LADWP Power Plant No. 2 and the historic location of the Saint Francis Dam. Robert Fisher reported this population numbered approximately 200 during surveys performed in the Summer of 2002 (after the Copper Fire). Other historic records for this species occur in the Santa Clara River watersheds

Soledad and Placerita canyons. The California red-legged frog has not been observed in the Santa Clara River since the 1970s, despite recent survey efforts in support of permitting and permit compliance under the Natural River Management Plan. Focused surveys performed by San Marino Environmental Associates included the proposed project site; however, neither tadpoles nor adult red-legged frogs were located. The project site does not provide habitat with potential to support the California red-legged frog; therefore, the species is not expected to occur.

Western Spadefoot Toad *(Spea [Scaphiopus] hammondii)*

Western spadefoot is a federal Species of Concern and a California Species of Special Concern. This species occurs in the Great Valley and bordering foothills, in the Coast Ranges from Monterey Bay south to Baja California, Mexico . From the Santa Clara River valley in Los Angeles and Ventura Counties southward, an estimated 80 percent of the habitat for this species has been lost. This species inhabits grassland, coastal sage scrub, and other habitats with open sandy, gravelly soils. The western spadefoot is primarily a species of the lowlands, frequenting washes, floodplains of rivers, alluvial fans, and alkali flats. The western spadefoot breeds in quiet streams, vernal pools, and temporary ponds. This species is rarely seen outside of the breeding season and is known to be in the San Francisquito Creek. The study area provides suitable habitat for this species and it was observed on the project site.

Birds

Swainson's Hawk (*Buteo swainsoni*)

Swainson's hawk is a federally listed Species of Concern and a state-listed Threatened species. There are recent observations of this raptor from the Santa Clara Valley and from the project site in 1999. These birds are all considered to have been transients or migrants passing through the region. The Swainson's hawk formerly bred along the coast in southern California, but breeding is now mostly limited to the Sacramento and San Joaquin valleys, extreme northeast California, and Mono and Inyo counties. There are recent breeding records for this raptor from the Antelope Valley. Typical breeding habitat consists of open habitat such as grasslands and agricultural fields with scattered groves of trees. Prey consists of small mammals and reptiles in early summer and large insects at other seasons. The project site provides a limited amount of suitable foraging habitat; and the project site is outside of the known breeding range and is not expected to breed on the project site. The Swainson's hawk is not likely to occur as a breeding resident on the project site, but has limited potential to occur while foraging.

Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*)

Western yellow-billed cuckoo is a federal Candidate for listing as Threatened or Endangered and a state-listed Endangered species. California's population was once estimated to be over 15,000 pairs, but in less than a hundred years it has declined to less than 30 pairs. Along the coast, breeding cuckoos persist along the Santa Ana River in Riverside County, and perhaps the San Luis Rey River in San Diego County. This species formerly nested in the Santa Clara River until the 1970s and it has not been a documented breeder here since that time. Two yellow-billed cuckoos observed in the Santa Clara River near the McBean Parkway bridge in 1998 may have been breeders, although the observer considered them to be migrants. The western yellow-billed cuckoo requires broad areas of old-growth riparian habitats dominated by willows and cottonwoods with dense understory vegetation. The project site lacks suitable breeding habitat for this species and the western yellow-billed cuckoo is not expected to occur.

Southwestern Willow Flycatcher (*Empidonax traillii extimus*)

Southwestern willow flycatcher is a federally listed and state-listed Endangered species. This flycatcher's breeding range includes southern California, Arizona, New Mexico, western Texas and extreme southern parts of Nevada and Utah. Although formerly considered to be a common summer resident, it was almost eliminated as a breeder in southern California by the early 1980s. This species breeds in riparian habitats along rivers, streams, or other wetlands where dense growths of willows, mule fat, or even tamarisk are present, often with a scattered overstory of cottonwood trees. A pair reportedly nested in the Santa Clara River near Valencia in 1995; however, CDFG and USACE reports that all observations in that area since then have been non-breed transients and migrants. The project site lacks suitable breeding habitat for this species and the southwestern willow flycatcher is not expected to occur.

Least Bell's Vireo (*Vireo bellii pusillus*)

Least Bell's vireo is a federally listed and state-listed Endangered species. This vireo was formerly considered to be a common breeder in riparian habitats throughout the Central Valley and other low elevation river systems in California and Baja California, Mexico. It is now considered to be a rare and local summer resident, although there have been some regional population increases. Individual least Bell's vireo have been observed in the Santa Clara River between its confluence with Castaic Creek and I-5 and at least one pair nested in the Santa Clara River in the project region in 1996. The least Bell's vireo breeds primarily in riparian habitats dominated by willows with dense understory vegetation. A dense shrub layer two to ten feet above ground is the most important habitat characteristic for this species. The project site lacks suitable breeding habitat for this species; therefore, the least Bell's vireo is not expected to occur.

Coastal California Gnatcatcher (*Polioptila californica californica*)

The coastal California gnatcatcher is a federally listed Threatened and a California Species of Special Concern. This species is considered to be an uncommon and local year-round resident from the coastal slopes of the San Gabriel Mountains and western Riverside County south through San Diego County. The current range is generally within the counties of San Diego, Orange, Los Angeles, and western Riverside; however, there are recent records from the northern and western parts of its historical range: Moorpark, Ventura County and Santa Clarita and Plum Canyon in Los Angeles County. The coastal California gnatcatcher is an obligate resident of Diegan, Riversidian, and Venturan sub-associations of coastal sage scrub. It typically occurs at elevations below 820 feet along the coast and below 1,800 feet inland. The Copper Fire in 2002 burned much of the upland sage scrub vegetation on the project site, but the alluvial sage scrub habitats remained intact. Results of the February 24, 2004 survey conducted by BonTerra Consulting indicated that potential for the coastal California gnatcatcher was primarily limited on the project site to the alluvial sage scrub habitats in San Francisquito wash. Focused surveys conducted on the project site by BonTerra Consulting in Summer/Fall 2004 and in Spring/Summer 2005 did not detect the coastal California gnatcatcher.

4.3.2 Project Impacts

Thresholds of Significance

The following thresholds were determined to indicate that potential impacts to biota could be significant for the proposed project.

- Located within a Significant Ecological Area (SEA), SEA buffer, or coastal Sensitive Environmental Resources, or located in a relatively undisturbed and natural area.

- Grading, fire clearance, and/or flood related improvements would remove substantial natural habitat areas.

- A major drainage course, as identified on USGS quad sheets by a blue, dashed line, is located on the project site.

- Contain a major riparian or other sensitive habitat (e.g. coastal sage scrub, oak woodland, sycamore riparian woodland, wetland, etc.).

- Contain oak or other unique native trees.

- Provides habitat for any known sensitive species (federal- or state-listed endangered, etc.).

- Site is part of or contributes to a regional habitat linkage or wildlife corridor.

As presented in the Initial Study Questionnaire for Land Use in Appendix A, it was determined that the following issue would be appropriately discussed within the Biota Factor section of the EIR. The following threshold was determined to indicate that potential impacts to land use could be significant for the proposed project.

- Inconsistent with the SEA Conformance Criteria.

Impacts Analysis

The impact section is divided into two sections: Proposed Development Footprint; and potential future San Francisquito Canyon Road expansion and Cliffie Stone Trail/Butterfield Overland Stage Trail construction. The proposed development and alignment of the potential future San Francisquito Canyon Road expansion and the two equestrian trails are illustrated in Figure 4.3-2.

The following sections discuss the direct and indirect impacts associated with project construction in the proposed development footprint and then the direct and indirect impacts for the potential road and trail alignments (see Figure 4.3-2).

Proposed Development Footprint

Direct Impacts

The direct impacts for the proposed development include the impacts from the construction of the graded pads and roadways, as well as all future fuel modification zones. All fuel modification is considered a direct impact to biological resources.

Vegetation and Special Status Vegetation Types

The estimated project-related impacts to vegetation types that occur on the project site, including SEA No. 19, are presented in Table 4.3-3. Implementation of the proposed project will impact a total of 57.2 acres that consists of ten different vegetation types. Three of these vegetation types are special status vegetation types: coastal sage scrub, mixed chaparral/ holly-leaf cherry woodland, and alluvial sage scrub. The proposed project would impact coastal sage scrub (2.0 acres), mixed chaparral/holly-leaf cherry woodland (0.8 acres), and alluvial sage scrub (4.7 acres). These impacts would be considered significant because these vegetation types are reduced within their range and/or have potential to support special status plant and wildlife species.

In addition to the impacts listed in Table 4.3-4, there is the potential for additional temporary impacts to vegetation within the cherry woodland associated with the re-abandonment of an old oil well, as discussed in Section 6.1, Environmental Safety. It is impossible to know how much vegetation would be impacted through this abandonment process, but any impacts would be significant prior to mitigation. The impacts discussed above and presented in Table 4.3-4 would be reduced to less than significant with implementation of the Mitigation Program.

TABLE 4.3-3
PROJECT IMPACTS ON VEGETATION TYPES

Vegetation Type	Existing Vegetation (acres)	Total Impact (acres)
Ruderal	15.2	0.4
Ornamental	1.0	0.8
Chamise Chaparral	4.2	0.0
Non-Native Grassland/Chamise Chaparral	3.3	1.0
Coast Live Oak Woodland[1]	3.2	0.0
Coastal Sage Scrub	2.0	2.0
Wash	14.2	0.0
Mixed Chaparral/ Holly-Leaf Cherry Woodland	10.0	0.8
Non-Native Grassland	72.0	47.7[2]
Alluvial Sage Scrub	65.9	4.7
Total	**191.0**	**57.4**

[1] Individual oak trees may be impacted by project implementation.
[2] [0.05] acre of this impact is in SEA No. 19, which includes permanent impacts from the levee and from the drainage structure.

Project implementation would also impact approximately 0.17 acre of non-wetland intermittent drainage under the jurisdiction of the USACE and the CDFG. This loss of any USACE or CDFG jurisdiction would represent a potentially significant impact. This impact would be reduced to less than significant with implementation of the Mitigation Program.

Figure 4.3-3 presents the jurisdictional drainage features with an overlap of the proposed project footprint. The amount of jurisdictional area that would be impacted by the proposed project is approximately 0.17 acres. Table 4.3-4 presents a summary of the required approvals for the project site based on biological impacts.

TABLE 4.3-4
REQUIRED APPROVALS AND PERMITS

DISCRETIONARY APPROVAL OR PERMIT	AGENCY	STATUS
Vesting Tract Map	County of Los Angeles	Lead Agency
Conditional Use Permit (Hillside Management, SEA, Density Controlled, Highway Realignment)	County of Los Angeles	Lead Agency
Oak Tree Permit	County of Los Angeles	Lead Agency
Section 404 Permit	U.S. Army Corps of Engineers	Responsible Agency
Streambed Alteration Agreement (1603)	California Dept. of Fish and Game	Responsible Agency
Section 401 Water Quality Certification	State Water Resources Control Board	Responsible Agency

Regarding the flood control levee, the 15-foot maintenance road and four horizontal feet of above ground "free board" area would be the only visible portions of the structure. This area is considered to be a permanent impact to the SEA No. 19 because vegetation and wildlife along this strip would be permanently altered; permanent impacts to SEA No. 19 due to levee construction would total 0.02-acre of non-native grassland, which is included in Table 4.3-3 and shown on Figure 4.3-3. Permanent impacts to the SEA No. 19 would total 0.05-acre, which includes impacts from the levee and from the drainage structure.

The majority of the levee system would be below ground and would not be visible or permanently impact vegetation or wildlife. Therefore, the approximately 91 horizontal feet of underground levee and backcut excavation impacts are considered temporary impacts. Temporary impacts to SEA No. 19 due to levee construction would total 2.22 acres (of which 2.08 acres is non-native grassland), and temporary impacts outside the SEA due to levee construction would total 0.16-acre. Upon completion of the levee system, the excavated soil would be filled into the trench and returned to existing elevations and the impacted area would be reseeded with native plant material appropriate for the area.

Though a formal tree survey was not performed, the coast live oak woodland (located in the northeastern portion of the site) and the remnant individual Fremont cottonwood trees (located in the southwestern portion of San Francisquito Canyon) within proposed open space Lot 61 are likely to support ordinance-sized oak trees and large cottonwood trees. No significant direct (e.g., removal or trimming) or indirect (e.g., soil compaction) impacts are anticipated to occur as a result of project development, with the exception of the potential expansion of the San Francisquito Canyon Road and/or the Cliffie Stone Trail, as discussed below.

Special Status Plant Species

The following state- or federally listed Threatened and/or Endangered plant species: Nevin's barberry, San Fernando Valley spineflower, slender-horned spineflower, spreading navarettia, and California orcutt grass would not be impacted by implementation of the proposed project because these species are not expected to occur within the project impact area either due to lack of suitable habitat or because they were absent during focused surveys (see Table 4.3-1). There would be no impact on these species and no mitigation would be required. Braunton's milk-vetch was not observed during focused surveys. However, Braunton's milk-vetch is a plant that germinates following soil disturbance or fire. Therefore, it has a limited potential to occur on the project site. Any impacts on this species would be considered significant. This impact would be reduced to less than significant with implementation of the Mitigation Program.

Slender Mariposa Lily (*Calochortus clavatus* var. *gracilis*)

Slender mariposa lily is a CNPS List 1B species. Slender mariposa lily is known to hybridize with a more common subspecies, club-haired mariposa lily (*Calochortus clavatus* var. *clavatus*). The lilies observed on the project site had characteristics of both slender mariposa lily and club-haired mariposa lily, and were likely intermediate between these two varieties. Representative voucher specimens were collected and will be deposited at Rancho Santa Ana Botanical Garden Herbarium. A total of approximately 317 individuals were observed on the project site during 2005 surveys. Attachment A, Exhibits 4 and 6, show the locations of the slender mariposa lilies observed on the project site during 2005 surveys, some of which are located within the project impact area. Any impact on this species would be considered significant. This impact would be reduced to less than significant with implementation of Mitigation Measure Bio-4.

The following CNPS-listed plant species: Greata's aster, Plummer's mariposa lily, Los Angeles sunflower, mesa horkelia, Southern California black walnut, Davidson's bush mallow, short-joint

beavertail, and rayless ragwort would not be impacted by implementation of the proposed project because these species are not expected to occur within the project impact area either due to lack of suitable habitat or because they were absent during focused surveys. There would be no impact on these species and no mitigation would be required (see Table 1).

The following CNPS List 3 or CNPS List 4 plant species: Peirson's morning glory, Palmer's grapplinghook, and vernal barley would have some potential to be impacted by implementation of the proposed project because these species occur or have limited potential to occur within the proposed impact area (see Table 1). Impacts to these species would be adverse, but would not be considered significant because these species are relatively common in the region and due to the limited amount of habitat impacted by the project relative to the amount of habitat available in the project region.

Special Status Wildlife Species

The following state- or federally listed Threatened and/or Endangered wildlife species: Santa Ana sucker, unarmored threespine stickleback, arroyo toad, California red-legged frog, Swainson's hawk, coastal California gnatcatcher, western yellow-billed cuckoo, southwestern willow flycatcher, and least Bell's vireo would not be impacted by implementation of the proposed project because these species are not expected to breed within the project impact area due to lack of suitable habitat or lack of observation during focused surveys (see Table 4.3-2).

The Santa Ana sucker, unarmored threespine stickleback, and arroyo toad may occur on the project site during or after heavy rainfall events. The morphology of the San Francisquito Canyon wash is not conducive to supporting reproduction or foraging of the Santa Ana sucker or the unarmored threespine stickleback on the site. These species have potential to occur as transients on the site during periods of inundation, but otherwise would not be likely to occur within the on-site portion of San Francisquito Canyon. The same can be said for the arroyo toad, which would also not be likely to occur within San Francisquito Canyon due to the absence of potential breeding habitat and the distance from known breeding populations in the project region. The indirect impacts on these three species are addressed above under urban pollutants and the impact reduced by implementation of the Mitigation Program. Assuming project design features avoid impacts on the creek, no mitigation would be required.

The western spadefoot, a federally listed Species of Concern and a California Species of Special Concern, was observed at two localities on the project site during 2005 spring surveys. Two pond locations were identified and were confirmed to have tadpoles. Each of the pond locations would be located within or adjacent to the graded footprint for the project (see Figure 4.3-2). Impacts to the western spadefoot would be significant prior to mitigation. Mitigation for impacts to the western spadefoot is presented in the Mitigation Program.

Impacts on other special status wildlife species that would result from implementation of the proposed project are considered adverse, but less than significant for the following species: silvery legless lizard, northern harrier, sharp-shinned hawk, Cooper's hawk, ferruginous hawk, golden eagle, merlin, prairie falcon, burrowing owl, California horned lark, southern California rufous-crowned sparrow, grasshopper sparrow, Bell's sage sparrow, pallid bat, pale big-eared bat, spotted bat, California mastiff bat, San Diego black-tailed jackrabbit, southern grasshopper mouse, and San Diego desert woodrat. However, impacts on the coast horned lizard, coastal western whiptail, ringneck snake, coast patch-nosed snake, and loggerhead shrike would be considered potentially significant. These impacts would be reduced to less than significant with implementation of the Mitigation Program.

Indirect Impacts

Landscaping

The proposed project includes landscaping adjacent to the proposed residential development. The landscaping would potentially include planting ornamental species that are known to be particularly invasive (e.g., Japanese honeysuckle [*Lonicera japonica*], fan palm [*Washingtonia* spp.], Peruvian pepper tree [*Schinus molle*], etc.). Seeds from invasive species would potentially escape to natural areas and degrade the adjacent native vegetation in Zone C and beyond. This impact would be considered potentially significant since the project is adjacent to natural open space. This impact would be reduced to less than significant with implementation of the Mitigation Program.

In addition, if brush management or landscape activities occur during the breeding season, they have potential to impact nesting bird species. This impact would be considered potentially significant because native nesting birds are protected by the Migratory Bird Treaty Act. This impact would be reduced to less than significant with implementation of the Mitigation Program.

Noise

Noise levels in the study area would increase substantially over present levels during construction of the proposed project. During construction, temporary noise impacts have the potential to disrupt foraging, nesting, roosting, and denning activities for a variety of wildlife species. These impacts are considered adverse, but not significant for most wildlife species, because the proposed project would not impact a substantial population of these species. However, nesting raptors would potentially incur temporary impacts from construction noise if present in the vicinity of the proposed project, and would potentially be temporarily displaced due to these disturbances. These impacts would be reduced to less than significant with implementation of the Mitigation Program.

Noise would also increase over present levels with implementation of the proposed project. Therefore, habitat remaining in the study area would be subject to increased disturbance. Wildlife stressed by noise would potentially be extirpated, leaving only wildlife tolerant of human activity. The chronic (i.e., permanent) noise increase would be considered adverse but less than significant because habitat within SEA 19 has been avoided and because landscaping buffers have been incorporated into the project design.

Urban Pollutants

Impacts on biological resources in the area would potentially occur as a result of changes in water quality. Improper disposal of petroleum and chemical products from construction equipment (temporary) could adversely affect water quality and, in turn, affect populations of species in San Francisquito Creek and other downstream areas. Water quality would also be adversely affected by runoff of pollutants from landscape features of the proposed project or infrastructure areas (e.g. fertilizers, pesticides, household chemicals, etc) (permanent). These indirect impacts are considered potentially significant since the project would potentially incrementally contribute to a reduction in water quality in the project region. This impact would be reduced to less than significant with implementation of the Mitigation Program.

Night Lighting

Lighting of the homes and yards in the proposed development would potentially result in an impact on the behavioral patterns of nocturnal and crepuscular (i.e., active at dawn and dusk) wildlife adjacent to the lighted areas. Of greatest concern is the effect on small-ground-dwelling animals that use the darkness to hide from predators, and on owls, which are specialized night

foragers. Because the proposed project impact area is adjacent to SEA No. 19, indirect impacts due to lighting during the evening are of particular concern. Indirect impacts as a result of the proposed project are considered potentially significant. This impact would be reduced to less than significant with implementation of the Mitigation Program.

Human Activity

Recreational or transitory use of the project site after buildout under the proposed plan will be more controlled than at present; however, not all uses can be controlled. Unauthorized uses can have various impacts, including:

- Loss of wildlife habitat from destruction of vegetation
- Loss of individuals from being run over or from destruction of nesting sites
- Disturbance to or destruction of special status habitat types
- Soil compaction and erosion resulting in a loss of vegetative productivity
- Destruction of food, cover, and breeding habitats

Wildlife would potentially be killed by vehicles, cats, dogs, or humans residing within the proposed project after completion. The Mitigation Program mandates the construction of permanent fencing along the backyards of each lot in order to protect the open space areas, including the SEA, from disturbance or destruction.

Potential Future San Francisquito Canyon Road Realignment and Equestrian Trails

Although it is not part of the proposed project, this potential future expansion of the San Francisquito Canyon Road, by the County of Los Angeles, has been accommodated at the request of the County in the project design. The estimated impacts to vegetation types that would potentially occur as a result of the potential future expansion of San Francisquito Canyon Road are summarized in Table 4.3-5. The County will determine when (or if) this future road expansion will occur.

TABLE 4.3-5
VEGETATION TYPE IMPACTS ASSOCIATED WITH THE POTENTIAL EXPANSION OF SAN FRANCISQUITO CANYON ROAD AND CLIFFIE STONE TRAIL

Vegetation Type	Right-of-Way	Road Expansion	Cliffie Stone Trail	Permanent Impacts (acre)
Ruderal	0.6	3.6	0.5	4.7
Ornamental	0.0	0.0	0.0	0.0
Chamise Chaparral	0.0	0.0	0.0	0.0
Non-Native Grassland/ Chamise Chaparral	0.0	0.1	0.0	0.1
Coast Live Oak Woodland	0.0	0.0	0.1	0.1
Coastal Sage Scrub	0.0	0.0	0.0	0.0
Wash	0.0	0.0	0.0	0.0
Mixed Chaparral/Holly-Leaf Cherry Woodland	0.0	0.0	0.0	0.0
Non-Native Grassland	0.3	0.5	0.0	0.8
Alluvial Sage Scrub	0.1	0.1	0.1	0.3
TOTAL	**1.0**	**4.3**	**0.7**	**6.0**

The potential expansion of San Francisquito Canyon Road within the existing right-of-way (ROW) would permanently impact approximately 4.3 acres of vegetation, including 0.1 acre of alluvial sage scrub. Impacts on alluvial sage scrub would be considered significant because this vegetation type is reduced within its range and has the potential to support special status plant and wildlife species. This impact would be reduced to less than significant with implementation of the Mitigation Program. Potential temporary construction impacts of up to 50 feet on either side of the proposed roadway expansion would impact up to 3.3 acres of vegetation on either side of the roadway.

The adjacent Tesoro del Valle project includes development of the Cliffie Stone Trail along its planned alignment through the proposed project site, parallel to San Francisquito Canyon Road and adjacent to the eastern edge of SEA No. 19. This trail has been accommodated in the project design at the request of the County. It is expected that most users of the existing trails on the project site would use the designated trail rather than traverse through the SEA No. 19, as is currently the case. Construction of the trail would impact 0.1 acre of coast live oak woodland, 0.1 acre of alluvial sage scrub, and 0.5 acre of ruderal vegetation. The impact on coast live oak woodland and alluvial sage scrub would be significant prior to mitigation. These impacts would be reduced to less than significant with implementation of the Mitigation Program.

Butterfield Overland Stage Trail

In addition to the Cliffie Stone Trail, the existing Butterfield Overland Stage Trail widened to 12 feet. This trail is located between San Francisquito Canyon Road and the eastern boundary of the SEA. Currently, a portion of this trail crosses the SEA boundary; however, the Butterfield Overland Stage Trail would redirect the trail to avoid all impacts to the SEA. Impacts associated with the implementation of the Butterfield trail are summarized below in Table 4.3-6. A total of 0.757 acres would be impacted by the trail. Impacts to the Riversidean alluvial fan sage scrub would be considered significant, prior to mitigation. With implementation of the mitigation program, impacts would be reduced to less than significant.

TABLE 4.3-6
VEGETATION IMPACTS OF THE BUTTERFIELD OVERLAND STAGE TRAIL

Vegetation Type	Summary of Impacts (Acres)
Floodway	0.091
Alluvial Sage Scrub	0.617
Ruderal	0.049
TOTAL	**0.757**

Special Status Plant and Wildlife Species

Direct impacts on special status plant and wildlife species for the proposed road expansion and trail construction have not been determined. This is a potentially significant impact that would be reduced to less than significant with implementation of the Mitigation Program, which requires pre-construction special status plant and wildlife surveys.

Indirect impacts resulting from proposed roadway construction and trail construction would be similar to those described for the proposed project, and share some of the same mitigation. These indirect impacts are described below.

Landscaping

The proposed roadway expansion would potentially include adjacent landscaping that could include ornamental species known to be particularly invasive (e.g., Japanese honeysuckle, fan palm, Peruvian pepper tree, etc.). Seeds from invasive species may escape to natural areas and degrade native vegetation. This impact would be considered potentially significant but would be reduced to less than significant with implementation of the Mitigation Program.

Noise

Noise levels in the study area would increase substantially over present levels during construction of the proposed roadway expansion. During construction, temporary noise impacts have the potential to disrupt foraging, nesting, roosting, and denning activities for a variety of wildlife species. These impacts are considered adverse, but not significant for most wildlife species, because the proposed project would not impact a substantial population of these species. However, nesting raptors would potentially incur temporary short-term impacts from construction noise if present in the vicinity of the proposed project, and would potentially be temporarily displaced due to these disturbances. This impact would be reduced to less than significant with implementation of the Mitigation Program.

Noise would not be expected to substantially increase over present levels with implementation of the proposed roadway expansion because indirect traffic noise is already present along this road. Therefore, the chronic (i.e., permanent) noise increase would be considered adverse but less than significant and no mitigation would be required.

Urban Pollutants

Impacts on biological resources in the area could occur as a result of changes in water quality. Improper disposal of petroleum and chemical products from construction equipment (temporary) could adversely affect water quality and, in turn, affect populations of species in San Francisquito Creek and other downstream areas. Water quality could also be adversely affected by runoff from the proposed roadway expansion (i.e., vehicles, improper disposal of chemicals) (permanent). These indirect impacts are considered potentially significant since the project could incrementally contribute to a reduction in water quality in the project region. This impact would be reduced to less than significant with implementation of the Mitigation Program.

Night Lighting

Should the County require the installation of lighting along the proposed roadway expansion of San Francisquito Canyon Road, the associated illumination onto the adjacent SEA No. 19 could result in an indirect impact on the behavioral patterns of nocturnal and crepuscular (i.e., active at dawn and dusk) wildlife adjacent to the lighted areas. Of greatest concern is the effect on small-ground-dwelling animals that use the darkness to hide from predators, and on owls that prey on them, which are specialized night foragers. Indirect impacts as a result of the proposed project are considered potentially significant. This impact would be reduced to less than significant with implementation of the Mitigation Program.

4.3.3 Cumulative Impacts

The proposed project will eventually be surrounded to the north, west, and south by the Tesoro del Valle residential development, and to the east by existing ranchland. Without the proposed project, existing and proposed development would impair the movement of most wildlife, with the exception of the SEA No. 19, which would be maintained in order to protect the unarmored threespine stickleback. With existing or approved development cutting off the project site from

much of the surrounding open space areas, wildlife movement to and from the site would continue to be hindered and decline. An analysis of the cumulative impacts to vegetation, wildlife, and wildlife corridors, is provided below.

USACE/CDFG Jurisdiction

Water quality, riparian habitats, and wetlands have significantly declined in southern California. Any impacts to waters of the United States on the project site would be cumulatively significant prior to mitigation. However, compliance with USACE and CDFG requirements would mitigate these impacts to a level less than significant.

Coastal Sage Scrub

Coastal sage scrub, which has been significantly reduced in southern California, has the potential to provide habitat that would support the coastal California gnatcatcher. This habitat has largely been converted to agricultural, industrial, and residential land uses and much of the remaining habitat is adjacent to urbanized areas. Therefore, prior to mitigation, any loss of coastal sage scrub would be significant. However, with the implementation of the Mitigation Program, the proposed project would not result in the regional loss of coastal sage scrub and cumulative impacts would be less than significant.

Holly-leaf Cherry Woodland

Construction related impacts to the holly-leaf cherry woodland on the project site would be avoided through the project design; however, direct impacts related to Zone B brush management and the 50-foot encroachment would be potentially significant. This habitat is considered to be sensitive and worthy of special consideration by the CDFG. Therefore, prior to mitigation, the loss of holly-leaf cherry woodland would be significant, as would the prevention of its recovery. However, with the implementation of the Mitigation Program, the proposed project would not result in the regional loss of holly-leaf cherry woodland and cumulative impacts would be less than significant.

Alluvial Sage Scrub

Alluvial sage scrub has also been significantly reduced in southern California and also has the potential to provide habitat that would support the coastal California gnatcatcher. This habitat has also been converted to other uses through agricultural, industrial, and residential development. Without mitigation, any loss of alluvial sage scrub would be significant. However, with the implementation of the Mitigation Program, the proposed project would not result in the regional loss of alluvial sage scrub and cumulative impacts would be less than significant.

Special Status Plant Species

Several special status plant species have the potential to occur on the project site. Focused surveys were conducted in 2004 and 2005. The results of these surveys will be used to either avoid the species through project design or mitigate for the loss of the species through a Mitigation Program consistent with the terms and conditions of Section 7 consultation with the USACE. Mitigation may include, but may not be limited to, the collection/salvage of existing plants and/or the preservation and rebroadcast of occupied topsoil within proposed open-space areas within San Francisquito Canyon.

These mitigation measures would ensure that no net loss of special status plant species would occur. Additionally, the project design features, including backyard fencing and preservation of

the SEA and other open space parcels, would ensure adequate open space for on-site mitigation, if necessary. Therefore, cumulative impacts would be less than significant.

Special Status Wildlife Species

The western spadefoot was identified on the project site on April 14, 2005 in two separate pond locations. The ponds would fall within the development footprint and impacts to the toads would be significant prior to mitigation. Implementation of the mitigation program, which includes the development of a relocation program subject to the approval of the California Department of Fish and Game and the County of Los Angeles, would reduce these impacts to less than significant. Another special status species with a likelihood of being located on the project site is the loggerhead shrike, which was likely impacted by the recent Copper fire due to loss of habitat. Since it is expected that project development would impact potential forage (but not potential breeding) habitat for this species, impacts would be less than significant. However, the reduction in forage habitat could result in a cumulative impact for the loggerhead shrike.

The Santa Ana sucker, unarmored threespine stickleback, and arroyo toad may occur on the project site during or after heavy rainfall events. The morphology of the San Francisquito Canyon wash is not conducive to supporting reproduction or foraging of the Santa Ana sucker or the unarmored threespine stickleback on the site. These species have potential to occur as transients on the site during periods of inundation, but otherwise would not be likely to occur within the on-site portion of San Francisquito Canyon. Impacts on the coast horned lizard, coastal western whiptail, ringneck snake, coast patch-nosed snake, and loggerhead shrike would be considered potentially significant. These impacts would be reduced to less than significant with implementation of the Mitigation Program.

With time and the implementation of the Mitigation Program, which includes the opportunity for the recovery of appropriate habitat in the preserved open spaces on the site, habitat with the potential to support special status wildlife species would be expected to develop. Therefore, cumulative impacts would be less than significant.

Wildlife Corridors

The project site is expected to ultimately be surrounded by residential areas and ranchland on all sides. This situation would impair the movement of wildlife regardless of the implementation of the proposed project. Nevertheless, the proposed project design includes the preservation of approximately 80 percent of the site as open space, including the entire SEA corridor within the project boundaries. The SEA would be maintained as a wildlife corridor that could provide continued access to the Angeles National Forest, which would remain as open space in perpetuity. The Mitigation Program would ensure the continued protection of the SEA as a wildlife corridor and potential cumulative impacts would be less than significant.

4.3.4 Project Design Features and Mitigation Measures

Project Design Features

- As a standard condition of approval for the project, the three open space parcels (Nos. 61, 62, and 63) will be shown on the proposed Tentative Tract Map as open space and will be granted to the County of Los Angeles and will remain as open space in perpetuity.

- As a standard condition of approval for the project, levee construction will be conducted outside of the rainy season and will avoid any ponded water potentially present on the project site.

Mitigation Measures

MM 4.3-1 The loss of coastal sage scrub, holly-leaf cherry woodland, and alluvial sage scrub (i.e., proposed roadway expansion) within the impact area is considered a significant impact prior to mitigation. These vegetation types will be restored onsite or, if appropriate, offsite at a ratio of not less than 1:1, as agreed to by the County of Los Angeles Department of Regional Planning and the Project Applicant. A revegetation program will be implemented in accordance with a County-approved landscape palette on all graded areas not utilized for improvements or structures. The revegetation program will be submitted to the County of Los Angeles Department of Regional Planning for review and approval by a qualified biologist prior to issuance of grading permits. Restoration will consist of seeding and container planting of appropriate species. Impacts are considered less than significant after implementation of the following measures:

A detailed restoration program will be developed prior to map recordation and implemented and will contain the following items:

a. *Responsibilities and qualifications of the personnel to implement and supervise the plan*. The responsibilities of the landowner, specialists, and maintenance personnel that will supervise and implement the plan will be specified.

b. Site selection. The site(s) for mitigation will be determined in coordination with the project applicant and the Los Angeles Department of Regional Planning. The site will be located in a dedicated open space area and will be contiguous with other natural open space areas.

c. Site preparation and planting implementation. The site preparation will include: 1) protection of existing native species, 2) trash and weed removal, 3) native species salvage and reuse (i.e., duff), 4) soil treatments (i.e., imprinting, decompacting), 5) erosion control measures (i.e., rice or willow wattles), and 6) seed mix application.

d. Schedule. Establishment of restoration/revegetation sites will be conducted between October 1st and January 30th. Seeding and planting of container plants will take place immediately after preparation of the restoration sites.

e. Maintenance plan/guidelines. The maintenance plan will include: 1) weed control, 2) herbivory control, 3) trash removal, 4) irrigation system maintenance, 5) maintenance training, and 6) replacement planting.

f. Monitoring Plan. The monitoring plan will include: 1) qualitative monitoring (i.e., photographs and general observations), 2) quantitative monitoring (i.e., randomly placed transects), 3) performance criteria as approved by the County, 4) monthly reports for the first year and bimonthly reports thereafter, and 5) annual reports which will be submitted to the County for three to five years.

The monitoring will be conducted for three to five years, depending upon the performance of the mitigation site.

g. Long-term preservation. Long-term preservation of the site will be outlined in the conceptual mitigation plan to ensure the mitigation site is not impacted by future development.

h. Performance standards will be identified and will apply for the revegetation of sage scrub. Revegetation will be considered successful at three years if the percent cover and species diversity of the restored and/or created habitat areas are similar to percent cover and species diversity of adjacent existing habitats, as determined by quantitative testing of existing, restored, and created habitat areas.

In addition, earth-moving equipment will avoid maneuvering in areas outside the identified limits of grading in order to avoid disturbing open space areas that will remain undeveloped. Prior to grading, the construction boundary limits will be marked by the construction supervisor and the project biologist. These limits will be identified on the grading plan. The applicant will submit a letter to the County of Los Angeles verifying that construction limits have been flagged in the field. No earth-moving equipment will be allowed outside of the construction boundary.

MM 4.3-2 Upon completion of construction activities, impacts to approximately 0.17 acre of non-wetland USACE and CDFG jurisdictional waters will be mitigated within the project boundaries through the creation of 0.17 acre of non-wetland jurisdictional waters. In addition to this assurance of "no net loss" of USACE and CDFG jurisdictional area within the project boundaries, another 0.17 acre of non-wetland jurisdictional area will be restored or enhanced on the project site for a total of 2:1 replacement. Acquisition of a Section 404 "dredge and fill" permit from the USACE (possibly through the use of Nationwide Permit No. 39), a Section 1602 "streambed alteration" permit from the CDFG, and a Section 401 water quality certification or waiver will be obtained from the Regional Water Quality Control Board.

Prior to the final submittal of an application for an USACE permit or CDFG agreement, the Project Applicant will develop a mitigation plan for the USACE, CDFG, and Los Angeles Department of Regional Planning. The objective of the mitigation is to ensure no net loss of habitat values as a result of the project. The detailed restoration program will contain the following items:

a. *Responsibilities and qualifications of the personnel to implement and supervise the plan*. The responsibilities of the landowner, specialists and maintenance personnel that would supervise and implement the plan will be specified.

b. *Site selection*. The site(s) for the mitigation will be determined in coordination with the project applicant and resource agencies. The site will be located in a dedicated open space area and will be contiguous with other natural open space.

c. *Site preparation and planting implementation.* The site preparation will include: 1) protection of existing native species, 2) trash and weed removal, 3) native species salvage and reuse (i.e. duff), 4) soil treatments (i.e., imprinting, decompacting), 5) temporary irrigation installation, 6) erosion control measures (i.e., rice or willow wattles), 7) native seed mix application, and 8) native container species.

d. *Schedule.* A schedule will be developed which includes planting to occur in late fall and early winter, between October 1st and January 30th.

e. *Maintenance plan/guidelines.* The maintenance plan will include: 1) weed control, 2) herbivory control, 3) trash removal, 4) irrigation system maintenance, 5) maintenance training, and 6) replacement planting.

f. *Monitoring Plan.* The monitoring plan will include: 1) qualitative monitoring (i.e., photographs and general observations), 2) quantitative monitoring (i.e., randomly placed transects), 3) performance criteria as approved by the resource agencies, 4) monthly reports for the first year and bimonthly reports thereafter, and 5) annual reports which will be submitted to the resource agencies for three to five years. The site will be monitored and maintained for five years to ensure successful establishment of riparian habitat within the restored and created areas; however, if there is successful coverage prior to five years, the Project Applicant may request from USACE and CDFG to be released from monitoring requirements.

g. *Long-Term Preservation.* Long-term preservation of the site will be outlined in the conceptual mitigation plan to ensure the mitigation site is not impacted by future development.

h. Performance standards will be identified and will apply for the restoration of riparian habitat. Revegetation will be considered successful at three years if the percent cover and species diversity of the restored and/or created habitat areas are similar to percent cover and species diversity of adjacent existing habitats, as determined by quantitative testing of existing and restored and/or created habitat areas.

This revegetation/enhancement plan may be combined with the revegetation plan required by Mitigation Measure 4.3-1, if appropriate.

MM 4.3-3 Braunton's milk-vetch was not detected during the special status plant surveys. Prior to issuance of a grading permit, a follow-up survey for this species will be conducted in any area partially disturbed for surveyor access or geotechnical studies, or areas that may have recently burned in a wildfire. If Braunton's milk vetch is found in the study area during follow-up surveys, the applicant will be required to consult with the USFWS and CDFG to obtain a permit under Section 7 or 10(a) of the federal Endangered Species Act and a Section 2081 concurrence from CDFG under the state Endangered Species Act to impact this species. The consultation process will include preparation of a mitigation plan to

avoid, relocate, or minimize impacts on this species. This plan will be submitted to and approved by the USFWS and CDFG.

MM 4.3-4 Slender mariposa lilies (Calochortus clavatus ssp. gracilis), possibly hybridized with club-haired mariposa lilies (Calochortus clavatus ssp. clavatus), have been observed during special status plant surveys on the site. Impacts on the slender mariposa lily population are considered significant under the CEQA, but can be mitigated to a level less than significant by the following measures.

a. Preparation and Submittal of Mitigation Plan: A Mitigation Plan will be prepared by a qualified biologist. The plan will include: 1) a summary of mitigation area conditions; 2) a discussion of the mitigation program and anticipated success; 3) guidelines for mitigation area preparation; 4) guidelines for bulb collection; 5) guidelines for transporting and replanting salvaged bulbs; 6) guidelines for long-term site maintenance and performance monitoring, 7) site status documentation; and 8) a discussion of site performance standards such as survival rate.

b. Collection and Transplantation of Bulbs: Prior to any ground-disturbing activities, the slender mariposa lily population located within the project impact area will be transplanted to an onsite mitigation area. The mitigation area is located in Open Space Lot 62 and is outside of the proposed grading footprint and fuel modification areas. The bulbs will be transplanted directly into the mitigation area on the same day they are collected by a landscape contractor experienced in native habitat maintenance, and the plants will be protected from herbivores by the installation of wire cages.

c. Supervision and Documentation of Transplantation: Bulb trans-plantation efforts will be documented by a biological monitor, who will keep field notes including the number and condition of bulbs transplanted.

d. Establishment of Maintenance and Monitoring Plan: Performance criteria and remediation measures will be reviewed and approved by the County. Program monitoring will occur over a five-year period, including qualitative monitoring visits during the first season after transplant, monthly visits during the first lily blooming season (February – June 2006) to assess establishment success, non-native species coverage, and general site conditions, and additional monitoring visits to assess site conditions that may affect future success of lily establishment. Remedial measures, such as invasive species control or soil amendments, will be recommended as needed in a timely manner to facilitate compliance with required performance standards. Any necessary contingency planting would be performed using seeds collected from adjacent lily populations located on the site, outside the project impact area.

MM 4.3-5 A relocation program for the western spadefoot will be conducted during the spring prior to construction at the height of the breeding season for this species (February through May as determined by a qualified biologist monitoring a known location of this species). A detailed methodology for

this effort will be submitted and approved by CDFG prior to implementation of the relocation program. Results of the relocation program will be provided to CDFG and the County of Los Angeles.

The intent of the relocation plan will be to capture and relocate as many western spadefoots as possible. Western spadefoots will be relocated to an area of suitable habitat that takes into consideration habitat requirements for all life stages of the toad, as approved by CDFG. The site will be granted to the County of Los Angeles and will be located in an area of preserved open space protected from future development. The relocation breeding pool will be no smaller in size, and similar or better in quality, as the habitat within the project impact area where the western spadefoots are captured.

MM 4.3-6 A qualified biologist, approved by the County, will install pit-fall traps and arrays beginning at least one week prior to the commencement of vegetation removal. The qualified biologist will be present to monitor the traps during vegetation removal and will also opportunistically salvage and relocate the coastal western whiptail as well as other special status amphibians and reptiles to similar habitat within proposed open space in San Francisquito Canyon.

MM 4.3-7 Trimming of some native plants and clearing of non-native invasive species for fuel modification will be monitored by a qualified biologist if it occurs during the peak bird nesting season. If possible, dependent upon the growth cycle of targeted annuals and the requirements of the Fire Department, brush management will be conducted outside of the peak bird nesting season (March 15 to September 15) to ensure that potential impacts to nesting birds are avoided.

MM 4.3-8 Prior to the issuance of a grading permit, a Landscape Plan, prepared by HRP LanDesign, will be submitted and approved by the Los Angeles County Department of Regional Planning. The Landscape Plan requires the planting of native, drought tolerant plant species. Implementation of the Landscape Plan and brush management requirements will be coordinated with the project biologist and approved by the Los Angeles Department of Regional Planning.

MM 4.3-9 Seven days prior to the start of construction activities, a qualified biologist will conduct a survey to determine if any raptors are nesting in or adjacent to the impact area. If nesting is not occurring, construction work can proceed. If an active nest is present, construction work will be prohibited within 500 feet of the nest (or as otherwise determined by the project biologist) until fledglings have left the nest. Results of the surveys will be provided to CDFG and the County.

MM 4.3-10 Prior to the issuance of a grading permit, the Project Applicant will apply for coverage under the State Water Resources Control Board's General Permit for Storm Water Discharge Associated with Construction Activity (Construction Activities General NPDES Permit) and will comply with all the provisions of the permit, including the development of a Storm Water Pollution Prevention Plan, which includes provisions for the implementation of Best Management Practices and erosion control measures. Best Management Practices will include both structural and

non-structural measures. The purpose of this mitigation measure is to insure that site runoff does not adversely affect SEA No. 19 and downstream biological resources.

MM 4.3-11 The Codes, Covenants and Restrictions (CC&Rs) of the Homeowner's Association (HOA) shall require that all backyard lighting in Lot S33 through Lot 51, which are adjacent to the SEA No. 19, must not be directed into the SEA. For these lots, all backyard lighting must be mounted to the home structure and may not be freestanding or placed on backyard fences.

MM 4.3-12 The portion of SEA No. 19 located within the proposed project site will be recorded as Open Space Lot No. 61 with approval of the Tentative Tract Map. Backyard fencing will be constructed behind all lots to protect open space areas, including the SEA No. 19 upon completion of site preparation and grading. This fencing would be required in order to prevent intrusion by future residents of the development and their pets. The fencing will discourage people and pets from entering the SEA. The fence will include permeable materials (i.e., wrought iron) in order to maintain view from the properties. Signs will be evenly spaced along the western edge of the SEA near Lots 33 through 51 indicating that areas on the other side of the signs contain sensitive biological resources. The signs will be installed and maintained throughout the life of the project by the HOA. The CC&Rs of the HOA shall disclose the existence of the SEA and the responsibility each homeowner has for ensuring its protection.

MM 4.3-13 Should lighting be required by the County to illuminate San Francisquito Canyon Road upon widening of the roadway, a lighting plan will be submitted to the County for review prior to approval of the roadway project. The lighting plan shall demonstrate that illumination from the proposed road expansion will be directed away from natural open space areas on and adjacent to the project impact area. If the County determines that the proposed lighting plan would potentially indirectly impact adjacent biological resources, the lighting plan will be redesigned or additional mitigation consistent with Mitigation Measure 4.3-15 will be required.

MM 4.3-14 Prior to the County's initiation of the San Francisquito Road expansion and/or the Cliffie Stone Trail construction, a tree survey will be conducted within the area of the proposed roadway expansion and trail area. All trees meeting the County Tree Ordinance requirements will be tagged, mapped, and evaluated to determine the approximate number of trees that would be impacted. Project design will be altered to avoid and minimize impacts on oak trees to the extent practicable, particularly if a heritage tree would be impacted. The heritage trees on the project site are adjacent to the proposed road alignment.

Upon approval of the final design plans for the proposed roadway and trail alignment, the Project Applicant will develop a detailed oak woodland mitigation plan and submit the plan to the County for review and approval. The objective of the mitigation plan is to ensure no net loss of habitat values as a result of the project implementation. Required replacement trees shall be in the ratio of at least 2:1, consistent with the Los Angeles

County Oak Tree Ordinances (Ord. 88-0157, adopted September 13, 1988). The mitigation plan shall require that a biological monitor be present during project grading to record the exact number of native trees impacted.

MM 4.3-15 Prior to issuance of a grading permit for construction of the San Francisquito Road expansion and/or the Cliffie Stone Trail, special status plant and wildlife surveys will be conducted. The results of these surveys and associated mitigation will be submitted to Los Angeles County Regional Planning Department for approval.

MM 4.3-16 Upon completion of the levee construction, the excavation area shall be entirely backfilled with existing San Francisquito Creek soil and only the four horizontal feet of above ground levee "free board" space would be visible. The impacted area shall be restored onsite with alluvial sage scrub habitat in accordance with the requirements of the County of Los Angeles Department of Regional Planning approved revegetation program. The levee shall be constructed with ungrouted rip-rap, which would allow for percolation of water, accumulation of transported soils, and establishment of plant life.

VII. SEA DESIGN COMPATIBILITY CRITERIA

1. The residential units, new roads, and grading have been designed to avoid encroaching into SEA No. 19, to avoid special status biological resources and to provide open space and movement corridors for biological resources to the maximum extent practicable. The Significant Ecological Area Technical Advisory Committee (SEATAC) recommends altering the design of the tract map to eliminate all impacts to the SEA No. 19. The current tract map design would result in approximately 0.05 acre of permanent impact to the SEA No. 19. Considerations for why the tract map should not be adjusted include the following: (1) the alignment of A Street has been designed according to County Department of Public Works requirements for roadway connections to adjacent properties; (2) moving the alignment of A Street further west to avoid all SEA impacts would require more hillside grading impacts; and (3) the tract map was previously redesigned to substantially reduce SEA impacts. Based on the 0.05 acre of impact to the SEA No. 19, the proposed project is not considered compatible with this criteria.

2. Proposed new development has been designed to avoid impacting the hydrology of San Francisquito Canyon Creek in SEA No. 19. The levee system is required to ensure that the graded pads would be protected in case the Creek changes course in the future. The construction of the project, including the levee system, would not alter the boundaries of the existing natural water course. SEATAC has stated that the "ungrouted rip-rap" would affect creek flow rates, although they believe this impact would be small. The levee system would be designed to minimize impacts to creek flows to the greatest extent feasible by allowing for the percolation of water, accumulation of transported soils, and establishment of plant life. However, because the rip-rap has the potential to slightly impact the creek flow, the proposed project is not considered compatible with this criteria.

3. The wildlife corridor through SEA No. 19 could be impacted by the construction of the underground levee because 0.05-acre of permanent SEA impacts would occur due to implementation of the proposed project. The large majority of

wildlife movement in the SEA would be undisturbed, indirect impacts would be minimized, and SEA No. 19 would be placed within a dedicated open space parcel.

4. The proposed project development footprint would retain approximately 80 percent of the site in open space parcels.

5. Development will be set back from the SEA No. 19 boundary through backyard fencing and landscaping buffers.

6. No new roads or utilities would occur within SEA No. 19 in order to avoid impacts on special status biological resources and wildlife movement in San Francisquito Canyon.

VIII. RECOMMENDED MONITORING PROGRAM

The boundaries of SEA No. 19 will be noted and flagged in the field prior to the initiation of construction activities. The project proponent will provide a qualified biological monitor during grubbing and grading activities to ensure that unapproved encroachment into the SEA does not occur.

The three proposed open space parcels (Nos. 61, 62, and 63) will be shown on the proposed Tentative Tract Map for dedication as open space upon its approval by Los Angeles County. Backyard fencing will be constructed at the rear of each lot at the conclusion of site preparation and grading. Signs will be placed at adequate intervals on the fencing adjacent to the SEA informing those reading that the area is biologically sensitive and to be avoided. The backyard fencing will be maintained by the homeowners and the signs will be installed and maintained throughout the life of the project by the HOA.

Revegetation or enhancement (according to Mitigation Measure 4.3-1) of coastal sage scrub, holly-leaf cherry woodland, or alluvial sage scrub vegetation, within or adjacent to areas where it previously occurred, in proposed open space parcels would commence upon completion of site preparation and grading as soon as possible. Monitoring would occur quarterly during the first year, and twice a year thereafter until success of the mitigation can be demonstrated by a qualified biologist. Success criteria would include the rehabilitation or expansion of an additional of coastal sage scrub and of holly-leaf cherry woodland which have become established and self sustaining. The amount of coastal sage scrub rehabilitation or expansion would be subject to change depending upon the determination of the area of potential effect for the potential future expansion of San Francisquito Canyon Road. This would be the responsibility of the County.

Level of Significance After Mitigation

Potentially significant biological impacts would be reduced to levels less than significant with the implementation of the mitigation measures.

FIGURE 4.3-1
JURISDICTIONAL DELINEATION

FIGURE 4.3-2
BIOLOGICAL IMPACTS

FIGURE 4.3-3
JURISDICTIONAL IMPACTS

4.4 CULTURAL RESOURCES

This section describes the potential impacts to cultural resources associated with implementation of VTTM 53189. The analysis presented in this section is based on the results of a Phase II Cultural Resource Evaluation conducted by BonTerra Consulting in October 2003. The full report is located in Appendix F.

A Phase I Archaeological Study, located in Appendix F, was performed for the project site by the Larwin Company in December 1999. This study identified two oil well loci on the site, recorded as CA-LAN-1445-H. The objectives of the Phase II report were as follows: 1) to update the cultural resources records search data for the project area and vicinity (including Native American consultation); 2) to evaluate the significance of CA-LAN-1445H as a potential historical resource; and 3) to prepare a paleontological resources assessment of the project area.

4.4.1 Existing Conditions

With the exception of a few dirt roads and some scattered structural remnants, the proposed project site is undeveloped land. The project site includes a portion of the San Francisquito Canyon/Soledad basin area, which is underlain by the non-marine Saugus Formation of the Pleistocene age. No prehistoric resources have been identified on or within one mile of the project site.

Cultural Resources Records Search

A cultural resources records search for VTTM 53189 was conducted by staff at the South Central Coastal Information Center (SCCIC) at California State University, Fullerton on October 7, 2003. The SCCIC is the state-designated repository for records concerning archaeological and historical resources in Los Angeles County. The records search provided information on known resources and on previous studies within one mile of the project boundaries.

On July 24, 2000, the Native American Heritage Commission (NAHC) in Sacramento commented on a Notice of Preparation (NOP) previously issued for VTTM 53189. Accordingly, BonTerra Consulting contacted the NAHC regarding the following: 1) special Native American sites or properties that may be present in or near the project area; and 2) a list of local Native Americans who could be contacted about the project. Because no Native American sites or properties were identified in the vicinity of VTTM 53189, no further Native American consultation was undertaken.

Cultural Records Search Results

The SCCIC reported that five non-Native American cultural resources were recorded within one mile of VTTM 53189 (see Table 4.4-1).

The project is less than 0.25 miles from the Angeles National Forest, which is California Historical Landmark No. 717. Other than the National Forest, only a historic ranch complex (on the Tesoro del Valle project site) associated with film star Harry Carey (CA-LAN-2071-H) is a property located within one mile of the project site, which is eligible for listing with the National Register of Historic Places. The NAHC search of the Sacred Lands File did not reveal any Native American sites or properties in the vicinity of VTTM 53189. No further Native American consultation was undertaken because no prehistoric sites were identified in the project area.

TABLE 4.4-1
CULTURAL RESOURCES RECORDED WITHIN ONE MILE OF THE PROJECT

SCCIC Designation	Date(s) Recorded	Built-Environment Description	Mean Date
CA-LAN-1432H	1979	Historic refuse deposit, ca. 1920s-1930s	1929.5
CA-LAN-1445H	1988, 1999	Historic oil well features, ca. 1925-1928	1926.5
CA-LAN-1448H	1988	Historic cemetery, graves 1880 to 1964	1922
CA-LAN-2070H	1992	Historic adobe residence, ca. 1920s	1924.5
CA-LAN-2071H	1992	Historic ranch complex, ca. 1920	1920

Archaeological Resource Evaluation

Two oil wells (circa 1925-1928) are located on the project site approximately 1,100 feet apart and are designated as CA-LAN-1445H, Locus A and Locus B. A photograph of the remains of these oil wells is presented in Figure 4.4-1. The structural remains, consisting of generic concrete footings for oil derricks, were determined not to have enough structural remains to warrant an architectural evaluation.

Archival research was conducted at the Los Angeles County Assessor Archives, City of Los Angeles Bureau of Engineering, California State University, Northridge Map Library, and University of California, Riverside Science Library in order to augment the archaeological work on the site. Additionally, historical data was obtained from Environmental Data Resources, Inc. (EDR), which maintains an extensive database on historical and environmental factors applicable to specific properties. EDR conducted a data search using a one-mile radius of the property.

Mechanically excavated trenches were dug in order to uncover any subsurface features and/or expose additional data about archaeological resources on the site. Trenches were excavated in three locations: Locus A; a small concrete slab in an area between Locus A and Locus B; and an area roughly 250 feet northeast of Locus A. Locus B was not tested because it is located in an area that would not be directly impacted by the proposed project. Trenches were excavated to varying lengths, but were all four feet deep by 20 inches wide. Figure 4.4-2 presents the location of the excavations.

Archaeological Test Results

All of the features associated with CA-LAN-1445H, including the two oil wells and two concrete slabs and a pit feature of unknown purpose, were related to oil drilling activities that occurred between 1925 and 1928. No significant archaeological deposits were identified in any of the trenching locations performed on the site.

Trench 1 (aligned east-west) encountered topsoils hardened with congealed petroleum and spilled plaster, but no additional cultural evidence was found below the surface. Trench 2 (aligned north-south) encountered topsoils of a similar character and revealed a buried feature consisting of a small but immoveable concrete slab or cap. The feature was interpreted as a cap or seal for a drill shaft and was left in place. No other subsurface materials were encountered in Locus A. Locus B was not tested because it is located in an area that would remain as open space under the proposed VTTM 53189.

Three trenches (3, 4, and 5) were excavated around the concrete slab between Locus A and Locus B. No surface artifacts were found after manually scraping the surface of the ground. Trenches were then excavated parallel to the east, south, and west sides of the slab. These

trenches produced no cultural evidence, except for a water line that likely led to an outside faucet or spigot and not an inside structure. Due to the small size of the slab and the lack of refuse, it was determined that the slab was probably a shed with an outdoor faucet.

Trench 6 was excavated 250 feet northeast of Locus A near some fragmented bricks that were visible from the surface. Metal items such as steel cable were also scattered about. A large concentration of fragmented bricks was encountered immediately below the surface and extended approximately three feet deep. Many were burned and/or coated with hardened petroleum. A short mortared alignment was found at the base of the deposit, indicating that a structural feature had been present at one time. This brick feature was interpreted as a small "still", which is an apparatus used in the on-site refining of crude oil to remove dire and other impurities with intense heat. However, the small size and the use of three different brick manufacturers (or salvaged bricks) suggest that it would have been experimental in nature and not very well planned. This site was designated as Locus C.

Archival Research Results

Previous research has stated that the dates that CA-LAN-1445H was in operation (1925-1928) indicate that the site would have been abandoned just before the St. Francis Dam collapsed in the spring of 1928. Using these dates, the property was owned by Joseph D. Perea, who held on to the property for 54 years.

Historic and recent USGS quadrangles showing VTTM 53189 were examined for indications of constructed features in the area. No buildings or structures are illustrated in or adjacent to the site area until the 1969 photo revised edition of the 1952 7.5 Newhall Quadrangle map. Therefore, the small concrete slab between Locus A and Locus B was therefore not present prior to 1969 and is not associated with the oil wells.

Paleontological Records Search

A paleontological resources records search was conducted for VTTM 53189 at the Los Angeles County Museum of Natural History (LACMNH), on September 26, 2003. The LACMNH is the central repository for fossil collections and associated records in Los Angeles County. The records search was performed by Samuel A. McLeod, Ph.D., of the Vertebrate Paleontology Division at the LACMNH. Dr. McLeod is a qualified paleontologist with extensive experience in Los Angeles County. The records search provided information on the geological formations underlying the project area and surrounding vicinity, the range of known fossil localities and fossil types in the vicinity, and the capacity of underlying formations to contain significant nonrenewable fossil resources. No field survey was undertaken for this assessment.

Paleontological Records Search Results

The NHMLAC determined that no fossil localities are known within the project area and that the Quaternary alluvium and gravels of the low-lying areas are unlikely to contain significant vertebrate fossil remains. The elevated portions of the project area are composed of fossil-bearing Saugus Formation that has yielded fossil remains of horse, dog, camel, gopher, and lizard in the surrounding vicinity. In the northwestern reaches of the tract, the fossil-bearing Castaic Formation has produced fossil remains of camel and a rare specimen of tapir.

4.4.2 Project Impacts

Thresholds of Significance

The following thresholds were determined to indicate that potential impacts to archaeological/historical/ paleontological could be significant for the proposed project:

- Location of the project site in or near an area containing known archaeological resources or containing features (drainage course, spring, knoll, rock outcroppings, or oak trees) which indicate potential archaeological sensitivity (San Francisquito Canyon Creek).

- Presence on the project site of known historic structures or sites (Oil well loci CA-LAN-1455-H).

'Historical resources" are defined as buildings, structures, districts, sites, or objects that are eligible for the California Register of Historic Resources (CRHR) (CEQA Guidelines 15064.5.a.3). An eligible resource is one that meets at least one of the following criteria for significance:

Criterion A - Associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

Criterion B - Associated with the lives of persons important in our past;

Criterion C - Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic value;

Criterion D - Has yielded, or may be likely to yield, information important in prehistory or history (referring to sites that have the potential to yield data relevant to important research topics).

Impacts Analysis

Archaeological and Historical Resources

In order to determine whether a site would yield, or may be likely to yield, information important in prehistory or history (Criterion D), three evaluation tools are used. If a site has the potential to yield significant data about individuals of important social, economic, and/or ethnic status, relationships between the site and communities/events, and/or sites of industrial or economic importance, then the archaeological site would be eligible for the California Register.

CA-LAN-1445H does not meet any of the criteria stated in the thresholds for significance. Criterion A is not met because there was no significant discovery of oil; therefore, the endeavor was not directly associated with any local history or heritage. Criterion B was not met because neither Joseph Perea or the International Oil Developers/International Industrial Corporation (builders and/or architects) are identified in the literature of historic oil and gas exploration and development in southern California or on the Newhall Ranch.

Criterion C was not met because the structural elements of the two wells do not exhibit any distinctive characteristics or artistic value and were strictly functional for supporting standard oil derricks of which there are numerous existing examples in the Newhall area. Criterion D was not met because neither the surface elements nor the subsurface deposits were found to contain important historical information and are unlikely to yield any new information that would

be historically important. The remains of a small brick still in Locus C for testing the quality of crude indicated that a small quantity of oil was found, but its size showed that it was not intended for processing large amounts and was likely used for testing purposes only. Data derived from Los Angeles County Assessor archival records and the environmental search by EDR, as well as dates documented for bricks impressed with a crescent symbol by the Los Angeles Brick Company at Alberhill, indicate that the site was operated between 1933 and 1935, rather than between 1925 and 1928 as suggested in an earlier study.

Using archaeological methods and archival research, it has been determined that the CA-LAN-1445H historic site is not a significant resource. Therefore, the proposed project would not have an adverse effect on a historical or archaeological resource as defined by CEQA and no further study would be required to proceed with the implementation of VTTM 53189.

Paleontological Resources

The NHMLAC concluded that surficial geological layers in the low-lying areas of VTTM 53189 are unlikely to contain significant fossil resources. Only deep grading/excavations in these areas pose a potential for fossils to be encountered. Deep excavations would be categorized as activities that would go below the Quaternary (late) alluvium and gravels and into underlying older (Tertiary) alluvium and the Saugus and Castaic Formations below. The Saugus and Castaic Formations of the hillsides and ridges along the western and northern reaches of the tract have the potential for significant fossil resources. Because the project will involve development of some hillside areas near Lots 1 through 5 and Lots 30 through 32, as well as the over-excavation and re-engineered fill of alluvial soils in the project footprint, the project has the potential to significantly impact paleontological resources prior to mitigation. A qualified paleontological monitor should monitor earthmoving activities on the site, including grading, cutting, and trenching (below eight feet) in low-lying areas and all grading and cutting in hillsides and ridges. Because the Saugus Formation is known to contain tiny microfossils, the paleontologist should periodically screen sediment samples in order to identify these resources.

4.4.3 Cumulative Impacts

The area of consideration for the discussion of cumulative impacts includes a one-mile radius from the project site. No Native American sites, properties, or sacred lands were identified in the vicinity of VTTM 53189. The SCCIC reported five cultural resources (including the two oil wells on VTTM 53189) that have been recorded within one mile of VTTM 53189, all of which were non-Native American. One of the five resources is the Harry Carey ranch complex property (on the Tesoro del Valle site), which is eligible for listing on the National Register of Historic Places. The other resources include a refuse deposit, a cemetery, and an adobe residence. Lastly, the Angeles National Forest is less than 0.25 mile from the project site and is listed as a California Historic Landmark.

Off-site historic resources would not be affected by the project. The two oil wells on the project site are not related in use, origin, or significance to the historic resources located outside of the project site. Because CA-LAN-1445H does not constitute a historical resource and does not contribute to the context of off-site historic or archaeological resources, the development of the project would not represent a cumulatively considerable impact. Potential impacts to any archaeological or paleontological resources that may be discovered during grading for the project would be mitigated to a level of less than significant through archaeological and paleontological evaluation.

4.4.4 Project Design Features and Mitigation Measures

Project Design Features

None

Mitigation Measures

MM 4.4-1 In accordance with PRC 5097.94, if human remains are found, construction activity in the area of the find must halt and the Los Angeles County coroner must be notified within 24 hours of the discovery. If the coroner determines that the remains are not recent, the coroner will notify the Native American Heritage Commission for consultation.

MM 4.4-2 The applicant shall agree to suspend construction in the vicinity of an archaeological resource encountered during ground-disturbing activities at the site and leave the resource in place until a qualified archaeologist can examine them and determine appropriate mitigation measures.

MM 4.4-3 A qualified paleontologist shall be retained to attend pre-grade meetings and to monitor earthmoving activities, including grading and trenching below a depth of eight feet in lower alluvial areas of the site and all grading and cutting in elevated hilly areas of the site. If fossil resources are uncovered, a subsurface evaluation may be needed to assess the discovery. In the event that fossils are exposed, the paleontologist shall be allowed to temporarily divert or re-direct grading in the area of the exposure to recover potentially significant fossils. Because the Saugus Formation is known to contain tiny microfossils, the paleontologist shall periodically screen sediment samples in order to identify these resources. Excavated significant fossil finds shall be offered, on a first right-of-refusal basis, to a repository with a retrievable collection system and an educational and research interest in the materials such as the Natural History Museum of Los Angeles County.

Level of Significance after Mitigation

With the implementation of the mitigation measures listed above, potential impacts to archaeological and paleontological resources would be reduced to a level less than significant.

FIGURE 4.4-1
OIL WELLS – LOCUS A AND LOCUS B

FIGURE 4.4-2
ARCHAEOLOGICAL TRENCH LOCATIONS IN CA-LAN-1445H

4.5 VISUAL QUALITIES

This section describes the aesthetic character and landform features of the proposed project site and immediate vicinity and discusses potential visual impacts that could result from implementation of VTTM 53189. The evaluation of aesthetics and visual resources is based upon the VTTM 53189 presented in Figure 2.2-1, site reconnaissance, and review of aerial photographs of the project site. Various viewsheds have been identified and photographs from the adjacent areas, as well as from within the project site, are included as exhibits to depict the current features of the site.

4.5.1 Existing Conditions

Landform/Topography

An aerial of the proposed project site is provided in Figure 4.5-1. The elevation of the project site ranges in elevation from approximately 1,250 feet above mean sea level (amsl) in the southern portion of the San Francisquito Canyon Creek to approximately 1,454 feet amsl in the northwestern hillside slopes and ridges of the project site. The majority of the project site is relatively flat. The central portion of the project site is characterized by the flat scrubland of the San Francisquito Canyon Creek which contains the intermittent San Francisquito Canyon Creek that drains the surrounding hillsides and the Angeles National Forest.

The landscape rises in elevation westward from San Francisquito Canyon Creek towards the surrounding hillsides. The northern and western edges of the project site contain some areas of moderately to steeply sloping hillsides. Several graded roads traverse through the project site and the shallow portions of the hillsides. The San Francisquito Canyon Road generally comprises the eastern border of the project site.

Existing Aesthetic Features

The prominent aesthetic features of the project site are based in the natural landscape, including the undeveloped hillsides in the western and northern reaches of the project site as well as the flat scrubland of the San Francisquito Canyon Creek. There are no exceptional or unique aesthetic features present within the boundaries of the project site. Non-native grasses are dominant in the flat and broad areas adjacent to the dirt roads in the western portion of the site. Riversidean sage scrub habitat is located adjacent to the 100-year flood zone of the San Francisquito Canyon Creek. Chamise chaparral is located along the steeper slopes found in the western half of the site. The dominant character of the vegetation on the site is low lying shrubs and grasses and sporadic and sparse stands of trees.

Eucalyptus trees are located just south of Lady Linda Lane along the main dirt road and holly-leaf cherry woodland is located in the northwest portion of the site. Many of these trees were destroyed or damaged in a recent wildfire. A grove of mature live oak trees is located in the northeastern corner of the site near the intersection of Lady Linda Lane and San Francisquito Canyon Road. The hillsides within the project site are undeveloped, except for some dirt roads that traverse the property. Because any alterations to the aesthetics of the project site would be most prominent to the surrounding land uses, an analysis of the project impacts on surrounding viewsheds is appropriate.

The project site is visible from the surrounding hillsides and from properties along San Francisquito Canyon Road in the vicinity of the project site. Views of the property from distant vantage points are not prominent due to the rolling topography of the area that obstructs views. A description of viewsheds into the project site from the surrounding areas is discussed below. The location of origin for the various photograph exhibits of the project site were

documented via Global Positioning System (GPS) technology. The location of each photograph site is illustrated on Figure 4.5-1, as well as arrows depicting the direction of the photograph.

Views from the North

Development north of the project site is minimal and consists of a few residential properties adjacent to the northern boundary of the site and a few homes/ranches in the northern reaches of San Francisquito Canyon Creek. Figure 4.5-2 (Location A) depicts the view of the project site from the intersection of Las Tunas and Quail Haven Trail, north of the project site. The northern boundary of the project site is just beyond the white wooden fence located on the right side of the photograph. As evidenced by this photograph, the view of the project site from the homes is obscured by the topography, as well as by the trees and distance from the project site.

The first photograph in Figure 4.5-3 (Location B) was taken from atop a graded hill within the project site and it illustrates the view to the north and east. As demonstrated by this photograph, the edge of the graded hill is approximately 50 feet higher in elevation than the residential properties located to the north behind the white fence near the intersection of Las Tunas and Quail Haven Trail. The view of the hillside portion of the project site from these homes located to the north is largely obscured by the presence of this ridgeline.

The second photo in Figure 4.5-3 (Location B) is a southerly continuation of the view depicted in the previous panoramic photograph. This view illustrates the flat scrubland of the San Francisquito Canyon Creek, the hillsides on the western portion of the project site, and the graded roads that traverse the area. The relatively sparse development of the hillsides to the east of the project site is also depicted in this photograph.

Views from the East

The majority of the developed land surrounding the project site is located to the east of San Francisquito Canyon Road. The first photograph in Figure 4.5-4 (Location C) was taken on Shawnee Court looking westward into the project site. The second photograph in Figure 4.5-4 (Location D) was taken on Piute Court looking westward into the project site. Both of these exhibits illustrate the open view of the project site available to the properties along San Francisquito Canyon Road. In the left corner of the second photograph, the grading and construction activities associated with the first phase of the Tesoro del Valle development are apparent.

The first photograph in Figure 4.5-5 (Location E) was taken from the intersection of Lowridge Place and Silkwood within the Hidden Ranch development looking westward into the project site. From this location, the project site is clearly visible from several of the homes located along these two streets. However, further east along Lowridge Place, views of the project site become obscured by the hilly topography and new home construction.

Views from the South

Development to the south of the project site is sparse. The second photograph in Figure *4.5-5* (Location F) depicts the project site from the southeastern corner of the property. The closest development is located approximately 1,400 feet further south along San Francisquito Canyon Road from the southern boundary of the property, followed by a single-family residential community located another 1,100 feet south of the project site.

Figure 4.5-6 (Location G) includes two panoramic photographs that were taken from the southwestern corner of the project site looking north to east and from east to south, respectively. Location G is at the corner of the Tesoro del Valle where Stoney Creek Road is proposed to connect and provide access to the project site. The single-family development located along San Francisquito Canyon Road is located in the distance on the right side of the second photograph in Figure 4.5-6. These photographs illustrate the sparse development surrounding the project site and the long distances to the existing development. As indicated by the photo location aerial Figure 4.5-1, the Tesoro del Valle project is located to the south and west of the project site and is currently under construction.

Views from the West

Only one structure is located near the western portion of the project site; a residential structure located in the hillside. The majority of the property to the west of the project site is located within the Tesoro del Valle residential development which has begun its first phase of development and has yet to begin grading west of the project site.

The first photograph in Figure 4.5-7 (Location H) was taken from within the project site looking westward toward the hillsides. The second photograph in Figure 4.5-7 (Location I) was taken further west along the graded road and includes the one residential development located northwest of the project site. These two exhibits illustrate the topography of the area, the lack of development west of the project site, and the areas currently altered by grading activities.

Recreational Views

The project site contains several dirt roads and trails that traverse through the SEA as well as upland areas. During the site reconnaissance, it was apparent that many of these roads and trails were being used for equestrian recreation, although there are no County-maintained regional riding or hiking trails within the project site. Users of these non-designated trails on-site currently have views of the existing undeveloped area. The photo location aerial Figure 4.5-1 depicts the roads and trails that traverse the project site that are currently being used for equestrian activity. Several equestrian centers and ranches are located along the eastern side of San Francisquito Canyon Road and horse crossing signs are located along the roadway, indicating heavy equestrian activity in the area.

The Tesoro del Valle residential project located to the south and west of the project site has incorporated a seven-mile equestrian trail, named the Cliffie Stone Trail, into the project design. The Tesoro del Valle equestrian trial map is provided in Figure 4.5-8. The Cliffie Stone Trail is depicted in orange and crosses the SEA from the Tesoro site, south of Area D as depicted in Figure 4.5-8, to San Francisquito Canyon Road. This regional trail system will be continued through the project site. In addition to the construction of the Cliffie Stone Trail, the Butterfield Overland Stage Trail will be constructed over an existing non-designated trail just east of the boundary of the SEA No. 19. The exact alignment of the connection of the trails in the project site to the trails in the Tesoro del Valle project has not been determined and will be finalized by the County Department of Parks and Recreation. Therefore, although part of the same trail system, the Cliffie Stone Trail will have no direct connections from the project site and the Tesoro del Valle project at the time of project completion.

4.5.2 Project Impacts

Thresholds of Significance

The following threshold was determined to indicate that impacts to visual qualities could be significant for the proposed project.

- Project visibility from or obstruction of views from a regional riding or hiking trail
- Location of the project site in an undeveloped or undisturbed area, which contains unique aesthetic features.
- Other factors affecting visual resources (approximately 932,000 cubic yards of grading).

Impacts to Landform/Topography

The proposed project would involve the construction of 60 single-family homes and would require approximately 246,000 cubic yards of raw grading balanced on-site (932,000 cy of total grading, including alluvium removal). The entire project site consists of 185.8 acres. The single-family development would be arranged in a sideways "T" shape along the western edge of the San Francisquito Canyon Creek and would extend westward into a large (un-named) canyon. The residential lots would range in size from 39,336 square feet to 10,075 square feet, or 0.90 to 0.23 acres respectively. Three large lots on the site would be preserved as open space, including:

- Lot 61 (approximately 103.76 acres)
- Lot 62 (approximately 29.45 acres)
- Lot 63 (approximately 16.26 acres)

Approximately 80.5 percent of the project site would be preserved within these three lots as open space. The large majority of this area will be preserved in its natural state, although some portions of these lots will include manufactured slopes vegetated with native plants. These three open space lots contain the majority of the hillside areas on the project site; therefore, preservation of these areas results in the preservation of many of the hillside features on the site. Lots 62 and 63 would preserve the majority of the steeply sloping hillside area, thereby minimizing the need for grading activities. Lot 61 would preserve the entire portion of San Francisquito Canyon Creek that is within the project boundaries. The residential homes would not be located on top of the prominent ridgelines; therefore, grading activities and changes to the topography are minimized by the location of the lots on the more level parts of the project site.

Figure 4.5-9 depicts a "key map" of the project site. This map has five location points to depict graphic representations of various perspectives on the post-construction project site. Figure *4.5-10* through Figure 4.5-14 help to illustrate what the post-construction project site will look like from five different vantage points.

Location 1

Lots 1 through 5 are located on the hilliest portion of the project site, with Lots 1 and 4 requiring the most hillside grading activity. As illustrated on Figure 2.3-1 in the Project Description, this portion of the site is in the Hillside Management area. Natural elevations on Lot 1 range from 1,420 to 1,480 amsl and the graded pad would be constructed at an elevation of 1,448 amsl. Lot 4 elevations range from 1,410 amsl to 1,450 amsl and the graded pad would be constructed

at 1,405 amsl. Graded pad elevations of these six lots steadily decrease from west to east. Lot 13 is adjacent to the large manufactured slope area and has an elevation range of 1,290 amsl to 1,350 amsl. The graded pad would be developed at 1,300 amsl. As previously stated, the majority of the remaining lots are located on relatively flat land that avoids the hillside area.

Figure 4.5-10 depicts the southerly view of the project site from the off-site property north of "C" Street near Lots 6 through 11. The difference in elevation between "B" Street on the project site and the property to the north is evident in this figure, as well as the "stair stepping" down in elevation for the lots along "C" Street.

Location 2 and 3

Figure 4.5-11 depicts a graphic representation of this northern portion of the project site. This figure illustrates the manufactured slopes that would border the eastern portion of the roadway and lots adjacent to the SEA. Additionally, this figure shows the proposed 3:1 grading of the hillside behind Lots 31, 32, and 33 (which will be contoured to reflect the natural topography to the greatest extent feasible), as well as the small landslide area behind Lots 27 and 28. The manufactured slope and landslide removal area is depicted from a location within the SEA area in Figure 4.5-12. A large portion of the hillside area would remain unaffected by the proposed project since development occurs largely along the foothill area. However, the development of the manufactured slope would present a significant visual impact to this hillside prior to mitigation.

Manufactured slopes would be developed on 314,128 square feet (7.2 acres) of the project site. The slopes would be constructed according to County of Los Angeles Public Works standards and would have a maximum slope of 2:1, with the exception of the manufactured slope site behind Lots 31, 32, and 33, which would be graded at a 3:1 slope. The majority of the slopes would be small and spread out across the site adjacent to the residential lot boundaries. Manufactured slopes would be revegetated with native, drought-tolerant plants that are consistent with the existing native vegetation on the project site.

Location 4

Figure 4.5-13 depicts the project site from the SEA, westward down "B" Street. This perspective illustrates the gradual rise in elevation from the intersection of "A" Street and "B" Street towards the junction with Tesoro del Valle. The required grading and manufactured slope between Lots 22 and 52, as well as the grading in the hillside areas for Lots 1 through 12, are depicted in the figure. Even though the graded pad development would be located in the foothill areas and not on the hilltops, the grading in the hillside areas would alter the character of the hillsides. This would be considered a significant impact, prior to mitigation.

Location 5

Figure 4.5-14 depicts a view of the project site from between Lots 43 and 44, looking northward at the corner of "A" Street and "B" Street. This perspective illustrates how the majority of the lots are developed on a gently sloping grade and are clustered in the flatter portions of the project site to avoid hillside development as much as possible, as well as to avoid sensitive biological habitats and vegetation.

The proposed project would result in changes in the existing topography of the project site. The majority of the landform and topography changes would not substantially alter the character of the site and there would not be any engineered fill slopes that would obstruct views. However, the grading hillside areas would necessitate a variety of manufactured slope areas that would

reduce/alter the ridgetops of the surrounding hills. Therefore, impacts to landform and topography due to grading activities would be considered significant prior to mitigation.

Impacts to Existing Aesthetic Features

Although the project site is currently undeveloped, vacant land, the project site does not contain any unique aesthetic features that would be impacted by the proposed project. However, the visual impacts of the proposed project include both the objective visual change created by the project and the subjective viewer response to that change. Distance from the project site, frequency of view, length of view, viewer activity, viewer perception, and viewing conditions contribute to the assessment of a visual impact. The physical changes in a viewshed as a result of a project are objective, while the viewer's perception is not. Sensitivity to a change in the physical condition is largely determined by how much the viewer has at stake in the viewshed. Typically, people who own property in an area are more sensitive to change than those just passing through.

Views from the North

The implementation of the proposed project would be visible from the residential properties north of the project boundary on the streets of Las Tunas and Quail Haven Trail, although it would be largely obscured by the tall trees and differences in elevation. A small portion of the ridgeline near these existing homes north of the project site is proposed to be altered to accommodate a manufactured slope that would be adjacent to the backyards of Lots 31, 32, and 33. The rest of this prominent ridgeline would be preserved as open space in a portion of Lot 63. The large hillside and manufactured slope behind Lots 31, 32, and 33 would serve to largely obscure the view of these three houses from these existing homes. Other views from the north of the proposed residential development would be largely obstructed by the hillside topography and the tall trees. The distance between the project site and other properties to the north of the project site would be too great to present an impact to the visual aesthetics of their viewshed.

Views from the East

The implementation of the proposed project would be the most visible from homes and ranches along the eastern side of the project site. These properties have a direct view of the land proposed for development because there are very few trees and no hills to obstruct the view over San Francisquito Canyon Creek. The views from the eastern side of San Francisquito Canyon Road toward the project site are illustrated by Figure 4.5-4 and Figure 4.5-5.

Although the proposed project development would be visible from property east of the project site, the distance to the proposed project site is approximately 2,000 feet, or 0.38 miles. This distance minimizes the visual impact of the proposed development. Additionally, the considerable amount of land that would be preserved as open space would serve to maintain the natural aesthetic of the project site, further minimizing the visual impact of the homes. With the exception of a road, the prominent ridgeline visible from the east would not be disturbed.

Views from the South

The distance between the southernmost houses proposed for the project site and the nearest ranch is approximately 2,000 feet. The nearest developed residential community is approximately 3,000 feet south of the project site, or 0.58 miles.

Therefore, the proposed project would have a minimal visual impact on these properties. The Tesoro del Valle development is located to the south and west of the project site and only the first phase is currently constructed. Therefore, the proposed project would have no visual impacts on the future residents of this property, as it would be perceived as a continuation of that development project.

Views from the West

One residential property is located on the northwest edge of the project site. This property would be located approximately 100 feet from northern the boundary of the project site and the viewshed from this property would be impacted by the implementation of the proposed project. This home is located at slightly higher elevations than the proposed project; therefore the viewshed would not be obscured by the project development. There are no other developments west of the project site and the Tesoro del Valle development is not directly visible from this one residential property.

The visual and aesthetic impact to the home located northwest of the project site is not considered a significant impact. The proposed project is a residential development surrounded by considerable amounts of open space. The hillsides surrounding the property would obscure views of a majority of the proposed development and the most prominent ridgeline to the south would be part of open space Lot 62.

The implementation of the proposed project would alter the aesthetics of the project site. Sixty single-family homes would be constructed on land that is currently undeveloped. However, the project design preserves 80 percent of the project site as open space through preservation in Lots 61, 62, and 63. Approximately 63.2 acres of vegetation would be impacted by either development or by fuel modification (which does occur in open space areas), resulting in a total of 122.6 acres, or 66 percent of the project site, remaining as undisturbed open space. The single-family residential development is clustered away from the ridgelines to minimize impacts to the aesthetic and biological resources on the project site. Therefore, much of the current aesthetic quality of the project site, including the San Francisquito Canyon Creek and the surrounding hillside ridgelines, would remain. Additionally, the distance between the project site and the majority of the neighboring residences contributes to the minimization of impacts to aesthetics. Impacts to aesthetic features are therefore less than significant.

Recreational Views

The development of the project site could change the current equestrian usage patterns on the site and subsequently impact the views of the current users. In general, because a County-maintained regional riding or hiking trail does not currently exist on the project site, the change in aesthetic features to currently unauthorized recreational users would not be significant.

Nevertheless, in order to accommodate for the continued recreational use and visual experience of equestrian users, the proposed project design includes the extension of the Cliffie Stone Trail into the project site where no dedicated trail currently exists, as well as the construction of the Butterfield Overland Stage Trail. These trails are located within Lot 61 and depicted on the tract map in Figure 2.2-1 and would be dedicated to the County of Los Angeles along with all of the open space lots. The trails will be maintained by the Department of Parks and Recreation (DPR). The creation of dedicated equestrian and hiking/biking trails would allow users to continue enjoying the visual aesthetics of the surrounding area.

As previously discussed, the change in the aesthetic features of the project site and surrounding area are not considered significant. Additionally, the extension of the Cliffie Stone Trail and Butterfield Overland Stage Trail would prevent the physical degradation of the San Francisquito

Canyon Creek by directing the equestrian activities into an easily maintained and designated trail area. The ultimate decision to restrict or allow access to the existing non-designated trails in the SEA No. 19 would be left to the discretion of the County of Los Angeles. Lot 61, which contains the sensitive SEA No. 19 habitat, will be preserved as open space in order to protect the sensitive habitat from a biological as well as aesthetic standpoint.

The construction of the underground levee system would be largely hidden, with the exception of approximately four feet of horizontal levee (two feet of vertical levee) that would be located above ground. The levee system would be located adjacent to the graded pads of the project site and would not be readily visible from the two equestrian/hiking trails. Visual impacts of the levee system would be less than significant.

4.5.3 Cumulative Impacts

The area under consideration for this cumulative impacts analysis includes residential development within one mile of the project site. General descriptions are provided in Section 2.6 for these neighboring projects. The Tesoro del Valle project is a large development (1,795 acres) currently in the first phase of construction. Upon completion, this project will have developed open spaces to the north, west, and south of the project site and will be visible from development along the eastern side of San Francisquito Canyon Creek.

The West Creek project is located just south of Tesoro and would also develop a large amount of currently open spaces along the western side of San Francisquito Canyon Creek. Completion of these two projects would significantly alter the character and aesthetics of the area on the west side of the San Francisquito Canyon Creek and would be visible from numerous vantage points and properties in the area.

Development along the eastern side of San Francisquito Canyon Creek is much less dense and is largely composed of ranches and Tract 52302, which includes 11 single family homes currently under construction. The adjacent Tract 46564, a subdivision of 318 single family homes built in the late 1990s, is further to the east and is not within the viewshed of the project site.

Upon completion of the surrounding projects, (including those that are planned and under construction), the implementation of VTTM 53189 would not result cumulatively considerable visual impacts. The visual changes in the area associated with the implementation of the Tesoro and West Creek projects would be considerable and would not be made more substantial by the development of VTTM 53189.

The proposed project would maintain considerable amounts of open space on the property, thereby resulting in a development that is complementary to the existing development to the east. VTTM 53189 would also provide a visual transition to the denser development planned and under construction for Tesoro del Valle and West Creek.

The proposed project would not significantly alter the views of the surrounding hillsides or topography of the area and would remain in the lower, flatter portion of the project site; therefore, the project design would maintain the character of the open space in the surrounding areas. Prominent ridgelines would not be developed by VTTM 53189 and the San Francisquito Canyon Creek would be preserved in its entirety, further emphasizing the project's conformity to the natural features of the site. The Santa Clarita Valley is growing at a rapid rate and residential development is underway or planned for much of the area surrounding the project site. The visual impacts of the proposed project would be negligible in the context of the surrounding planned development and development currently under construction.

4.5.4 Project Design Features and Mitigation Measures

Project Design Features

- Approximately 80 percent of the project site is preserved as open space in Lots 61, 62, and 63. Approximately 122.6 acres, or 66 percent of the project site, would remaining as undisturbed open space not impacted by fuel modification, in order to maintain the natural and aesthetic features of the project site.

- The final configuration of the Cliffie Stone Trail and the Butterfield Overland Stage Trail will be determined by the County of Los Angeles Parks and Recreation Department. The trails will not traverse the SEA and it is the intent of the applicant that the trails shall avoid oak tree impacts.

Mitigation Measures

MM 4.5-1 At the completion of construction activities, all manufactured slope areas shall be landscaped. Landscaping plans for the project site would use native vegetation (i.e., oaks, coastal sage scrub) on manufactured slopes that are adjacent to naturally vegetated areas to minimize the potential visual impacts of development. The plan materials, placement, and maintenance of the native revegetation would be approved by the Fire Department, Department of Regional Planning, and by the project biologist. The manufactured slope behind Lots 31, 32, and 33 would be constructed at a 3:1 grade to ensure slope stability and to minimize potential erosion along the hillside area. This manufactured slope shall be contoured to reflect the natural topography to the greatest extent feasible in order to enhance the aesthetic qualities of the slope area.

Level of Significance after Mitigation

With the incorporation of the mitigation measures listed above, the visual and aesthetic impacts associated with the implementation of the project would be less than significant.

Figure 4.5-1
Photo Locations

Figure 4.5-2
Site Photos – Location A

Figure 4.5-3
Site Photos – Location B

Figure 4.5-4
Site Photos – Locations C and D

Figure 4.5-5
Site Photos – Locations E and F

Figure 4.5-6
Site Photos – Location G

Figure 4.5-7
Site Photos – Locations H and I

Figure 4.5-8
Tesoro del Valle Equestrian Trail Map

Figure 4.5-9
Location Key Tentative Tract Map

Figure 4.5-10
Graphic Representation Location 1

Figure 4.5-11
Graphic Representation Location 2

Figure 4.5-12
Graphic Representation Location 3

Figure 4.5-13
Graphic Representation Location 4

Figure 4.5-14
Graphic Representation Location 5

SECTION 5.0 SERVICES ANALYSIS

5.1 TRAFFIC/ACCESS

A traffic study was prepared for this project by Linscott, Law & Greenspan Engineers in October 2003. The traffic study identifies and evaluates the potential impacts that traffic generated by the proposed development of VTTM 53189 will have on the local and regional roadway network. The study was prepared in accordance with the County of Los Angeles and City of Santa Clarita traffic study guidelines. The traffic study is summarized below and the study is included in its entirety in Appendix G of this EIR.

5.1.1 Existing Conditions

The proposed project site is located north of Copper Hill Drive in unincorporated Los Angeles County and is bordered by San Francisquito Canyon Road to the east, Lady Linda Lane to the north, and open space within the approved Tesoro del Valle project to the south and west. Regional access to the project area is provided by the Interstate 5 freeway and the State Route 14 freeway. A description of important roadways within the study area is provided below:

- ***Golden State (I-5) Freeway*** is a major north-south freeway that connects Santa Clarita Valley with the City of Los Angeles and the Central Valley. The I-5 provides four lanes of travel in each direction in the project vicinity. Local access to the freeway is available from Magic Mountain Parkway or The Old Road/Rye Canyon Road.

- ***Antelope Valley (SR-14) Freeway*** is a major north-south freeway connecting the eastern portion of the Santa Clarita Valley with the City of Los Angeles and the Antelope Valley. In the project vicinity, the SR-14 provides four to five lanes of travel in each direction. Local access to the freeway is available from the Via Princessa interchange.

- ***Copper Hill Drive*** is a primary east-west roadway, approximately following the northern Santa Clarita border. At Avenida Rancho Tesoro, Copper Hill Drive provides three lanes of traffic in each direction, but it ranges from one to three lanes at other locations. On-street parking is generally not permitted. The posted speed limit on Copper Hill Drive in the project vicinity is 55 miles per hour (MPH).

- ***Avenida Rancho Tesoro*** is a north-south roadway through the City of Santa Clarita which provides immediate access to the project site. It currently provides one lane of travel in each direction and has been recently paved.

- ***McBean Parkway*** is a primary north-south roadway (east-west in the southern end) through the City of Santa Clarita, generally providing three lanes of travel in each direction. On-street parking is generally not permitted in the project vicinity. The posted speed limit on McBean Parkway is 50 MPH. McBean currently ends at Copper Hill Drive, but it is proposed to be extended so that it intersects San Francisquito Canyon Road.

- ***Seco Canyon Road*** is a primary north-south roadway through the City of Santa Clarita that provides two lanes of travel in each direction south of Copper Hill and one lane north of Copper Hill. Parking is generally not permitted on Seco Canyon Road, south of Copper Hill Drive, but is permitted north of Copper Hill Drive. The posted speed limit on Seco Canyon Road is 35 MPH north of Copper Hill Drive and 45 MPH south of Copper Hill Drive.

Study Area

Potential traffic-related impacts associated with the implementation of the proposed project were evaluated at three key intersections in the vicinity of the project site. The project site is located within the unincorporated County; however, one of the three study intersections is located within the City of Santa Clarita. The three key intersections are listed below.

1. Avenida Rancho Tesoro and Copper Hill Drive (County)
2. McBean Parkway and Copper Hill Drive (County)
3. Seco Canyon Road and Copper Hill Drive (City)

These intersections were determined by Los Angeles County Department of Public Works Traffic and Lighting Division staff and the City of Santa Clarita Transportation and Engineering Services staff. Intersection No. 1 is currently stop-controlled, and will be signalized as part of the Tesoro del Valle project; the other two intersections are signalized.

Existing Traffic Volumes

Manual traffic counts were conducted at the three study intersections from 7:00 to 9:00 AM to determine the morning commuter peak hour and from 4:00 to 6:00 PM to determine the afternoon peak hour. Traffic volumes at these intersections reflected the same typical peak periods generally associated with peak commuter hours. Construction related traffic to and from Avenida Rancho Tesoro at Copper Hill Drive was not included in the existing traffic count because the construction traffic is temporary. Table 5-1 identifies the existing traffic volumes at the study intersections during the AM and PM peak hours.

TABLE 5-1
EXISTING TRAFFIC VOLUMES

No.	Intersection	Date	Direction	AM Peak Hour Volume		PM Peak Hour Volume	
				Began	Volume	Began	Volume
1	Avenida Rancho Tesoro and Copper Hill Drive	9-23-03	NB SB EB WB	7:00	0 41 583 1,875	4:45	0 28 1,227 353
2	McBean Parkway and Copper Hill Drive	9-18-03	NB SB EB WB	7:00	464 0 367 2,207	5:00	938 0 1,273 684
3	Seco Canyon Road and Copper Hill Drive	9-18-03	NB SB EB WB	7:00	595 794 613 1,197	5:00	638 449 1,460 665

Level of Service Methodology

The County of Los Angeles and City of Santa Clarita evaluate Level of Service (LOS) using their respective Intersection Capacity Utilization (ICU) methodology. LOS can vary from LOS A (free flow) to LOS F (jammed condition). LOS D is generally recognized as the minimum acceptable LOS in urban areas. Volume-to-Capacity (V/C) ratios and LOS values during AM and PM peak hours were calculated for all three intersections. The three study intersections are currently

operating at acceptable Levels of Service (LOS D or better) during the AM and PM peak hours. The existing peak hour AM and PM data for 2003 for the three intersections are summarized below.

- Avenida Rancho Tesoro and Copper Hill Drive

  AM: V/C 0.506 (LOS A) PM: V/C 0.361 (LOS A)

- McBean Parkway and Copper Hill Drive

  AM: V/C 0.654 (LOS B) PM: V/C 0.807 (LOS D)

- Seco Canyon Road and Copper Hill Drive

  AM: V/C 0.695 (LOS B) PM: V/C 0.591 (LOS A)

5.1.2 Project Impacts

Thresholds of Significance

The following thresholds were determined to indicate that impacts to traffic/access could be significant for the proposed project:

- Development of more than 25 dwelling units and located in an area with known congestion problems (roadway or intersections).

- Exceedance of the congestion management program (CMP) Transportation Impact Analysis threshold of 50 peak hour vehicles added by project traffic to a CMP highway system intersection or 150 peak hour trips added by project traffic to a mainline freeway.

Thresholds of significance for the two County of Los Angeles intersections were identified using the traffic impact analysis guidelines set forth in the County of Los Angeles Department of Public Works' *Traffic Impact Analysis Report Guidelines*, January, 1997. According to the County's published guidelines, the impact is considered significant if the project-related increase in the V/C ratio equals or exceeds the following threshold:

Pre-Project V/C	LOS	Project Related Increase in V/C
>0.700-0.800	C	equal to or greater than 0.04
>0.800-0.900	D	equal to or greater than 0.02
>0.900	E-F	equal to or greater than 0.01

Per the County's *Traffic Impact Analysis Report Guidelines*, the ICU calculations utilize a lane capacity of 1,600 vehicles per hour (vph) per lane and 2,880 vph for dual left-turn and right-turn lanes. Additionally, a clearance factor of 0.10 is utilized.

For the City of Santa Clarita intersection, the thresholds of significance were identified using the City of Santa Clarita's *Traffic Impact Report Guidelines*. According to these guidelines, a significant transportation impact is determined based on the following sliding scale criteria:

Final V/C	LOS	Project Related Increase in V/C
0.00-0.79	A-C	equal to or greater than 0.04

0.80-0.89	D	equal to or greater than 0.02
0.90 or more	E-F	equal to or greater than 0.01

Per the City's *Traffic Impact Report Guidelines*, the ICU calculations utilize a capacity of 1,750 vph for left-turn, through, and right-turn lanes. Additionally, clearance factors of 0.05 for two phases, 0.07 for three/five phases and 0.10 for six phases or more are utilized.

Impacts Analysis

Trip Generation

The 6th Edition of *Trip Generation*, published by the Institute of Transportation Engineers (ITE), 1997, was used to determine the traffic volumes generated by the proposed project on an average weekday based upon the number of dwelling units. Weekday AM peak hour trips generated by the proposed project are expected to be 45 (11 inbound trips and 34 outbound trips). Weekday PM peak hour trips generated by the proposed project are expected to be 61 (39 inbound trips and 22 outbound trips). A total of 574 trips are expected to be generated over a 24-hour period on a typical workday, including 287 inbound trips and 287 outbound trips. The distribution of these vehicle trips for the AM peak hour and the PM peak hour are presented in Figure 5.1-1 and Figure 5.1-2, respectively.

Trip Distribution

The traffic generated by the proposed project was assigned to the local roadway system based on the land use, existing traffic movements, characteristics of the surrounding roadway systems, and nearby regional population and employment centers. The project traffic volume distribution percentages within the three study intersections are illustrated in Figure 5.1-3.

Ambient Growth

Growth in traffic due to the combined effects of continuing development, intensification of existing development, and other factors, were conservatively assumed to be 6.6 percent per year through 2005. This ambient growth incrementally increases the V/C ratios at all of the study intersections. The fourth columns of Table 5-2 and Table 5-3 show that the three intersections are expected to continue operating at acceptable Levels of Service (LOS D or better) during AM and PM hours in 2005.

TABLE 5-2
SUMMARY OF VOLUME TO CAPACITY RATIOS AND
LEVELS OF SERVICE COUNTY OF LOS ANGELES STUDY INTERSECTIONS
AM and PM Peak Hours

No.	Peak Hour	2003 Existing Condition		2005 With Ambient Growth		2005 With Proposed Project		Change in V/C	Significant Impact?	2005 With Related Projects		2005 With Regional Mitigation	
		V/C	LOS	V/C	LOS	V/C	LOS			V/C	LOS	V/C	LOS
1	AM	0.506	A	0.560	A	0.572	A	0.012	No	0.879	D	0.879	D
	PM	0.361	A	0.395	A	0.400	A	0.005	No	0.728	C	0.728	C
2	AM	0.654	B	0.727	C	0.729	C	0.002	No	0.938	E	0.869	D
	PM	0.807	D	0.900	D	0.903	E	0.003	No	1.174	F	0.882	D

Source: Tentative Tract 53189 Traffic Impact Study; Linscott, Law & Greenspan Engineers
*No. 1 represents the intersection of Avenida Rancho Tesoro and Copper Hill Drive
No. 2 represents the intersection of McBean Parkway and Copper Hill Drive

TABLE 5-3
SUMMARY OF VOLUME TO CAPACITY RATIOS AND LEVELS OF SERVICE
CITY OF SANTA CLARITA STUDY INTERSECTIONS
AM and PM Peak Hours

No.	Peak Hour	2003 Existing Condition		2005 With Ambient Growth		2005 With Proposed Project		2005 With Related Projects		Change in V/C	Significant Impact?
		V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS		
3	AM	0.695	B	0.777	C	0.873	D	0.874	D	0.001	No
3	PM	0.591	A	0.660	B	0.811	D	0.812	D	0.001	No

Source: Tentative Tract 53189 Traffic Impact Study; Linscott, Law & Greenspan Engineers
*No. 3 represents the intersection of Seco Canyon Road and Copper Hill Drive

Related Projects

Information regarding the potential impact of the proposed project must be considered within the context of other nearby related and/or ongoing development. Files at the County of Los Angeles Department of Regional Planning and the City of Santa Clarita provided information on other known development projects in the area. This information was used to illustrate the impact of the proposed project relative to other projects in the area in order to determine the cumulative impact. A list of all related projects is included in the Traffic Impact Study in Appendix G.

The City of Santa Clarita requires that traffic from related projects are analyzed prior to consideration of traffic due to the proposed project. The fifth column of Table 5-3 illustrates that the LOS at the Seco Canyon Road and Copper Hill Drive intersection is incrementally increased by the addition of traffic generated by the related projects. Table 5-3 also shows that the study intersection in the City of Santa Clarita is expected to operate at an acceptable LOS during both the AM and PM peak hours. A thorough analysis of the cumulative impact of the proposed project is provided in Section 5.1.3 below.

Proposed Project

Table 5-2 and Table 5-3 indicate that none of the study intersections are expected to be significantly impacted by the proposed project during the AM and PM peak hours. Therefore, no project-related traffic mitigation measures are required.

The Congestion Management Program (CMP) is a state-mandated program that was enacted by the State Legislature with the passage of Proposition 111 in 1990 that is intended to address the impact of local growth on the regional transportation system. The CMP for the County of Los Angeles requires a review of designated monitoring locations on the CMP highway system for potential impact analysis. However, there are no CMP arterial monitoring intersections or freeway monitoring locations in the vicinity of the project area.

The proposed project would not add 50 or more trips during either the weekday AM or PM peak hours (of adjacent street traffic) at any CMP monitoring intersections, or 150 or more trips (in either direction) during the weekday AM or PM peak hours at any CMP mainline freeway monitoring locations. Hence, no CMP traffic assessment is required for the proposed project. The project traffic engineer indicates that the project is expected to add less than 10 trips per hour to the I-5 Freeway during the AM and PM peak hours, which would not result in a significant impact to operations along the freeway in the project vicinity.

Transit Impact Review

The closest transit route in the project vicinity is the Santa Clarita Transit Route 7 which travels on McBean Parkway (south of Copper Hill Drive) and Copper Hill Drive (east of McBean Parkway). Per the CMP guidelines, the proposed project is expected to generate a demand for two transit trips during the weekday AM peak hour and three transit trips during the weekday PM peak hour. Over a 24-hour period, the proposed project is forecasted to generate a demand for 28 daily transit trips. Given the relatively few generated transit trips, the proposed project would not create any impacts on future transit service.

5.1.3 Cumulative Impacts

The area of consideration for cumulative impacts includes the greater Santa Clarita Valley, including the related projects described in the Traffic Impact Study in Appendix G. Table 5-4 below lists all the related projects in the County of Los Angeles and the City of Santa Clarita that may result in a cumulative traffic impact.

TABLE 5-4
CUMULATIVE PROJECTS FOR TRAFFIC ANALYSIS

FIGURE 2.6-1 NO.	PROJECT NUMBER	LOCATION	LAND USE	SIZE	STATUS
County of Los Angeles					
1	98170	Curtis Development Copper Hill Drive and Haskell Canyon Road	Single-Family Housing Condominium Commercial	421 DU 115 DU 39,200 SF (est.)	Approved Not Defined
2	88280	Seco Canyon Development North terminus of Boxwood Lane and Raintree Lane	Single-Family Housing	303 DU	Built
3	02-341	Davidon Homes North of Copper Hill drive and east of Hidden Hills Drive	Single-Family Housing	6 DU	Denial Recommended
4	88321	Valencia Company Northerly extension of McBean Parkway between Westerly extension Decoro Drive and San Francisquito Canyon Road	Single-Family Housing Condominium	701 DU 730 DU	Recorded
5	95075	Valencia Company North of Decoro Drive and east of Copper Hill Drive	Single-Family Housing Condominium	190 DU 268 DU	Built
6	97088	Lincoln Property Company North of Copper Hill Drive between San Francisquito Canyon Drive and extension of Raintree Lane	Single-Family Housing	11 DU	Approved
7	98016	The Newhall Land and Farming Company East side of McBean Parkway, between Copper Hill Drive and Northpark Drive	Apartment	330 DU	Recorded
8	99155	Valencia Company Copper Hill Drive approximately 500 feet east of Smyth Drive and Boskovich Drive	Light Industrial	83,334 SF	Approved
9	92074	Montalvo Properties - Tesoro De Valle West of San Francisquito Canyon Road and north of Copper Hill Drive	Single-Family Housing Condominium Commercial	1,601 DU 901 DU 75,000 SF	Area A Under Construction

TABLE 5-4 (Continued)
CUMULATIVE PROJECTS FOR TRAFFIC ANALYSIS

FIGURE 2.6-1 NO.	PROJECT NUMBER	LOCATION	LAND USE	SIZE	STATUS
10	98008	Valencia Company – West Creek West side of San Francisquito Canyon Creek	Single-Family Housing Condominium/Apt. Commercial	1,248 DU 1,297 DU 180,000 SF	Approved
11	88422	Maybell Bishop Copper Hill Drive, 1500 ft of Seco Canyon Road	Single-Family Housing	419 DU	Approved
12	94021	Cucamonga Development Company North of Copper Hill Drive 1300 ft west of Haskell Canyon Road	Single-Family Housing	194 DU	Approved
13	88044	Davidon Homes NWC of Copper Hill Drive and Haskell Canyon Road	Single-Family Housing	213 DU	Approved
14	88596	Seco Canyon Development #4 Northerly extension of Seco Canyon Road between Haskell Canyon Road and San Francisquito Canyon Road	Single-Family Housing	594 DU	Approved
15	88082	CJB Development Inc. North terminus of Haskell Canyon Road northeast of Copper Hill Drive	Single-Family Housing Condominium	421 DU 99 DU	Approved
16	93179	The Newhall Land and Farming Company West of McBean Parkway between Decoro Drive and Copper Hill Drive	Single-Family Housing Condominium	146 DU 244 DU	Approved
City of Santa Clarita					
17	03-154	Smyth Drive and Dickason Drive	Church	55,000 SF	Preliminary Review
18	03-170	NEC of Alta Vista and Constellation (Copper Hill Drive between Smyth Drive and Decoro Drive)	Industrial	132,000 SF	Approved
19	02-193	North Valencia II - Hidden Creek SWC of McBean Parkway and Copper Hill Drive	Senior Housing	275 DU	Approved
20	02-251	Greystone: North Valencia II - Alta Vista Copper Hill Drive and Alta Vista Drive, west of Valencia High School	Single-Family	160 DU	Approved
21	02-251	Standard Pacific: North Valencia II - Alta Vista Copper Hill Drive and Alta Vista Drive, west of Valencia High School	Single-Family Multi-Family	79 DU 90 DU	Approved
22	02-292	Warmington Homes: North Valencia II - The Willows SWC McBean Parkway and Decoro Drive	Single-Family	205 DU	Approved
23	02-335	Fountain Glen: North Valencia II Decoro Drive and Sunny Creek	Single-Family	226 DU	Proposed
24	02-442	William Lyons Homes: North Valencia II - Andora SWC of McBean Parkway and Cottonwood	Single-Family	141 DU	Proposed
25		KB Homes: North Valencia II West of McBean Parkway, South of Decoro Drive	Single-Family	155 DU	Proposed
26		Olsen Company: North Valencia II West of McBean Parkway, South of Decoro Drive	Single-Family	168 DU	Proposed

The analysis of cumulative impacts takes into consideration the following planned improvements:

- New traffic lane configurations as depicted in the *Traffic Impact Study* for Tesoro del Valle prepared by Darnell & Associates, Inc. 1998. (Figure 5.1-4)

- Northerly extension of McBean Parkway from Copper Hill Drive to San Francisquito Canyon Road (resulting in traffic shifts to McBean Parkway)

The County of Los Angeles analysis procedures require that traffic from related projects be considered in the future cumulative conditions, after consideration of traffic due to the proposed project and project mitigation. Future improvements include future lane configurations for each study intersection and the northerly extension of McBean Parkway from Copper Hill Drive to San Francisquito Canyon Road, which will result in a number of traffic shifts.

Table 5-2 shows that the Avenida Rancho Tesoro and Copper Hill Drive intersection is expected to operate at an acceptable LOS during both the AM and PM peak hours under the "With Related Projects" scenario. However, the County of Los Angeles Department of Public Works considers the increase in V/C and LOS to indicate that a cumulative significant traffic impact is anticipated with the addition of cumulative traffic growth (i.e. project and related projects traffic) at the Avenida Rancho Tesoro/Copper Hill Drive. The McBean Parkway and Copper Hill Drive intersection is expected to operate at LOS E during the AM peak hour an LOS F during the PM peak hour. Therefore, this intersection is anticipated to be significantly impacted due to cumulative traffic growth during the AM and PM peak hours prior to mitigation. Figure 5.1-4 and Figure 5.1-5 illustrate the future cumulative (existing, ambient growth, project, and related projects) traffic volumes for the AM and PM peak hours, respectively.

The implementation of traffic mitigation measures would reduce this impact to a level less than significant. The currently recommended traffic mitigation program developed for the cumulative growth associated with the Tesoro del Valle project would need to be altered for the impacted intersection in order to accommodate the growth associated with the proposed project. The proposed mitigation measures for the intersection of McBean Parkway and Copper Hill Drive include the restriping activities detailed in Table 5-5 below. The implementation of these mitigation measures would be the responsibility of the County Engineer, with individual projects paying their fair share contribution. No alterations to the constructed roadway system would be required.

TABLE 5-5
PROPOSED CUMULATIVE IMPACT MITIGATION

Direction	Current Mitigation (Tesoro del Valle)	Proposed Mitigation
McBean Parkway Northbound to Copper Hill Drive	2 left-turn lanes 2 through lanes 1 right-turn lane	2 left-turn lanes 1 through lane 2 right-turn lanes
McBean Parkway Southbound to Copper Hill Drive	1 left-turn lane 2 through lanes 1 right-turn lane	1 left-turn lane 1 through lanes 1 shared through/right-turn lane 1 right-turn lanes

As illustrated in the last two columns of Table 5-2, the proposed mitigation would improve the V/C ratio from 0.938 (LOS E) to 0.869 (LOS D) during the AM peak hour and from 1.174 (LOS F) to 0.882 (LOS D) during the PM peak hour. With the incorporation of the

proposed mitigation, the intersection would operate at an acceptable level and no additional mitigation measures would be required.

The proposed project's "fair share" percentage for the study intersections that require cumulative improvement measures is 1.3 percent. This amount is based on the average of the weekday AM and PM peak hour project generated traffic volumes on the approaches to each affected study intersection divided by the project plus other development (related) projects' traffic volumes on those same approaches. Neither the existing traffic volumes nor the ambient growth traffic volumes are included in these calculations.

5.1.4 Project Design Features and Mitigation Measures

Project Design Features

None.

Mitigation Measures

MM 5.1-1 Prior to issuance of occupancy permits, the project applicant will contribute its pro-rata fair share (1.3 percent) of the costs of restriping the McBean Parkway and Copper Hill Drive intersection.

Level of Significance after Mitigation

With the implementation of the mitigation measure listed above, project-related and cumulative traffic impacts would be less than significant. Project specific impacts would be less than significant.

FIGURE 5.1-1
AM PEAK HOUR VEHICLE TRIP DISTRIBUTION

FIGURE 5.1-2
PM PEAK HOUR VEHICLE TRIP DISTRIBUTION

FIGURE 5.1-3
PROJECT TRAFFIC VOLUME DISTRIBUTION PERCENTAGES

FIGURE 5.1-4
PLANNED TRAFFIC IMPROVEMENTS FOR TESORO DEL VALLE

FIGURE 5.1-5
AM PEAK HOUR FUTURE CUMULATIVE TRAFFIC

FIGURE 5.1-6
PM PEAK HOUR FUTURE CUMULATIVE TRAFFIC

5.2 SEWAGE DISPOSAL

Information regarding wastewater/sewer service is based on written and verbal correspondence with the County Sanitation Districts of Los Angeles County, as well as information provided on the County's website. The County Sanitation Districts' response to our request for information on sewer facilities is located in Appendix H.

5.2.1 Existing Conditions

The County Sanitation Districts of Los Angeles County are a confederation of 25 independent special districts that work cooperatively under a Joint Administration Agreement to provide wastewater treatment and solid waste services to 78 cities and all of the unincorporated areas within the County of Los Angeles. Seventeen of the Sanitation Districts are signatory to a Joint Outfall Agreement, which provides for a regional approach to wastewater treatment. The Joint Outfall System is comprised of an interconnected organization of trunk sewers and pumping plants that allows excess flow at one facility to be transferred and treated at another facility.

The project area is currently outside the jurisdictional boundaries of the Sanitation Districts and would have to be annexed into District No. 32 before sewerage service could be provided to the proposed project. The wastewater generated by the proposed project would be discharged into a newly constructed sewer system that would connect to sewer lines in the Tesoro del Valle development for conveyance to the Sanitation Districts' Rye Canyon trunk sewer. This 10-inch diameter trunk sewer has a design capacity of 2.4 million gallons per day (mgd) and conveyed a peak flow of 0.9 mgd when last measured in 2003.

Wastewater generated by the project site would be treated at the Saugus and Valencia Water Reclamation Plants. These interconnected facilities form the Santa Clarita Valley Joint Sewerage System (SCVJSS), which has a permitted treatment capacity of 19.1 mgd. In order to provide service based on regional growth forecasts adopted by the Southern California Association of Governments (SCAG), a two phase expansion of the Valencia Water Reclamation Plant has been approved that will increase the treatment capacity of the SCVJSS by 15 mgd. The first phase involves a 9 mgd expansion, which is expected to meet the Regional Growth Management Plan forecasted demand through 2010. The second phase, scheduled to be completed in early 2010, will consist of an additional 6 mgd expansion and will increase the SCVJSS treatment capacity to 34.1 mgd, which will be sufficient to meet the demand until 2015. The SCVJSS currently processes an average flow of 18.4 mgd.

5.2.2 Project Impacts

Thresholds of Significance

The following threshold was determined to indicate that potential impacts to sewer disposal could be significant for the proposed project.

- Creation of capacity problems at the treatment plant serving the proposed project.
- Creation of capacity problems in the sewer lines serving the project site.

Impacts Analysis

According to the Sanitation Districts' Table of Generation Factors, the wastewater generation rate for a single-family home is 260 gallons per day. The proposed project (60 units), would therefore produce an estimated total of 15,600 gallons per day (gpd) or 0.0156 mgd of wastewater.

Currently, the permitted treatment capacity of SCVJSS is 19.1 mgd and it processes an average flow of 18.4 mgd. Therefore, the plant has the capacity to treat an additional 0.8 mgd of wastewater prior to the planned expansion. Considering that the proposed project would only be contributing 0.0156 mgd of wastewater and that expansions of the SCVJSS are already underway, the implementation of the project would not result in a significant impact to the capacities of treatment plant(s).

The Rye Canyon Trunk Sewer has a capacity of 2.4 mgd and a conveyed peak flow of 1.5 mgd; hence, its available capacity is 0.9 mgd. As calculated, the project would generate 0.0156 mgd of wastewater, well within the available capacity of the trunk sewer. Therefore, the implementation of the proposed project would not result in a significant impact to the trunk sewer line serving the project area.

The California Health and Safety Code enables the Sanitation Districts to charge a fee for connecting to the Sanitation Districts' sewer system. This connection fee is levied to mitigate for the incremental expansion of the sewer system to accommodate new projects. The proposed project would be subject to this fee in order to mitigate for impacts associated with the proposed project. The connection fee for District No. 32 is $2,330.00 per single-family unit. Because this project proposes to build 60 units, the total sewer connection fee would be $139,800.00.

As mentioned previously, the proposed project site would need to be annexed into District No. 32 before sewerage service could be provided to the development. Upon submittal of the application for annexation to the County Sanitation District of Los Angeles County, the Districts' staff will calculate the acreage involved and will provide the applicant with a quote of the annexation fees to be paid. The annexation fee consists of three processing fees which are paid to the County Sanitation District of Los Angeles County, Local Agency Formation Commission (LAFCO), and the State Board of Equalization (SBE).

5.2.3 Cumulative Impacts

The area of consideration for cumulative wastewater impacts includes the service area of the Saugus and Valencia Water Reclamation Plants. All proposed projects in the area, other than those reliant upon septic tanks, would need to connect to the SCVJSS Treatment Plant system. All projects connecting with this system would be required to pay a connection fee, thereby mitigating the impacts of the development. The annexation fee mitigates for the costs associated with establishing an expanded service area.

The proposed project would not contribute to any cumulative impacts to wastewater services because its impacts are mitigated by the payment of fees, as are the impacts of other projects in the area. Additionally, both the SCVJSS Treatment Plant system and the Rye Canyon trunk sewer have sufficient capacity to transport and treat the proposed project's wastewater with the current infrastructure, prior to any facility expansions.

5.2.4 Project Design Features and Mitigation Measures

Project Design Features

None.

Mitigation Measures

MM 5.2-1 Prior to the issuance of connection permits and building permits, the project applicant shall complete the annexation process into County

Sanitation District No. 32 and pay all applicable annexation fees to the County Sanitation Districts of Los Angeles County.

MM 5.2-2 After approval of the annexation by the Board of Directors of County Sanitation District No. 32 of Los Angeles County and prior to the issuance of occupancy permits, the project applicant shall pay connection fees to the County Sanitation Districts of Los Angeles County.

Level of Significance after Mitigation

After implementation of the mitigation measures, no significant impacts to wastewater facilities would result from the proposed project.

5.3 EDUCATION

5.3.1 Existing Conditions

This analysis of impacts to school facilities is based on written and verbal correspondence with the Saugus Union School District and the William S. Hart Union High School District. The analysis of impacts to libraries is based on written and verbal correspondence with the County of Los Angeles Public Library as well as the Public Library website. The Saugus Union School District and the William S. Hart Union High School District's response to our request for information on school facilities are located in Appendix H.

Elementary Education

The Saugus Union School District (SUSD) currently contains fourteen elementary schools and is operating at capacity. The growth in the Santa Clarita Valley is outpacing the development of new schools. The SUSD is working towards the construction of two new elementary schools: Tesoro del Valle Elementary and Bouquet Canyon Elementary. The boundaries for these planned new schools, as well as the boundaries for the existing schools, are currently under consideration by the Boundary Committee. In September and October 2003, the Boundary Committee voted on specific recommendations and is planning on presenting these recommendations to the Board of Trustees.

The new students generated by the proposed project would likely be served by the Tesoro del Valle Elementary School, which was constructed in 2003-04 and is scheduled to open on August 17, 2005. This school is designed with 27 permanent classrooms and will be able to be expanded to accommodate eight to ten additional classrooms. The Tesoro del Valle Elementary School will have a capacity for 720 students and will accommodate students being generated by the Tesoro master planned development.

Middle and High School Education

The William S. Hart Union High School District (WHSD) provides junior high and high school education services within the Santa Clarita Valley area. WHSD school facilities are currently operating beyond capacity and are not able to accommodate additional students.

The students generated by the proposed project would likely attend the Rio Norte Junior High School for grades 7 through 8 and by the Valencia High School for grades 9 through 12. The permanent capacity of Rio Norte is 1,026 students and is provided by 25 permanent classrooms and 12 built-in-place "permanent" portable classrooms. Temporary classroom capacity for an additional 368 students is provided by 20 portable classrooms, resulting in a total classroom

capacity of 1,394 students at the school. WHSD does not have plans to expand the permanent size of this school.

The Valencia High School has a permanent capacity of 1,924 students, which is provided by 48 permanent classrooms and 26 built-in-place "permanent" portable classrooms. Temporary classroom capacity for 840 students is provided by 32 portable classrooms, which results in a total classroom capacity for 2,764 students. WHSD does not have plans to expand the permanent size of this school.

Libraries

Library services for the unincorporated County of Los Angeles are provided by the County of Los Angeles Public Library. The proposed project is located in an area of the County that is served principally by the Santa Clarita Valley Bookmobile rather than a permanent library facility. The Bookmobile travels to rural and remote areas that do not have permanent libraries to provide them with library services. A weekly schedule identifies the days and hours the Bookmobile will in a particular location, including the communities of Acton, Newhall, Cal Verde, Castaic, and Agua Dulce. The closest location to the proposed project site would be at 27700 Parker Road in Castaic on Tuesday from 9:30 a.m. to noon. The Bookmobile's collection consists of approximately 10,940 books, 1,442 audio recordings, 1,964 video recordings, and 9 magazines; no computer services are offered. The County does not have any plans to expand the collection of the Bookmobile.

There are three libraries in the Santa Clarita Valley that could potentially serve the residents of the proposed development. The first is the Valencia Library located on West Valencia Boulevard in Valencia, approximately 5 miles from the project site. The second is the Newhall Library located on West 9th Street in Newhall, approximately 7.5 miles from the project site. The third is the Canyon Country Jo Anne Darcy Library located on Soledad Canyon Road in Canyon Country, approximately nine miles from the project site.

Because of the proposed development of several new residential projects in the vicinity of the project site, the County of Los Angeles Public Library has plans to construct new facilities in the area in order to more adequately serve the area's library needs. However, the plans are in their earliest stages and no further information is currently available.

5.3.2 Project Impacts

Thresholds of Significance

The following threshold was determined to indicate that impacts to education could be significant for the proposed project:

- Creation of capacity problems at the district level by the proposed project.
- Creation of capacity problems at individual schools which serve the project site.
- Creation of substantial library impacts due to increased population and demand.

Elementary Education Impacts Analysis

The SUSD is currently experiencing capacity problems due to the rapid growth within the Santa Clarita Valley. The proposed project would generate additional students who would have to be enrolled into a school system that is already at capacity. Due to the proximity of the

two projects, new students generated by the proposed project would likely be enrolled at Tesoro del Valle Elementary School, which is scheduled to be open in August 2005.

The SUSD uses the generation factor of 0.431 children per single-family home to anticipate the new student enrollment that would be generated by a new residential development. Using this generation factor, the proposed project would result in the addition of 25.86 new elementary students for the SUSD.

With approval of Proposition 1A by voters on November 13, 1998, the school fee provisions of Senate Bill (SB) 50 became effective, which placed statutory caps on developer fees and stated that local governments cannot deny a project based on the adequacy of school facilities. SB 50 also permits additional developer fees to be levied in amounts up to approximately 50 percent of the cost of constructing school facilities and for land acquisition and site development (Level 2 Fees). The State is responsible for contributing the other 50 percent of the cost of construction, site acquisition a development by providing per-pupil; grants based upon the school district's funding eligibility as determined by a one-time assessment of existing capacity and unhoused students, and thereafter, on a school facility needs analysis to be conducted by the district.

If, in the future, the State ceases to make apportionment of funds to school districts, then the SUSD may levy additional amounts representing approximately 100 percent of the cost of constructing school facilities and site acquisition (Level 3 Fee).

The SUSD has completed its needs analysis and documentation of eligibility for the State Funding Program by the State Allocation Board relative to SB50. Unless the developer enters into a mitigation agreement with the school district regarding the payment of fees for the construction of new school facilities, it must pay the Statutory School Fees established by SB 50. These fees would mitigate for any impacts associated with the implementation of the proposed project. The applicable fees vary in amount depending on the level of Statutory School Fee that is in effect at the time the developer obtains building permits for the dwelling units within the project. Table 5-6 shows the various levels of Statutory School Fees that may be applicable at building permit issuance.

TABLE 5-6
STATUTORY SCHOOL FEES

Level of Statutory School Fee	Amount per Square Foot of Development
Level 1	$2.14
Level 2	$2.21
Level 3	$4.41

Middle and High School Education Impacts Analysis

The proposed project would be serviced by the Rio Norte Junior High School for grades 7-8 and by the Valencia High School for grades 9-12. WHSD student generation rate for new residential development is 0.1770 junior high students per single family household and 0.2601 senior high school students per single family household, for a total student generation rate of 0.4371. Using these generation rates, the proposed project would result in approximately 10.6 new junior high students and approximately 15.6 senior high school students, for a total of 26.2 new students in the WHSD. The Rio Norte Junior High School and the Valencia High School are both at capacity, and therefore the WHSD cannot currently accommodate students generated by the proposed project.

In order to mitigate for the impacts that would result from the proposed project, the developer would at a minimum have to pay the Statutory School Fees pursuant to Education Code Section 17620 and Government Code Section 65995. Alternatively, the developer could negotiate an agreement with WHSD to pay the "fair share school mitigation payment," which would involve the payment of presumably higher fees to the WHSD than the mandatory Statutory School Fees.

Absent a negotiated agreement between WHSD and the developer, the developer is subject to the payment of the Statutory School Fees. The applicable fees vary in amount depending on the Level of Statutory School Fee (presented in Table 5-6) that is in effect at the time the developer obtains building permits for the dwelling units within the project.

Library Impacts

Currently, the Santa Clarita Valley Bookmobile is not adequately serving the community due to the growth in the demand for library services in the area. According to the Public Library, any increase in population would result in the need for additional facility space and library items. The County of Los Angeles Public Library uses the following planning guidelines to assess the amount and type of services needed:

- 2.75 library items (books, periodicals, videos, etc) per capita
- 0.5 square foot per capita
- 1.0 computer per 1,000 persons served.

The Library assumes 3.09 average persons per household. Using this figure, the project's 60 homes would generate 185.4 people in need of library services. This translates to a need for approximately 510 library items, 93 square feet of space, and 0.2 computers. In order to mitigate for the costs associated with facility expansions, the Public Library has a Facilities Mitigation Fee Program applicable to new residential development in the unincorporated area of Los Angeles County served by the Public Library.

The proposed project would be subject to these fees. The current fee is $665.00 per dwelling unit, which would result in a total fee of $39,900 for the construction of the 60 homes proposed in the project. The Public Library intends to use these fees to fund the construction of new library facilities that would serve residents of the project site. Impacts to library services are considered less than significant because the mitigation fee would compensate for the increase in demand for library services and facilities resulting from the implementation of the project.

5.3.3 Cumulative Impacts

The area of consideration for cumulative impacts to school facilities includes the Saugus Union School District the William S. Hart School District. Both of these school districts are currently operating beyond capacity and are actively planning for the expansion of school facilities to accommodate new student populations. All development projects within the two school districts are required to pay for potential impacts to the respective districts through the Statutory School Fees pursuant to Senate Bill 50. Therefore, the impacts associated with the regional growth are mitigated incrementally as each development provides payment to the districts. Because the proposed project would also contribute payments to the two affected school districts, no cumulative impacts would result from the implementation of the proposed project.

The same system is established for the mitigation of library impacts. The County of Los Angeles Public Library Facilities Mitigation Fee Program eliminates the impacts associated with new development. Because the proposed project would contribute payments to the County

for library services, as would all other new development in the area, no cumulative impacts would result from the implementation of the proposed project.

5.3.4 Project Design Features and Mitigation Measures

Project Design Features

None.

Mitigation Measures

MM 5.3-1 Prior to the issuance a grading permit, the project applicant shall pay developer fees to the Saugus Union School District pursuant to the requirements established in SB50.

MM 5.3-2 Prior to the issuance a grading permit, the project applicant shall pay developer fees to the William S. Hart School District pursuant to the requirements established in SB50, or shall negotiate a separate agreement with the WHSD for school mitigation.

MM 5.3-3 Prior to the issuance a grading permit, the project applicant shall pay the Facilities Mitigation Fee Program for library services.

Level of Significance after Mitigation

After implementation of the mitigation measures listed above, project related impacts to schools and libraries would be less than significant.

5.4 WATER UTILITIES

This section addresses the proposed project's impacts to water supply and water supply infrastructure.

5.4.1 Existing Conditions

Castaic Lake Water Agency

The project is within the CLWA service area. CLWA is a public water agency that serves an area of 195 square miles in Los Angeles and Ventura counties. CLWA is a water wholesaler that provides about half of the water used by Santa Clarita households and businesses. CLWA treats and delivers water to the local water retailers, including the Santa Clarita Water Division, Los Angeles County Water District #36, Newhall County Water District (NCWD), and Valencia Water Company. CLWA operates two potable water treatment plants, storage facilities, and over 17 miles of transmission pipelines. Historically, groundwater has been the primary source of water in the Santa Clarita Valley. Since 1980, local groundwater supplies have been supplemented with imported water from the State Water Project (SWP). CLWA also delivers highly treated recycled water from one of the two water reclamation plants in the Santa Clarita Valley, owned by the Sanitation Districts of Los Angeles County, in order to meet the non-potable water demands (golf course and landscape irrigation, etc.).

Newhall County Water District

More specifically, the project is located within the purview of the NCWD (see Figure 5.1-1). The NCWD service area lies in three distinct geographical areas of the Santa Clarita Valley: Newhall, Pinetree, and Castaic. NCWD has approximately 9,010 service connections, which are spread over a 34-square-mile area (CLWA et al. 2005c). The NCWD supplies water from

both groundwater wells and CLWA-imported water. In 2004, water demand for the NCWD was 11,217 acre-feet (AF), or 13 percent of the total CLWA 2004 demand, with 5,896 AF supplied by SWP water and the balance provided by local groundwater (CLWA et al. 2005c).

Because NCWD has been identified as the public water system that may supply water to the project site, recent relevant actions by the NCWD are discussed here. The approval by the NCWD of Resolution No. 2004-3, Resolution of the Board of Directors of Newhall County Water District (Board) Regarding Water Supply and Demand (Resolution), adopted by the Board on January 29, 2004 and amended in July of 2004, was an attempt to correct inaccuracies (according to the Board) in the assessment of current water supply in CLWA's 2000 UWMP, and concluded that there is not sufficient current supply of water to meet all current and future demands. The Resolution identified two categories of water supply, i.e., "Current and Finalized Future Supply" and "Unfinalized Additional Supply" and concluded that certain supplies are not currently available. The NCWD's "Unfinalized Additional Supply" category included water that is, according to NCWD, only in the conceptual planning stages and may be, therefore, limited. Included in the "Unfinalized Additional Supply" is perchlorate contaminated groundwater. Perchlorate issues are discussed in more detail below.

Since the adoption of Resolution 2004-3, the NCWD subsequently adopted a report prepared by Stetson Engineers Inc. (Stetson Report) which analyzed the existing water supplies in the Santa Clarita Valley to determine if currently available and reasonably feasible future water supply sources would be sufficient to meet future water demands resulting from near-term anticipated growth. The Stetson Report concluded that CLWA (including NCWD) will have sufficient water supplies to meet future water demands. On April 14, 2005, Newhall County Water District rescinded Resolution 2004-3 and indicated that it will use the Stetson Report as the basis for pending and future water supply assessments and verifications.

Historic Water Supplies

Groundwater Supplies

The Santa Clarita Valley has historically depended for its water supply on an underground water basin, or aquifer, divided into upper and lower levels. Overall the groundwater basin covers about 84 square miles and includes a shallow upper basin, the Alluvial Aquifer, and a deeper layer called the Saugus Formation.

Saugus Formation

The Saugus Formation contains much greater quantities of groundwater than the Alluvial Aquifer. Recent information on the thickness of the alluvium and the degree of potential draw down interference between adjacent Saugus Formation and Alluvial Aquifer wells has supported a calculation of groundwater in storage in the Saugus Formation of approximately 1.65 million AF (Slade, 2002).

The Saugus Formation has supplied about 7,500 to 15,000 AFY in normal weather years (CLWA et al. 2005). Planned dry-year pumping 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 (CLWA et al. 2005). No long-term continuous or permanent decline in either water levels or the amount of groundwater in storage has occurred under the historical range of pumping (Slade 2002). However, high 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 (CLWA et al. 2005).

FIGURE 5.4-1
PURVEYOR SERVICE AREAS

Total pumpage from the Saugus Formation in 2004 was 6,500 AF, up from approximately 4,200 in the preceding year (CLWA, 2004). Groundwater pumpage from the Saugus peaked in the early 1990s and then declined steadily; pumpage has remained stable, at an average of about 4,800 AFY, since 2000 (CLWA et al. 2004). On a long-term average basis since the importation of SWP water, total pumpage from the Saugus Formation has ranged from a low of about 3,700 AFY (in 1999) to a high of nearly 15,000 AFY (in 1991); average pumpage from 1980 to present has been about 7,000 AFY (CLWA et al. 2004). These numbers are at the lower end of the estimated range of the operational yield of the Saugus Formation.

Alluvial Aquifer

Although the Alluvial Aquifer is the smaller of the two-aquifer system as measured by storage capacity, most water wells within the CLWA service area are drilled into this aquifer. Slade (1986) estimated the practical or perennial yield of the Alluvial Aquifer to be from 31,600 AFY to 32,600 AFY. However, the total annual groundwater production from the Alluvial Aquifer over the last 10 years has averaged approximately 35,000 AFY, about 10 percent higher than the "practical or perennial yield", without any evidence of undesirable conditions that might be an indication of aquifer overdraft.

The operational yield of the Alluvial Aquifer is estimated to be about 30,000 to 40,000 AFY in normal weather years, and 30,000 to 35,000 AFY in dry years. Total pumpage from the Alluvial Aquifer in 2004 was approximately 33,800 AF, an increase of about 200 AF from the preceding year (CLWA et al. 2004). Groundwater pumping from the Alluvial Aquifer has averaged approximately 36,500 AFY since 2000 (CLWA et al. 2004). Over the last two decades, since the inception of SWP deliveries in 1980, total pumpage from the Alluvium has ranged from a low of about 20,000 AFY (in 1983) to slightly more than 43,000 AFY (in 1999) (CLWA et al. 2004).

The use of one well in the Alluvial Aquifer has been suspended due to the detection of perchlorate (discussed below).

Perchlorate Issues

The subject of perchlorate contamination and its impact on groundwater supplies has been extensively discussed in the 2005 UWMP. As discussed in the 2005 UWMP, 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) have been removed form service. In 2002, perchlorate was detected in the SCWD Stadium well located directly adjacent to the Whittaker-Bermite site. This Alluvial well has also 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 of 2005, the presence of perchlorate was detected in VWC's Well Q2, an Alluvial well located immediately northwest of the confluence of Bouquet Creek and the Santa Clara River. VWC removed the well from active service. Significant progress has been made toward characterizing the extent of perchlorate contamination and implementing the necessary measures for on-site clean-up and off-site groundwater containment and treatment. Restoration of all impacted capacity is anticipated in 2006 (CLWA et al. 2005) Imported Water

SWP deliveries to CLWA from 1990 through 2004 are shown in Table 5-7. SWP supplies supplement local water sources.

TABLE 5-7
SUMMARY OF ANNUAL SWP AND LOCAL GROUNDWATER USE WITHIN THE CLWA SERVICE AREA, 1990 TO 2002

Year	SWP Table A[1] Amount (AF)	SWP Allocation[2] (Percent)	SWP Deliveries (AF)	Local Groundwater Deliveries[3] (AF)	Agriculture and Miscellaneous Uses[4] (AF)	Total (AF)
1990	41,500	100	21,600	21,500	11,280	54,380
1991	54,200	30	7,970	31,800	10,280	50,050
1992	54,200	45	14,900	27,300	12,150	54,350
1993	54,200	100	13,840	30,000	11,220	55,060
1994	54,200	53	14,700	31,600	13,870	60,170
1995	54,200	100	17,000	28,700	14,350	60,050
1996	54,200	100	18,870	32,100	15,350	66,320
1997	54,200	100	23,220	32,000	16,390	71,610
1998	54,200	100	20,270	28,600	13,610	62,480
1999	54,200	100	27,300	30,000	17,140	74,440
2000	95,200	100	32,580	28,400	15,320	76,300
2001	95,200	39	35,370	25,320	16,090	76,780
2002	95,200	70	41,770	26,460	16,810	85,040
2003	95,200	90	44,420	22,980	14,810	82,910
2004	95,200	65	47,200	24,670	15,590	87,910

[1] *"Table A" is a term used in the SWP Water Supply Contracts. The "Table A Amount" is the annual maximum amount of water to which an SWP Contractor is contractually entitled, and is specified in Table A to each Contractor's Water Supply Contract. (The Table A Amount was previously referred to as "entitlement.") However, the amount of water actually available for delivery in any year may be an amount less than the Contractor's Table A Amount due to hydrology and a number of other factors.*

[2] *SWP allocation (i.e. the percent of Table A Amount that each Contractor could have received based on that year's supply availability and Contractor requests), as determined by DWR for the year. The values shown are M&I Table A allocation percentages. In 1991, the Devil's Den Water District permanently transferred 12,700 AF of agricultural Table A Amount to CLWA. For years prior to implementation of the Monterey Amendment in 1996, agricultural Table A allocations were as follows: 0 percent in 1991; 45 percent in 1992; 100 percent in 1993; 53 percent in 1994; and 100 percent in 1995.*

[3] *Groundwater deliveries by municipal water purveyors within the CLWA service area.*

[4] *Includes groundwater pumped by, and SWP water delivered to, agricultural and miscellaneous uses within the CLWA service area. SWP deliveries to agricultural and miscellaneous uses within the CLWA service area occurred from 1992 to 2000, with a maximum of approximately 1,070 AF delivered in 1997.*

Source: SCVWP 2003.

Table 5-7 also shows total water delivered by CLWA. Total water deliveries within the CLWA service area include deliveries by the four municipal water purveyors, along with groundwater pumped by agriculture and miscellaneous uses. Agriculture and miscellaneous uses include irrigated agriculture, landscape irrigation, golf course irrigation, and other miscellaneous uses within the service area.

DWR Forecasted Deliveries

In May 2003, the California Department of Water Resources (DWR) completed its State Water Project Delivery Reliability Report. The report provides current information on the ability of the SWP to deliver water under existing and future levels of development, assuming historical levels of precipitation. On May 25, 2005, DWR informed the SWP Contractors that it is in the process of updating the Reliability Report and provided a recommended set of analyses to be used for preparing 2005 UWMPs (DWR 2005). These updated analyses indicate that the SWP could deliver up to 77 percent of the total Table A Amounts on a long-term average basis. Assuming SWP reliability of 77 percent, CLWA's average/normal water year deliveries would be approximately 73,300 AFY (CLWA's Table A entitlement is 95,200 AFY). The single dry year deliveries, according to the DWR are forecasted to be approximately five percent of CLWA's Table A, or 4,800 AFY and the multiple dry year deliveries could be approximately 33 percent, or 31,400 AFY. These forecasts would vary slightly over the 2005 UWMP planning period.

Recycled Water

Wastewater that has been highly treated and disinfected can be reused for landscape irrigation and other non-potable purposes. In 1993, CLWA completed a *Draft Reclaimed Water System Master Plan* to use recycled water as a reliable water source to meet some non-potable demand within its service area. In 2002 a Draft Recycled Water Master Plan update was completed. Since 2003, CLWA's 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. The total annual recycled water demand is estimated to be approximately 17,400 AFY (CLWA et al. 2005b). CLWA anticipates that full implementation of the recycled water system would occur over the next 25 years.

Water Supply and Demand Assessment

Table 5-8 below provides a summary of the current and planned water supplies and banking programs as identified by CLWA. Table 5-9 provides CLWA's projected average/normal water year water supplies and demands, and
Table 5-10 and Table 5-11 provide the projected single and multiple dry year water supplies and demands. The analysis provided in the 2005 UWMP takes into account the available water supplies and water demands for CLWA's service area to assess the region's ability to satisfy demands through the year 2030. Diversity of supply allows CLWA and the purveyors the option of drawing on multiple sources of supply in response to changing conditions, such as varying climatic conditions (average/normal years, single dry years, multiple dry years), natural disasters, and contamination, such as perchlorate.

TABLE 5-8
EXISTING AND PLANNED WATER SUPPLIES THROUGH 2030
(ACRE-FEET)

Type of Supply	2005	2010	2015	2020	2025	2030
Existing Supplies						
Wholesale (Imported)						
SWP Table A Supply [2]	65,700	67,600	69,500	71,400	73,300	73,300
Flexible Storage Account [3]	4,680	4,680	4,680	4,680	4,680	4,680
Flexible Storage Account [3,4] (Ventura County)	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 Existing 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
Total Banking Programs	**50,870**	**50,870**	**0**	**0**	**0**	**0**
Planned Supplies						
Local Supplies						
Groundwater	0	10,000	10,000	20,000	20,000	20,000
Restored Wells (Saugus Formation)	*0*	*10,000*	*10,000*	*10,000*	*10,000*	*10,000*
New Wells (Saugus Formation)	*0*	*0*	*0*	*10,000*	*10,000*	*10,000*

TABLE 5-8 (Continued)
EXISTING AND PLANNED WATER SUPPLIES THROUGH 2030
(ACRE-FEET)

Type of Supply	2005	2010	2015	2020	2025	2030
Recycled Water[6]	0	0	1,600	6,300	11,000	15,700
Transfers						
Buena Vista-Rosedale [7]	0	11,000	11,000	11,000	11,000	11,000
Total Supplies	**0**	**21,000**	**22,600**	**37,300**	**42,000**	**46,700**
Planned Banking Programs [3]						
Rosedale-Rio Bravo	0	20,000	20,000	20,000	20,000	20,000
Additional Planned Banking	0	0	20,000	20,000	20,000	20,000
Total Banking Programs	**0**	**20,000**	**40,000**	**40,000**	**40,000**	**40,000**

Notes:

1. *The values shown under "Existing Supplies" and "Planned Supplies" are supplies projected to be available in average/normal years. The values shown under "Existing Banking Programs" and "Planned 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 6-5 of DWR's "Excerpts from Working Draft of 2005 State Water Project Delivery Reliability Report" (May 2005).*
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 ten 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. *Recycled water supplies based on projections provided in Chapter 4, Recycled Water of the 2005 UWMP.*
7. *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.*

Source: CLWA et al. 2005b. Table 3-1.

TABLE 5-9
PROJECTED AVERAGE/NORMAL YEAR SUPPLIES AND DEMANDS

Type of Supply	2010	2015	2020	2025	2030
Existing Supplies					
Wholesale (Imported)					
SWP Table A Supply [1]	67,600	69,500	71,400	73,300	73,300
Flexible Storage Account [2]	0	0	0	0	0
Flexible Storage Account (Ventura County)[2]	0	0	0	0	0
Local Supplies					
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 Supplies	**115,300**	**117,200**	**119,100**	**121,000**	**121,000**
Existing Banking Programs					
Semitropic Water Bank[2]	0	0	0	0	0
Total Banking Programs	**0**	**0**	**0**	**0**	**0**
Planned Supplies					
Local Supplies					
Groundwater	0	0	0	0	0

TABLE 5-9 (Continued)
PROJECTED AVERAGE/NORMAL YEAR SUPPLIES AND DEMANDS

Type of Supply	2010	2015	2020	2025	2030
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 Supplies	**11,000**	**12,600**	**17,300**	**22,000**	**26,700**
Planned Banking Programs [3]					
Rosedale-Rio Bravo[2]	0	0	0	0	0
Additional Planned Banking[2]	0	0	0	0	0
Total 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)	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

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" (May 2005).*
2. *Not needed during average/normal years.*
3. *Recycled water supplies based on projections provided in Chapter 4, Recycled Water of the 2005 UWMP.*
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 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.*
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 Chapter 7 of the 2005 UWMP.*

Source: CLWA et al. 2005b. Table 6-2.

TABLE 5-10
PROJECTED SINGLE DRY YEAR SUPPLIES AND DEMANDS

Type of Supply	2010	2015	2020	2025	2030
Existing Supplies					
Wholesale (Imported)					
SWP Table A Supply [1]	3,800	3,800	3,800	4,800	4,800
Flexible Storage Account	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					
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 Supplies	**59,060**	**59,060**	**57,680**	**58,680**	**58,680**

TABLE 5-10 (Continued)
PROJECTED SINGLE DRY YEAR SUPPLIES AND DEMANDS

Type of Supply	2010	2015	2020	2025	2030
Existing Banking Programs					
Semitropic Water Bank[3]	17,000	0	0	0	0
Total Banking Programs	**17,000**	**0**	**0**	**0**	**0**
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 Supplies	**21,000**	**22,600**	**37,300**	**42,000**	**46,700**
Planned Banking Programs [3]					
Rosedale-Rio Bravo	20,000	20,000	20,000	20,000	20,000
Additional Banking Programs[7]	0	20,000	20,000	20,000	20,000
Total Banking Programs	**20,000**	**40,000**	**40,000**	**40,000**	**40,000**
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**

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" (May 2005).*
2. *Initial term of the Ventura County entities' flexible storage account is ten 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 Chapter 4, Recycled Water of the 2005 UWMP.*
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. *Rosedale-Rio Bravo Water Banking and Recovery Program online in 2006, based on completing CEQA and subsequent adoption by CLWA Board of Directors.*
7. *Assumes additional planned banking supplies available by 2014.*
8. *Assumes increase in total demand of 10 percent during 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 Chapter 7 of the 2005 UWMP.*

Source: CLWA et al. 2005b Table 6-3.

TABLE 5-11
PROJECTED MULTIPLE DRY YEAR SUPPLIES AND DEMANDS[1]

Type of Supply	2010	2015	2020	2025	2030
Existing Supplies					
Wholesale (Imported)					
SWP Table A Supply [2]	30,500	31,400	31,400	31,400	31,400
Flexible Storage Account	1,170	1,170	1,170	1,170	1,170
Flexible Storage Account (Ventura County)[3]	340	340	0	0	0
Local Supplies					
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 Supplies	**81,210**	**82,110**	**81,770**	**81,770**	**81,770**
Existing Banking Programs					
Semitropic Water Bank[3]	12,700	0	0	0	0
Total Banking Programs	**12,700**	**0**	**0**	**0**	**0**
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 Supplies	**17,500**	**19,100**	**23,800**	**28,500**	**33,200**
Planned Banking Programs					
Rosedale-Rio Bravo[8]	5,000	15,000	15,000	15,000	15,000
Additional Banking Programs[8,9]	0	5,000	15,000	15,000	15,000
Total Banking Programs	5,000	20,000	30,000	30,000	30,000
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	106,900	117,200	128,100	137,900

TABLE 5-11 (Continued)
PROJECTED MULTIPLE DRY YEAR SUPPLIES AND DEMANDS[1]

Notes:

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" (May 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 ten 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 of the 2005 UWMP ([11,000 + 15,000 + 25,000 + 35,000]/4).*
5. *Recycled water supplies based on projections provided in Chapter 4, Recycled Water of the 2005 UWMP.*
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. *Rosedale-Rio Bravo Water Banking and Recovery Program online in 2006, assuming CEQA complete and adoption by CLWA Board of Directors.*
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 Chapter 7 of the 2005 UWMP.*

Source: CLWA et al. 2005b. Table 6-4.Source: CLWA et al. 2005b. Table 6-4.

CLWA's demands vary from year to year depending on local hydrologic and meteorologic conditions, with demands generally increasing in years of below-average local precipitation and decreasing in years of above-average local precipitation. According to the 2005 Draft UWMP (and shown in Table 5-9), CLWA's 2010 average year demand (without conservation) is estimated to be 100,050 AF and 138,300 AF by 2030 (without conservation) (CLWA et al. 2005).

In 2001, CLWA signed the Memorandum of Understanding Regarding Urban Water Conservation in California (MOU). 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 total water demands by about 10 percent of the urban potion of total demand. As shown in the tables and stated in the 2005 UWMP, based on conservative water supply and demand assumptions over the next 25 years in combination with conservation of non-essential demand during certain dry years, CLWA and the retail water purveyors will be able to deliver a reliable water supply to its customers.

As shown in Table 5-8, in 2002 CLWA stored 24,000 AF of its Table A Amount in an account in the Semitropic Water Storage District's Groundwater Storage Program in Kern County[1] and in 2004, CLWA stored 32,522 AF of available 2003 Table A Amount water in a second Semitropic account.[2] In accordance with the terms of CLWA's storage agreements with Semitropic,

[1] The Negative Declaration prepared by CLWA was challenged in California Water Network v. Castaic Lake Water Agency (Ventura County Superior Court Case Number CIV 215327), which held in favor of CLWA. That case is presently on appeal in the Second District Court of Appeal, Sixth Division, Case Number B177978 (CLWA et al. 2005b).

[2] No legal challenge was made to CLWA's approval of this project or of the Negative Declaration for this project (CLWA et al. 2005b).

90 percent of the banked amount, or a total of 50,870 AF (see Table 5-8), is recoverable through 2013 to meet CLWA water demands when needed. Each account has a term of ten years for the water to be withdrawn and delivered to CLWA.[3] Current operational planning includes use of the water stored in Semitropic for dry year supply.

Also shown in Table 5-8 is CLWA's planned participation in an additional banking program (the Rosedale-Rio Bravo Water Banking Program). The initial offering from the Rosedale-Rio Bravo project, a water banking and exchange program, is for storage and pumpback capacity of 20,000 AFY, with up to 100,000 AF of storage capacity. As discussed above, other planned supply programs include the Buena Vista Water Storage District/Rosedale-Rio Bravo Water Storage District Water Storage and Recovery Program. The initial offering from the Buena Vista-Rosedale program is up to 11,000 AFY of firm supply. This water supply would primarily meet the potential demands of future annexations to the CLWA service area and, currently, proposed annexations have a demand for about 4,000 AFY of this supply (CLWA 2005) and include the proposed project.

Of CLWA's 95,200 AF of annual Table A Amount discussed in the tables above, 41,000 AFY was permanently transferred to CLWA in 1999 by Wheeler Ridge-Maricopa Water Storage District, a member unit of the Kern County Water Agency. With regard to availability, the 2005 UWMP provides a discussion of the appropriateness of relying on the 41,000 AFY, which includes: 1) the transfer was completed in 1999 and the Department of Water Resources has allocated and annually delivered water in accordance with the completed transfer; (2) the revised EIR for the transfer corrects the sole defect identified by the Court of Appeal (i.e., tiering off the Monterey Agreement EIR)[4]; (3) the Monterey Amendments settlement agreement expressly authorizes the operation of the SWP in accordance with the Monterey Amendments, which authorize the transfer; (4) the Court of Appeal refused to enjoin the transfer, and instead required preparation of a revised EIR; and (5) the transfer contract remains in full force and effect, and no court has ever questioned their validity or enjoined the use of this portion of CLWA's Table A amount.

5.4.2 Impact Analysis

Thresholds of Significance

Significance Criteria

The proposed project would have a significant impact on water supply if it would:

- have insufficient water supplies available to serve the project from existing and planned entitlements; or
- have insufficient water supply infrastructure available to serve the project

Water Supply

The proposed project's projected water demand would be approximately 54 AFY, as shown in Table 5-12. The timing of the project places it well within the timeframe for calculating "planned

[3] Thereafter, the remaining amount of project water in the account is forfeited (CLWA et al. 2005b).

[4] CLWA's EIR prepared in connection with the 41,000 AFY water transfer was challenged in Friends of the Santa Clara River v. Castaic Lake Water Agency (Los Angeles County Superior Court, Case Number BS056954) ("Friends"). On appeal, the Court of Appeal, Second Appellate District held that since the 41,000 AFY EIR tiered off the Monterey Agreement EIR that was later decertified, CLWA would also have to decertify its EIR and prepare a revised EIR. CLWA approved the revised EIR in December 2004. Friends was dismissed permanently in February 2005. In January 2005, two new challenges to CLWA's EIR were filed.

future uses" within the 2030 water supply projection included in the 2005 UWMP (project build-out is expected to be before 2030). Sufficient water supplies, including groundwater supplies, are available to serve the project from existing and planned entitlements and resources without substantially depleting groundwater supplies.

TABLE 5-12
WATER USE ESTIMATE

Land Use Categories	Water Use Factor[1]		Proposed Project	Estimated Water Use (AFY)
	AFY	per		
Single Family Residential	0.90	unit	60	54
Total (rounded)				54
[1] *Factor provided by NCWD.*				

As with all of the CLWA purveyors, annual allocation from CLWA to the NCWD is dependent on demand and supply within the district. Therefore, the proposed project demand would not exceed the current available water supply to either NCWD or the Santa Clarita Valley as a whole. Based on this analysis, NCWD can adequately serve the project without adversely affecting existing customers within the service area. Moreover, NCWD has confirmed that they can adequately serve the project without any additional facilities or entitlements (the Newhall County Water District's response to the project's request for information on water supply and facilities is located in Appendix H). Therefore, impacts would be less than significant.

Water Supply Infrastructure

The project's infrastructure would be constructed to the specifications of the NCWD, the pipeline would provide sufficient capacity to serve the project and the proposed project would have adequate domestic and fire flow storage. According to the NCWD, the increased demand generated by the proposed project would not adversely affect service capabilities or facilities in the project area, and the addition of 60 residential units would not require the expansion of the existing facilities. Impacts related to water supply infrastructure would be less than significant.

The NCWD does not currently have development fees for this service area, although they are studying a connection fee structure that would be applicable in the future to the Tesoro area. This future connection fee may or may not be applicable to the proposed project, depending on the timing of the fee implementation and the project construction. At the time of connection, the project applicant will pay any appropriate development fees. Mitigation measures are provided to ensure the applicant provides all necessary documentation and easements related to water supply infrastructure to NCWD. Impacts are considered less than significant; however, mitigation measures for otherwise standard conditions and requirements are recommended.

5.4.3 Cumulative Impacts

Based on the demand projections through the year 2020 included in the 2000 UWMP, the water supply would be adequate if the proposed project were developed in addition to existing and other planned future uses. Thus, cumulative impacts to water supply, including groundwater supply, would be less than significant since all projected demand through 2020 can be met with the planned water supply.

5.4.4 Project Design Features and Mitigation Measures

Project Design Features

None.

Mitigation Measures

The following mitigation measures are provided to document standard procedures:

MM 5.1-1 Prior to issuance of a grading permit, the developer shall submit to the NCWD all plans, designs, and fire department requirements for the development in order that the NCWD may design the necessary water system facilities required for the development in accordance with the NCWD's Rules and Regulations; or, at the NCWD's option, the water system may be designed by the developer, subject to the NCWD's review and approval.

MM 5.1-2 Prior to issuance of a grading permit, the developer shall grant the NCWD any and all easements required for water service, together with a policy of title insurance, satisfactory to the NCWD, guaranteeing the NCWD's title to such easements.

MM 5.1-3 Prior to issuance of a grading permit, the developer shall, in accordance with the NCWD's Rules and Regulations, and any required Water Service Agreement, pay all required fees and charges, including any required deposit amount in order to process plans, design and complete construction of required on-site and off-site improvements, and if NCWD elects to design the water system all costs and expenses of design.

Level of Significance after Mitigation

With the incorporation of mitigation measures listed above, impacts to water utilities associated with the proposed project would be less than significant.

SECTION 6.0 OTHER ANALYSES

6.1 ENVIRONMENTAL SAFETY

This section summarizes information contained in the Phase I Environmental Assessment Report performed by Waterstone Environmental, Inc. (Waterstone) in May of 1999. The technical report is included in Appendix I of this DEIR. The Phase I report was conducted for a 176-acre parcel located within the current 185.8 project site. It was determined that the conclusions of this report were still applicable to the proposed project, even though the current project site includes an additional 10 acres.

6.1.1 Existing Conditions

The project site consists of a 185.8 acre parcel of undeveloped land located in the Santa Clarita Valley, which is surrounded by the Angeles and Los Padres National Forests, San Gabriel Mountains, and Piru Mountains. There are no known active faults on the project site and the San Andreas Fault is located approximately 20 miles to the northeast. The Santa Clara River is located approximately four miles south of the project site. The intermittent San Francisquito Canyon Creek, a tributary of the Santa Clara River, runs in a north-south direction in the eastern portion of the project site.

Waterstone conducted the Phase I Assessment by performing several tasks, including:

- Researching past activities that occurred on the site to identify any former operations that may have impacted the site with hazardous materials.
- Inspecting the site for areas of potential hazardous materials
- Identifying neighboring sites that have the potential to impact the site with hazardous materials
- Contacting the appropriate regulatory agencies for information regarding hazardous materials use, storage, and/or releases
- Reviewing published governmental agency lists to identify properties within one mile of the site with a reported release of hazardous materials.

A regulatory agency database review of the proposed project site and the neighboring area was conducted to search for properties that may have the potential for existing or future site contamination, environmental liabilities, or potential for contamination migration to surrounding areas. The federal databases searched and the results of the records search are summarized below.

- National Priorities List (NPL) of the Environmental Protection Agency (EPA): Identifies sites under the Superfund program. No NPL sites were identified within a one-mile radius.
- Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS): Identifies properties suspected of having adversely impacted the environment. No CERCLIS sites were identified within a one-half mile radius.
- Resources Conservation and Recovery Act (RCRA): Identifies hazardous waste taken from the point of generation to the point of disposal. No RCRA generator sites were identified within one-quarter mile radius; no treatment, storage, and disposal facilities were identified within one-quarter mile radius; and no violations or enforcement actions sites were identified within one-quarter mile radius.

- CORRACTS: Identifies RCRA facilities that are undergoing corrective action. No CORRACTS facilities were identified within the one-mile radius.
- Emergency Response Notification System (ERNS): Identifies reported releases of oil or hazardous substances. No ERNS incidents have occurred within a one-eighth mile radius.

The state databases searched and the results of the search are summarized below.

- State Priority Lists Sites (SPL): No SPL sites were identified within a one-mile radius.
- State Hazardous Waste Sites (SCL): No state hazardous waste sites were identified within a one-mile radius.
- Registered Underground Storage Tanks (UST): No UST sites were identified within a one-quarter mile radius.
- Leaking Underground Storage Tank Incident Report (LUST): No LUST sites were identified within a one-half mile radius.
- Solid Waste Facility Information System List: No sites were identified within a one-half mile radius.
- Toxic Release Inventory System List: No TRIS sites were identified within a one-quarter mile radius.

The California Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR) records were reviewed for the project site to identify oil field activities located within the project site. Two abandoned oil wells were identified within the project boundaries.

The research also involved site reconnaissance. No evidence of underground or aboveground storage tanks were observed on the project site. Because the proposed project site is undeveloped, there is no evidence or concerns of asbestos contamination, lead-based paint, urea-formaldehyde foam insulation, or equipment that could possibly contain polychlorinated Biphenyls (PCBs). There was not evidence of chemical use, storage, or illegal dumping.

6.1.2 Project Impacts

Thresholds of Significance

The following threshold was determined to indicate that impacts to environmental safety could be significant for the proposed project.

- Previous uses on the site that indicate residual soil toxicity.

Impacts Analysis

According to the DOGGR, two abandoned oil wells are located on the project site. Figure 4.4-1 contains two photographs of the wells, one located in the central portion of the project site (#301) and one located in the western portion near the Hollyleaf Cherry tree grove (#302). The wells were developed by International Oil Developers, Inc. in the mid-1930s. Neither well was successful and they were both abandoned shortly after drilling in 1935.

If oil wells are not properly abandoned with adequate filling and plugging of the wells, groundwater contamination could result. The abandonment report for one of the wells indicates that it was abandoned at 358 feet below ground surface (bgs) with a wooden plug and 25 sacks of cement on top to create a barrier from approximately 318 to 358 feet bgs. A metal cap was

then welded to the surface casing. The abandonment procedure for well #301 was not provided in the DOG files. The abandoned oil wells on-site may pose a hazard to future development if it is determined that the abandonment procedures were not adequate.

It was common for former drilling activities to create mud pits near wells for the disposal of waste drilling mud and cuttings from the drilling of the well and it is likely that mud pits exist near the abandoned wells on the project site. If mud pits are present on the site, they may contain oil and grease that was used as a lubricant in the drilling operations.

The Phase I Assessment concluded that the levels of oil and grease would not result in a significant impact due to the length of time since the drilling. Natural bacteria in the soil have most likely digested much of the oil and grease. Metals may be at higher level than surrounding levels; however, the report determined that the vast majority of mud pits do not contain a hazardous condition. This conclusion is supported by the lack of productivity at the wells and the depth of the wells.

6.1.3 Cumulative Impacts

The presence of the two abandoned oil wells would be mitigated through the re-abandonment procedures specified by the DOGGR and reduce the potential hazards associated with those wells to less than significant levels. The mitigation of this hazard would reduce impacts to less than significant. No cumulatively considerable hazards are present on the project site.

6.1.4 Project Design Features and Mitigation Measures

Project Design Features

None.

Mitigation Measures

MM 6.1-1 Prior to issuance of a grading permit, the two abandoned oil wells on the project site will be re-abandoned according to current California Department of Conservation, Division of Oil, Gas, and Geothermal Resources standards. Vegetation temporarily impacted by the re-abandonment process will be reseeded with native plant material mix.

Level of Significance after Mitigation

With the incorporation of the mitigation measure described above, potential impacts would be less than significant.

SECTION 7.0 EFFECTS FOUND NOT TO BE SIGNIFICANT

This section presents a summary of the environmental factors that were determined to have no impact or have a less than significant impact as presented in the County's Initial Study Checklist dated July 22, 2003. The Initial Study Checklist is provided in Appendix A.

7.1 NOISE

The County has determined that the project site is not located near a high noise source, such as an airport, railroad, freeway, or industrial land use. The residential land use is not considered to be "sensitive" or in proximity to other sensitive uses, such as schools, hospitals, or senior citizens facilities. The residential land use proposed for the project site is compatible with neighboring land uses and would not result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity. Therefore, potential noise impacts were determined to be less than significant.

7.2 MINERAL RESOURCES

According to the Special Management Areas map in the County General Plan, no known mineral resources are located in the vicinity of the project site. The nearest area indicated as having mineral resources is approximately four miles southwest of the project site. The project is not located within and would not result in the loss of availability of a known mineral resources that would be of value to the region and the residents of the state. The project would not result in the loss of availability of a locally important mineral resource discovery site delineated on a local general plan, specific plan, or other land use plan. Therefore, potential mineral resources impacts were determined to be less than significant.

7.3 AGRICULTURE RESOURCES

The County has determined that the proposed project would not 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. The project is consistent with the current zoning and General Plan land use designation and would not conflict with a Williamson Act contract. The project would not involve other changes in the existing environment which could result in conversion of farmland to non-agricultural use. Therefore, potential agriculture resources impacts were determined to be less than significant.

7.4 FIRE/SHERIFF

The project site would be within the jurisdiction of the Santa Clarita Valley Sheriff Station located at 23740 Magic Mountain Parkway in Valencia. The station is located approximately 4-5 miles from the project site. The County of Los Angeles Sheriff's Department anticipates that non-emergency response time to a request for service to the project site would be approximately 20-30 minutes. The priority response time would be approximately 7-12 minutes and the response time under emergency circumstances would be approximately 4-7 minutes. All response times are approximations only and would be dependent upon both the employment of area radio cars and traffic conditions.

This station serves an area of 656 square miles with a population of approximately 200,000 residents. The ideal officer to population ratio is one deputy per 1,000 residents and with the current staffing of 171 sworn deputies currently assigned, their ratio is less than ideal at one deputy for every 1,169 residents. Assuming a residential density of 3.01 persons per

dwelling unit, the proposed project will generate a population increase of 180. Based on this population increase, the project would not require additional deputes to the station and impacts to Sheriff services would be less than significant.

The Sheriff's Department is concerned about their ability to provide an adequate level of service to all policed areas due to the rapidly expanding population of the Santa Clarita Valley area. There is no developer "fee" mechanism in place to contribute to the Sheriff's Department that would offset any impacts, and the Sheriff's Department has a budget set by the Board of Supervisors. Therefore, there is no mechanism in place to reduce impacts of the project to zero. With the proposed project, the creation of more lots would result in an increase in property tax revenue for the County, although the increase in property taxes may not cover the increase in all services to be provided by the County. Nevertheless, impacts to the Sheriff's Department are less than significant.

The County of Los Angeles Fire Department assesses a developer fee for the Santa Clarita Valley for the benefit of the Consolidated Fire Protection District. This includes all of the unincorporated area within the zone of the City of Santa Clarita. The City of Santa Clarita collects developer fees and transfers the revenue to the District upon request. As detailed in Section 3.3 of this EIR, the project applicant will pay all applicable developer fees, which will provide funds for the fire protection facilities that are required by new development.

7.5 GENERAL

The County has determined that the project would not result in an inefficient use of energy resources or result in a major change in the patterns, scale, or character of the general area or community. The proposed project would not reduce the amount of agricultural land. Therefore, general impacts were determined to be less than significant.

7.6 LAND USE

The County has determined that the proposed project is consistent with the existing Santa Clarita Valley Area Plan land use designation for the site. The project is consistent with the hillside management criteria and would not divide an established community. It was determined that potentially significant impacts may result from the analysis of the Significant Ecological Area criteria. The analysis of the proposed project's compatibility with SEA criteria is presented in conjunction with the Biota Factor. Potential land use impacts were determined to be less than significant.

The SCVAP land use designations for the project site include Hillside Management Area (HM), Non-Urban 1 (N-1), and Floodway/Floodplain (W). Figure 2.3-1 presents the land use designations per the SCVAP and the slope densities on the project site. The "W" designation refers to the central portion of the SEA, which accounts for 54.3 acres of the project site and does not allow for residential development. The large majority of the remaining portion of the project site is designated as N-1, which includes 127 acres and requires a maximum of 0.5 dwelling units per acre for slope ranges less than 50 percent (1 du per 20 acres for slopes above 50 percent). The area designated as N-1 could contain approximately 60 residential units, given the various ranges of slope on the site. Approximately 4.6 acres of the project site are included within the HM area, which could contain a total of 1.5 units, based on the range of slopes on the site. Therefore, based on the land use designation in the SCVAP, the project site could contain a total of approximately 61 units. The proposed project contains a total of 60 residential lots, which is in conformance with the SCVAP land use designations.

The Los Angeles County General Plan designates the area as Non-Urban and SEA No. 19. The Non-urban land use designation includes the foothill and high desert areas of the County

that are not planned for urban use or scheduled to receive urban service. A wide variety of land uses are allowed within the Non-urban land use, including residential development, local highway-oriented commercial and industrial uses, as well as local industrial uses. The proposed project site is zoned by the County of Los Angeles as R-1-7,000 (Single-Family Residence Zone) and A-2-2 (Heavy Agricultural Zone).

The R-1-7,000 is applied to the eastern portion of the project site (approximately 75 acres), including the SEA No. 19, and indicates a residential zone with a minimum lot size of 7,000 square feet. In theory, within the land designated R-1-7,000, a total of approximately 460 single family lots could be created within this portion of the project site. The A-2-2 zone (Heavy Agricultural Zone) is applicable to the land west of the SEA No. 19 (approximately 111 acres), and requires a two acre minimum lot size. In theory, within the land designated A-2-2, a total of 55 single family lots could be created within this portion of the project site. Based on the current zoning, a total of approximately 515 dwelling units would be allowable (exclusive of consideration for hillside management or SEA restrictions). The proposed project includes only 60 dwelling units, in conformance with the SCVAP land use designation, which is considerably less dense than what is allowed under the Los Angeles County zoning designation for the site.

7.7 POPULATION/HOUSING/EMPLOYMENT/RECREATION

The proposed project involves the development of single-family residential development. The County has determined that the proposed project would not exceed official regional or local population projections and would not induce substantial direct or indirect growth in an area. The project would not displace existing housing, displace substantial numbers of people, result in a substantial job/housing imbalance, or create a substantial increase in vehicle miles traveled. The project would not require new or expanded recreational facilities for future residents. Therefore, potential population/housing/employment/recreation impacts were determined to be less than significant.

The Los Angeles General Plan states that four acres per thousand population is required to satisfy the demand for local park facilities. The General Plan also states that Santa Clarita Valley requires six acres per thousand population in order to satisfy the regional demand for park facilities. As part of the project, the project applicant will provide the Quimby obligation of $91,917, which is equitable to 0.6 acres of recreational facilities.

7.8 OTHER SERVICES: SOLID WASTE

The County of Los Angeles has recently adopted an ordinance, effective March 6, 2005, that requires all construction projects to recycle at least 50 percent of construction wastes. The ordinance amends Title 20- Utilities of the Los Angeles County Code- by adding Chapter 20.87- Construction and Demolition Debris Recycling and Reuse.

The ordinance states that at least 50 percent of all construction and demolition (C&D) debris, soil, rock, and gravel removed from a project site must be recycled or reused unless a lower percentage is approved by the Director of Public Works. A Recycling and Reuse Plan (RRP) must be submitted to the Department of Public Works, Environmental Programs Division, after an application for a permit has been filed for a project. The RRP must contain a project description and the estimated total weight of the project C&D debris, with separate estimates for (1) soil, rock, and gravel, (2) all other inert materials, and (3) all other project C&D debris. The ordinance also requires that annual progress reports be submitted to the Director for review. Therefore, compliance with the County Ordinance would ensure that construction-related impacts to solid waste would be less than significant.

Waste haulers within the County unincorporated areas are already required to collect recycled materials. The Department of Public Works will make pamphlets available to new residents of proposed project site that explains the benefits of recycling and encourage recycling. Therefore, long-term operational solid waste generated by the residential homes would be less than significant due to the availability of recycling services.

SECTION 8.0 ALTERNATIVES ANALYSIS

Section 15126.6 of the State CEQA Guidelines addresses the discussion of alternatives in EIRs. Key provisions of the Guidelines are identified throughout this section to explain the basis for the alternatives evaluated in this EIR. Section 15126.6 states the following:

> "An EIR shall describe a range of reasonable alternatives to the 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, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation. An EIR is not required to consider alternatives which are infeasible."

In accordance with CEQA Guidelines, the discussion of alternatives in this Section of the EIR focuses on a reasonable range of alternatives. Scenarios considered and eliminated during the design process are discussed and include the following:

1. Alternative Site Scenario
2. Large Lot Scenario

Project alternatives which are under consideration in this EIR include the following:

1. Alternative 1: No Project
2. Alternative 2: Small Lot Alternative
3. Alternative 3: 30 Large Lot Alternative
4. Alternative 4: 52 Lot Alternative

8.1 ALTERNATIVES CONSIDERED AND ELIMINATED

Section 15126.6(c) specifies that an EIR should identify any alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process and briefly explain the reasons underlying the lead agency's determination. Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are: (1) failure to meet most of the basic project objectives, (2) infeasibility, or (3) inability to avoid significant environmental impacts.

8.1.1 Alternative Site Scenario

Section 15126.6(f)(2) of the CEQA Guidelines requires an analysis of an alternative location(s) to the proposed project site and notes that "only locations that would avoid or substantially lessen any of the significant effects of the project need to be considered for inclusion in the EIR." CEQA further states that "an EIR need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative."

The proposed project involves the implementation of a residential project on approximately 186 acres. The objectives of the proposed project are presented in Section 2.5 of the Project

Description. In order to develop the proposed project in an alternative location, several requirements would need to be satisfied including the following:

1. Comparable size lot (approximately 186 acres);

2. Located within the Santa Clarita Valley; and

3. Accessible by existing roadways.

Based on a preliminary search for property in the surrounding area, it was determined that there are no locations that satisfy these criteria. The large majority of the property in the local area is either developed or entitled to be developed by another property owner, such as the currently vacant and undeveloped property within the Tesoro del Valle and the West Creek project areas. The Bouquet Canyon projects (4 tentative tract maps) at the intersection of Vasquez Canyon Road and Bouquet Canyon Road are not available for consideration as an alternative site for the Burnam project site because these projects have been submitted to the County for Tract Map approval; a CEQA review process has been started and partially completed. Recent discussions with the landowner indicate that the projects have been redesigned and will be submitted to the County within the next two months to restart the entitlement and CEQA processes. Additionally, the developable land in the vicinity of the project site is constrained by the presence of the Angeles National Forest to the north. It was determined that an alternative location would be infeasible and was therefore eliminated as an alternative under consideration.

8.1.2 Large Lot Scenario

In 2000, the Larwin Company applied to the County of Los Angeles to develop the VTTM 53189 site with residential homes. The previously proposed project design is included as Figure 8.1-1. The project included 60 single-family homes on lots of at least two acres in size. Lots 1 through 14 would have been located along the western side of San Francisquito Canyon Road, which would have provided access to the homes; these lots extended into SEA No. 19. Lots 15 through 60 were distributed along two streets that ran perpendicular to each other and would have been accessed via the Tesoro del Valle project in the same manner as the currently proposed project for VTTM 53189.

This scenario was eliminated for various reasons through the development review process with the County of Los Angeles Department of Regional Planning. The lots along San Francisquito Canyon Road were considered to be too close to the SEA No. 19. Certain habitats, such as the oak woodlands and the riversidian alluvial fan sage scrub, would have been significantly impacted by the development of the lots (1-14) along the eastern side of the SEA. A large amount of hillside area within Lots 31 through 35 would have required substantial manufactured slopes. Additionally, the project would have required approximately 912,000 cubic yards of grading balanced on-site, which included 750,000 cubic yards of alluvial removal and replacement for compaction.

In contrast, the proposed project does not include development within the SEA No. 19 and does not include residential homes along San Francisquito Canyon Road. Development would be more compact and the footprint of the proposed project would be significantly reduced. Grading activities would reduce earthwork to approximately 246,000 cubic yards balanced on-site. Therefore, the “Large Lot Scenario” was eliminated in favor of the proposed project, which was designed in accordance with the guidance of the County of Los Angeles Department of Regional Planning.

FIGURE 8.1-1
LARGE LOT SCENARIO

8.2 ALTERNATIVES TO THE PROPOSED PROJECT

The analysis for each of the project alternatives identified below includes the following:

- Description of the alternative
- Analysis of the environmental impacts and comparison to the proposed project
- Analysis of the alternative's ability to meet the project objectives

8.2.1 Alternative 1: No Project/No Development

Under the No Project Alternative, the proposed project would not occur and the environmental effects from the proposed project would be avoided. The only land uses that would be allowed to continue would be the existing land uses. Therefore, the project site would remain in an undeveloped condition.

Comparison of Environmental Impacts

Because this alternative does not propose any development on the land and all of the existing conditions would remain intact, all environmental impacts associated with the proposed project would be eliminated.

Ability to Meet the Project Objectives

This scenario does not achieve any of the current project objectives.

Alternative 1 Analysis Conclusion

This alternative would be the environmentally superior alternative because all of the existing natural open space and vegetation would be preserved and there would be no construction or operation related environmental impacts. However, this alternative would result in non-residential use of land. The project site is anticipated for residential development by the SCVAP. Additionally, this alternative does not achieve any of the project objectives stated in Section 2.5 of this EIR, with the exception of Objective 6, which states that the natural drainage features of the San Francisquito Canyon SEA No. 19 should be preserved.

Section 15126.6(2) of the CEQA Guidelines states that "if the environmentally superior alternative is the "no project" alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives."

8.2.2 Alternative 2: Small Lot Alternative

In this alternative, as depicted in Figure 8.2-1, lot sizes would be smaller in size, similar to the adjacent Tesoro del Valle project site. Lots within Tesoro del Valle generally range from approximately 4,200 to 7,000 square feet. A reasonable alternative lot size for comparison to the proposed project was therefore assumed to be 6,000 to 7,000 square feet. Under this alternative, a total of 60 single-family residential lots with the same internal roadway system would be developed on the project site. Lot sizes in the proposed project average approximately 13,000 square feet; this alternative would result in lot sizes approximately 40 to 50 percent smaller. Reduced lot sizes would allow for a more compact development and would allow for a redistribution of the lots to less environmentally-sensitive areas. For example, the majority of the lots could be reduced in length along the eastern side of "A" Street near the boundary of SEA No. 19, yielding a broader development buffer along the SEA. Additionally,

lots could be eliminated from the hillside areas of the project site. The internal roadway system ("A", "B", and "C" Streets) would remain as currently depicted in the tract map in order to satisfy County requirements for multiple points of access to the site and for connection to the adjacent Tesoro del Valle development.

Comparison of Environmental Impacts

Geotechnical The movement of lots out of hillside areas would substantially reduce grading impacts. Additionally, the general reduction in the lot sizes would result in a reduced need for overall grading activities. Under this alternative, the amount of hillside grading would be substantially lessened as a result of the reduced footprint of the project site. The amount of manufactured slope area required for the project would be reduced because development would be further pulled away from the hillside areas, including the hillside areas behind Lots 1-8 as well as Lots 30-32 on the proposed Tract Map 53189.

However, a substantial amount of remedial grading for the alluvial soils under the central portion of the developed footprint would still be required. The roadways would still need to be constructed "at-grade" to connect with the Tesoro del Valle project site and the property to the north of the project, which would still impact hillside areas and require substantial grading. It is possible that this alternative would result in an imbalance of cut-to-fill resulting from the reduction in the amount of hillside grading activities. An imbalance may require fill material to be brought into the project site from off-site areas. Nevertheless, grading would be reduced overall under this scenario. Although geotechnical impacts were determined to be less than significant with the currently proposed project design, this alternative would further minimize geotechnical impacts.

Flood The amount of impervious cover on these lots would not necessarily be reduced under this alternative because smaller lot sizes may or may not equate to smaller homes. Therefore, it is unknown whether this scenario would result in a decrease in impervious area and a corresponding increase in surface water percolation. However, a reduced project footprint would likely reduce impacts to the hydrology of the site due to decreased disturbance to natural areas. A reduction in the length of the lots along the eastern side of Street "A" adjacent to the SEA would create more distance between the lots and the San Francisquito Creek floodplain. Although flood impacts were determined to be less than significant with the currently proposed project design, this alternative would further minimize potential flood impacts.

Fire This alternative would reduce the amount of open space areas that would be subject to fuel modification. However, the number of lots (and number of residents) on the project site would remain unchanged and fuel modification pursuant to the County requirements for development within a VHFHSZ would still be required.

Water Quality This alternative may not necessarily reduce the amount of impervious cover on the site, although the overall disturbed area would be reduced due to the smaller lot sizes. The size of the house pads would not necessarily be dictated by the size of the lots. Additionally, the internal roadway system would remain consistent with the currently proposed project design.

The amount of vehicles using the internal roadway system would not be reduced; therefore, the amount of pollutants in stormwater runoff associated with vehicle use, such as hydrocarbon pollutants and heavy metals, would not be reduced under this alternative.

However, the reduction in lot size would likely reduce the amount of water needed for lawn irrigation as well as the amount of pesticides/herbicides used for lawn and garden maintenance. Therefore, some water quality improvements may be realized with this alternative, while other water quality impacts would remain the same. Although water quality impacts were determined to be less than significant with the currently proposed project design, this alternative would further minimize some water quality impacts.

Air Quality

The reduction in grading activities associated with this alternative would translate to a corresponding reduction in construction emissions. As noted in Section 4.2, construction related PM_{10} would be significant on the peak day and peak quarter prior to mitigation and NO_X emissions would be significant on the peak day and in the peak quarter in the proposed project design even after mitigation. The construction related NO_X emissions have to be reduced by at least half in order to not be significant in the peak quarter.

It is highly unlikely that the reduction in lot size would translate to a 50 percent reduction in PM_{10} or NO_X emissions due to the amount of grading and alluvium removal and compaction that would still be required and the construction of the roadway connections to the Tesoro del Valle project. However, these emissions would be reduced under this alternative. There would be no changes in the internal roadway system, and therefore no reduction in emissions associated grading for the roadway design. Although construction-related air quality impacts for NO_X emissions were determined to be significant with the currently proposed project design and this alternative would reduce these emissions somewhat, it is highly unlikely that this alternative could reduce construction-related air quality impacts to a level less than significant. However, air quality impacts would be less than those from the proposed project.

Biota

The reduced lot sizes, locating homes away from the hillsides and the SEA, and reduced fuel modification zones would reduce impacts to biota. Although biota impacts were determined to be less than significant with the currently proposed project design, this alternative would reduce overall biota impacts.

Cultural Res.

This alternative would reduce potential impacts to archaeological and paleontological resources through the reduction of the grading activities.

Visual Qualities

The aesthetics of the project site would be altered by the redesign of the project footprint to a more compact form. The homes would be located much closer together and would give the appearance of a more urban residential design rather than the more rural design currently proposed in the tract map. The amount of manufactured slopes would be reduced and there would be an increase in the amount of open space on the site. Otherwise, the location of the internal roadway system, and therefore the general location of the lots on the property, would remain unchanged.

Impacts to visual qualities were determined to be less than significant with the currently proposed project design. This alternative design would alter the aesthetics of the project by creating a more urban and compact development that would be less compatible with the large lot ranchland to the east of the project site. Because of the surrounding community's standard for larger-lot rural properties, adverse visual character impacts would be increased under this scenario, although it would be similar in appearance to the Tesoro del Valle project.

Traffic/Access This alternative would not change the analysis of traffic/access impacts performed for the currently proposed project design because the number of units would not change.

Sewage Disposal This alternative would not change the analysis of sewage impacts performed for the currently proposed project design because the number of units would not change.

Education This alternative would not change the analysis of education impacts performed for the currently proposed project design because the number of units would not change.

Utilities This alternative would not change the analysis of utilities impacts performed for the currently proposed project design because the number of units would not change.

Environ. Safety This alternative would not change the analysis of environmental safety impacts performed for the currently proposed project design.

Ability to Meet the Project Objectives

The project objectives as listed in Section 2.5, as well as an analysis of the alternative's ability to meet the project objectives, are presented below.

Project Applicant Objectives:

1. Provide single-family housing within the Santa Clarita Valley that contributes to the local diversity of housing and lot sizes for existing and future residents and that is consistent with the type and size of housing satisfying the market demands in this area.

   This alternative is partially consistent with this objective. The majority of the housing within the Area A of the Tesoro del Valle project is constructed on lots that are approximately 4,200 to 7,000 square feet in size. This size of housing is in high demand, as the available homes in the development are being sold rapidly. However, the current market for housing in this area can accommodate variations in housing size and affordability. The lot sizes in this Alternative do not contribute to the diversity of housing and lot sizes for existing and future residents since they would reflect the housing size provided by the larger Tesoro del Valle project. The larger lots included in VTTM 53189 would provide the housing market in the immediate area with more diversity and would satisfy the potential homeowners who seek a more rural atmosphere and spacious property.

2. Provide high-quality housing that will help to meet the existing and future demand and help alleviate the housing shortage in the Santa Clarita Valley.

This alternative is consistent with this objective. The number of homes on the project site is the same as the proposed project, which would help satisfy some of the local demand for housing and is also consistent with the Santa Clarita Valley Area Plan.

3. Provide a residential development that conforms to the existing Santa Clarita Valley Area Plan land use designation and density requirements.

   This alternative is consistent with this objective. The number of homes on the project site is the same as the proposed project, which is also consistent with the Santa Clarita Valley Area Plan.

4. Incorporate design techniques, such as developing a compact project footprint that avoids sensitive biological resources and hilltop development and preserves open space, in order to create a visually harmonious project.

   This alternative is consistent with this objective. The alternative would achieve a more compact development than the proposed project and would avoid hilltop development by remaining within (and reducing) the proposed grading footprint for the site.

5. To preserve the natural drainage features of the San Francisquito Canyon SEA No.19 that transects the property.

   This alternative is consistent with this objective. The smaller lots would reduce the overall graded footprint of the project site, thereby creating a broader development buffer along the SEA.

Los Angeles County General Plan Objectives:

This alternative is consistent with all of the Los Angeles County General Plan objectives listed in Section 2.5 of this EIR.

Santa Clarita Valley Areawide Plan Objectives:

This alternative is consistent with all of the Santa Clarita Valley Areawide Plan objectives listed in Section 2.5 of this EIR.

Alternative 2 Analysis Conclusion

This alternative would reduce the significant air quality impacts associated with grading of the proposed project, but would likely not reduce them to a level less than significant. Biota and hillside grading impacts would also be reduced under this alternative due to the reduced size of the lots. Additionally, this alternative would provide for an increased buffer between development and the SEA. Some proposed project impacts that were determined to be less than significant would be reduced under this alternative, while others would remain similar.

This alternative would result in a development that would accommodate the same number of homes as the proposed project, but would reduce some impacts. However, this alternative would not completely satisfy all of the project objectives. This Alternative would develop lots and homes that are similar in size to the larger Tesoro del Valle project and would not contribute to the local diversity of housing size options. Additionally, landowners to the northeast and southeast of the project site have expressed concerns about developing small lots on the project site, which would be incompatible with the equestrian nature of the area. Nevertheless, due to the reduction in impacts to air quality, biota, and grading, this alternative would be the environmentally superior alternative under Section 15126.6(2) of the CEQA Guidelines.

8.2.3 Alternative 3: 30 Large Lot Alternative

In this alternative, as depicted in Figure 8.2-2, the development footprint of the project site would remain similar in size. However, instead of developing 60 lots, this alternative would double the size of each lot, resulting in a total of 30 lots on the project site. The internal roadway system ("A", "B", and "C" Streets) would remain as currently depicted in the tract map in order to satisfy County requirements for multiple points of access to the site.

Comparison of Environmental Impacts

Geotechnical Because the development footprint of the project site would remain similar, the geotechnical impacts would remain largely the same as in the proposed project. The amount of earthwork, including remedial grading of alluvial soils, would not be changed. This alternative would not reduce impacts associated with geotechnical hazards.

Flood This alternative would reduce the amount of impervious cover on the site by eliminating half of the homes and their associated amenities (garage, driveway, etc.), thereby decreasing urban runoff and increasing stormwater percolation into the soil. Flood impacts would be slightly reduced under this alternative.

Fire This alternative would not substantially change the analysis of wildland fire-related hazards or impacts. Larger lot sizes do provide more flexibility with the location of the home on the graded pad, which could allow for reductions and/or alterations in the amount of fuel modification required on the site. Nevertheless, all requirements associated with the VHFHSZ would be implemented in this alternative as well as the proposed tract map design.

Water Quality This alternative would reduce the amount of impervious cover on the site, which may contribute to reductions in urban runoff into the storm drain system. However, some of this impervious cover would be replaced by landscaping, which requires more irrigation and lawn care maintenance. Therefore, the increased amount of irrigated lawn and landscaping could increase the amount of fertilizers, herbicides, and pesticides used on the project site and entering the stormwater runoff. The alternative would also allow for more biofiltration of stormwater runoff through the soil and increased percolation due to the decrease of impervious cover.

The amount of vehicles using the internal roadway system would be reduced; therefore, the amount of pollutants in stormwater runoff associated with vehicle use, such as hydrocarbon pollutants and heavy metals, would be proportionately reduced under this alternative. Therefore, some water quality impacts would be reduced under this alternative, while other impacts could be increased.

Air Quality Because grading activities associated with this alternative would remain largely unchanged, there would not be a change in heavy vehicle-related construction emissions. As noted in Section 4.2, construction related PM_{10} would be significant on the peak day and peak quarter prior to mitigation and NO_X emissions would be significant on the peak day and in the peak quarter in the proposed project design even after mitigation. The

construction related NO_X emissions would not be reduced under this Alternative.

The elimination of 30 lots would result in a corresponding reduction in resident-owned vehicle emissions. Although operational air quality impacts are not significant under the proposed project, they would be reduced under this alternative.

Biota Because the grading footprint of the project site would not be changed, the same amount of vegetation would be impacted under this alternative. Therefore, impacts to biota would remain the same as for the proposed project.

Cultural Res. This alternative would not reduce the cultural resources impacts from the currently proposed project design because the grading footprint would not be reduced.

Visual Qualities The aesthetics of the project site would be altered due to the large lot design. The elimination of half of the lots would result in larger "ranch style" lots that would be more compatible with the homes and ranches on the eastern side of San Francisquito Canyon Road. However, the development would be different from the design of the abutting Tesoro del Valle property, which provides vehicular access to the project site. The overall size of the development, including internal roadway system and "footprint" of the project site, as well as the land use, would remain unchanged under this alternative. The larger lot design would be compatible with the preferences of the existing landowners on the east side of the property; therefore, visual impacts would be reduced under this scenario.

Traffic/Access This alternative would reduce the number of vehicle trips per day in proportion to the number of vehicles eliminated under this scenario. Therefore, this alternative would reduce the direct and cumulative impacts associated with traffic from the project site.

Sewage Disposal This alternative would reduce the sewage impacts of the currently proposed project design by eliminating approximately half of the sewage that would need to be treated from the project site. The 60 unit proposed project would generate approximately 15,600 gallons of wastewater per day, while this alternative would generate approximately 7,800 gallons of wastewater per day.

Education This alternative would reduce the number of students enrolled in the local school district in proportion to the reduction in the number of homes on the project site. School enrollment would be reduced from approximately 26 elementary students to approximately 13 students. Junior High enrollment would be reduced from 10.6 to 5.3 students and Senior High enrollment would be reduced from 15.6 students to 7.8 students.

Water Utilities This alternative would reduce the amount of potable water demanded by the development. The NCWD calculates water demand based on an average demand of 0.9 acre-feet per year (af/yr) per dwelling unit. Therefore, this alternative would reduce the amount of potable water for internal home use (not irrigation) by the project site by approximately half. However, the increased size of the lawns would require irrigation and the

amount of potable water saved by eliminating half of the homes could be off-set by increased landscape irrigation; therefore, the reduction in potable water demand would not be reduced by half. Nevertheless, impacts to water utilities would be reduced under this scenario.

Environ. Safety This alternative would not change the analysis of environmental safety impacts performed for the currently proposed project design.

Ability to Meet the Project Objectives

The project objectives as listed in Section 2.5, as well as an analysis of the alternative's ability to meet the project objectives, is presented below.

Project Applicant Objectives:

1. Provide single-family housing within the Santa Clarita Valley that contributes to the local diversity of housing and lot sizes for existing and future residents and that is consistent with the type and size of housing satisfying the market demands in this area.

   This alternative is consistent with this objective. This alternative would cater to an affluent homeowner that could afford to purchase large lots. According to the Southland Association of Realtors, there is a shortage of homes for sale in the Valley that is not able to satisfy the robust demand for housing. The annual median price for a single-family home in the Valley is expected to rise in 2005 to a record high of $501,777. Therefore, although the housing under this scenario would be larger and more expensive than the proposed project, the market demands for housing in the region are high enough to be able to accommodate the higher prices.

2. Provide high-quality housing that will help to meet the existing and future demand and help alleviate the housing shortage in the Santa Clarita Valley.

   This alternative is consistent with this objective, but less consistent than the proposed project. The number of homes in this Alternative is half of what is proposed in VTTM 53189. Therefore, fewer homes would be developed on the site, which would reduce the ability of the project to help satisfy the local demand for housing.

3. Provide a residential development that conforms to the existing Santa Clarita Valley Area Plan land use designation and density requirements.

   This alternative is consistent with this objective. Although this alternative creates a substantially less efficient use of the developed land than the proposed project (the project site is able to accommodate up to 60 lots, per the SCVAP), fewer lots may be developed and still be in compliance with the SCVAP.

4. Incorporate design techniques, such as developing a compact project footprint that avoids sensitive biological resources and hilltop development and preserves open space, in order to create a visually harmonious project.

   This alternative is consistent with this objective and does not have any greater or lesser impacts than the proposed project.

5. To preserve the natural drainage features of the San Francisquito Canyon SEA No.19 that transects the property.

This alternative is consistent with this objective and does not have any greater or lesser impacts than the proposed project.

Los Angeles County General Plan Objectives:

This alternative is consistent with all of the Los Angeles County General Plan objectives listed in Section 2.5 of this EIR.

Santa Clarita Valley Areawide Plan Objectives:

This alternative is consistent with all of the Santa Clarita Valley Areawide Plan objectives listed in Section 2.5 of this EIR.

Alternative 3 Analysis Conclusion

This alternative would not reduce the significant air quality impacts associated with grading of the proposed project. Some proposed project impacts that were determined to be less than significant would be reduced under this alternative, while others would remain similar. Therefore, there would likely be an environmental advantage to this alternative.

However, this alternative would provide fewer homes for the Santa Clarita Valley area, which is rapidly growing in population. Developable land is at a premium in the region and this Alternative would not provide as much housing as the proposed project, VTTM 53189. Therefore, this alternative does not fully satisfy all of the project objectives.

8.2.4 Alternative 4: 52 Lot Alternative

In this alternative, as depicted in Figure 8.2-3, Lots 1-8 would be eliminated from the project design. The project site would be developed in the same footprint as is currently depicted in the tract map, with the exception of the land currently depicted as Lots 1-8, resulting in a total of 52 lots. The internal roadway system ("A", "B", and "C" Streets) would remain as currently depicted in the tract map in order to satisfy County requirements for multiple points of access to the site. This alternative would eliminate a substantial amount of the development in the hillside areas of the site.

Comparison of Environmental Impacts

Geotechnical The footprint of the project site would remain unaltered with the exception of grading associated with the development of Lots 1-8. Under the proposed tract map, this portion of the project site would require considerable grading to develop these lots due to the hillside topography of the area. According to the current tract map, Lots 1-8 are located on the hilliest portion of the project site, with Lots 1 and 4 requiring the most hillside grading activity. Elimination of these lots would lessen the amount of hillside grading activity on the project site.

However, the development of "B" Street and "C" Street would still be required in order to connect with the Tesoro del Valle to the west and the private property to the north, respectively. Additionally, "B" Street is required to provide alternative fire and emergency access to the site. The development of "B" and "C" Streets would require substantial grading activity in that portion of the project site in order to match street grades with the adjacent Tesoro del Valle development. Therefore, although this scenario would reduce grading activities associated with development of

some lots in the foothill areas on the site, this benefit would be diminished since the adjacent roadways would still need to be developed.

Additionally, the elimination of Lots 1-8 may result in an imbalance of cut and fill materials on the site. According to the current tract map, the development of these lots would produce fill material for the rest of the project site. The elimination of these lots from the development footprint would reduce the fill material available for the remainder of the project footprint.

Flood This alternative would reduce the amount of impervious cover on the site by eliminating eight of the homes and their associated amenities (garage, driveway, etc.), thereby slightly decreasing urban runoff and increasing stormwater percolation into the soil. Flood impacts would be slightly reduced under this alternative.

Fire This alternative would eliminate the lots that are closest to the property boundary and which, under the current tract map, would require a fire wall to eliminate the need for off-site fuel modification. Therefore, the elimination of these lots would reduce the amount of fuel modification and the fire wall needed to be in compliance with County VHFHSZ fuel modification requirements.

Water Quality This alternative would slightly reduce the amount of impervious cover and landscaping on the project site, which would contribute to reductions in urban runoff into the storm drain system from parked cars and the use of fertilizers, herbicides, and pesticides. The amount of vehicles using the internal roadway system would be reduced; therefore, the amount of pollutants in stormwater runoff associated with vehicle use, such as hydrocarbon pollutants and heavy metals, would be proportionately reduced under this alternative. Therefore, overall water quality impacts would be reduced under this alternative.

Air Quality Grading activities associated with this alternative would be reduced by the elimination of the eight lots. Therefore, there would be a proportional reduction in heavy vehicle-related construction emissions. As noted in Section 4.2, construction related PM_{10} would be significant on the peak day and peak quarter prior to mitigation and NO_X emissions would be significant on the peak day and in the peak quarter in the proposed project design even after mitigation. NO_X emissions on the peak day would be 152 lbs/day and the SCAQMD threshold is 100 lbs/day; emissions on the peak quarter would be 5.03 lbs/day and the SCAQMD threshold is 2.5 lbs/day. It is highly unlikely that the reduction in the number of lots would translate to an adequate reduction in PM_{10} or NO_X emissions due to the amount of grading and alluvium removal and compaction that would still be required on the site. Therefore, construction related NO_X emissions would be reduced under this alternative, but would not be reduced enough to reduce air quality impacts to less than significant.

Biota The reduction in the grading footprint would slightly reduce impacts on biota. However, this portion of the project site consists entirely of non-native grasslands. According to the biological impacts discussion in Section 4.3, non-native grasslands are not sensitive habitats and impacts to

this vegetation type would not require mitigation. Therefore, the benefits of this alternative to biota would be minimal.

Cultural Res. This alternative would reduce potential impacts to archaeological and paleontological resources through the reduction of the grading impacts associated with Lots 1-8.

Visual Qualities The overall size of the development, including internal roadway system and "footprint" of the project site would be only slightly changed. The aesthetics of the project site would be altered due to the avoidance of some development in the hillside portion of the project site, although "B" and "C" Streets would still be developed. Therefore, the aesthetic benefit from this alternative would be the preservation of a portion of hillside within the project site.

Traffic/Access This alternative would reduce the number of vehicle trips per day in proportion to the number of lots eliminated under this scenario. However, due to the elimination of some hillside grading, it might be necessary to import fill material from off-site locations to compensate for the loss of on-site fill material. This could result in more short-term construction truck traffic to the project site. Although construction-related truck traffic could increase, this alternative would reduce the operational direct and cumulative impacts associated with long-term traffic.

Sewage Disposal This alternative would slightly reduce the sewage impacts of the currently proposed project design by eliminating sewage generated from eight lots. The 60 unit proposed project would generate approximately 15,600 gallons of wastewater per day, while this alternative would generate approximately 13,520 gallons of wastewater per day.

Education This alternative would reduce the number of students enrolled in the local school district in proportion to the reduction in the number of homes on the project site. School enrollment would be reduced from approximately 26 elementary students to approximately 22 students. Junior High enrollment would be reduced from 10.6 to 9.2 students and Senior High enrollment would be reduced from 15.6 students to 13.5 students. Therefore, impacts to education would be reduced under this scenario.

Water Utilities This alternative would slightly reduce the amount of potable water demanded by the development. The NCWD calculates water demand based on an average demand of 0.9 acre-feet per year (af/yr) per dwelling unit. Therefore, this alternative would reduce the amount of potable water demanded in proportion to the reduction in the number of homes on the project site. This alternative would reduce water demand to approximately 46.8 af/yr from 54 af/yr. Therefore, impacts to water utilities would be slightly reduced under this scenario.

Environ. Safety This alternative would not change the analysis of environmental safety impacts performed for the currently proposed project design.

Ability to Meet the Project Objectives

The project objectives as listed in Section 2.5, as well as an analysis of the alternative's ability to meet the project objectives, are presented below.

Project Applicant Objectives:

1. Provide single-family housing within the Santa Clarita Valley that contributes to the local diversity of housing and lot sizes for existing and future residents and that is consistent with the type and size of housing satisfying the market demands in this area.

   This alternative is consistent with this objective. The type and size of housing would not be altered from the proposed project.

2. Provide high-quality housing that will help to meet the existing and future demand and help alleviate the housing shortage in the Santa Clarita Valley.

   This alternative is consistent with this objective, but less consistent than the proposed project. The number of homes in this alternative is slightly reduced from what is proposed in VTTM 53189. Therefore, fewer homes would be developed on the site, which would slightly reduce the ability of the project to help satisfy the local demand for housing.

3. Provide a residential development that conforms to the existing Santa Clarita Valley Area Plan land use designation and density requirements.

   This alternative is consistent with this objective. Although this alternative creates a less efficient use of the developed land than the proposed project (the project site is able to accommodate up to 60 lots, per the SCVAP), fewer lots may be developed and still be in compliance with the SCVAP.

4. Incorporate design techniques, such as developing a compact project footprint that avoids sensitive biological resources and hilltop development and preserves open space, in order to create a visually harmonious project.

   This alternative is consistent with this objective. Grading impacts would be reduced under this alternative for the most prominent hillside area of the site.

5. To the maximum extent practicable, preserve the natural drainage features of the San Francisquito Canyon SEA No.19 that transects the property.

   This alternative is consistent with this objective and would not be different from the proposed project.

Los Angeles County General Plan Objectives:

This alternative is consistent with all of the Los Angeles County General Plan objectives listed in Section 2.5 of this EIR.

Santa Clarita Valley Areawide Plan Objectives:

This alternative is consistent with all of the Santa Clarita Valley Areawide Plan objectives listed in Section 2.5 of this EIR.

Alternative 4 Analysis Conclusion

This alternative would reduce the significant air quality impacts associated with grading of the proposed project, although it would not be enough to reduce those impacts to a less than significant level. Visual impacts associated with hillside grading would also be reduced under

this alternative and this alternative would be more consistent with the County's Hillside Management criteria for development in slope areas. In summary, some proposed project impacts that were determined to be less than significant would be reduced under this alternative, while others would remain similar to the proposed project. Therefore, there would be an environmental advantage to this alternative. However, this alternative would provide fewer homes for the Santa Clarita Valley area, which is rapidly growing in population. Developable land is at a premium in the region and this Alternative would not provide as much housing as the proposed project, VTTM 53189. Therefore, this alternative does not fully satisfy all of the project objectives.

FIGURE 8.2-1
SMALL LOT ALTERNATIVE

FIGURE 8.2-2
30 LARGE LOT ALTERNATIVE

FIGURE 8.2-3
52 LOT ALTERNATIVE

SECTION 9.0 LONG-TERM ENVIRONMENTAL EFFECTS

9.1 Growth-Inducing Impacts

In accordance with Section 15126.2(d) of the CEQA Guidelines, the growth-inducing analysis of the proposed project must address two key issues. The first is the potential for the project to foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. The second issue is the potential for the project to encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. Typically, this issue involves the potential for the project to induce further growth by the expansion or extension of existing services, utilities, or infrastructure. By definition, the CEQA Guidelines state that "it must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment."

As described in detail in Section 2.0, the proposed project involves the development of 60 residential lots on approximately 186 acres within the unincorporated County of Los Angeles, near the City of Santa Clarita. The project would be located adjacent to existing rural residential homes and ranchland to the east, Tesoro del Valle residential development to the south and southwest, and vacant open space entitled for development in Tesoro del Valle to the west and north. The proposed project is consistent with the SCVAP land use designations.

The project site will eventually be surrounded by development on all sides upon the completion of the Tesoro del Valle project, with the exception of property designated as SEA No. 19. Property to the west between the proposed project site and the Tesoro del Valle site may developed in the future; however, the development of these properties would not be facilitated by the proposed project. Los Angeles County is experiencing a shortage of all housing types and the proposed project would be accommodating an existing population and housing demand rather than providing a surplus or inviting more growth. While this project has the potential to foster some economic growth within the County, the development of 60 lots would have a negligible effect on local or regional population growth.

With respect to the second criteria for growth inducement, the proposed project would not extend or expand services, utilities, or infrastructure beyond those areas already planned for by the SCVAP. The proposed project would not facilitate the use of or encourage development along San Francisquito Canyon Road because the road does not provide access to the project site. All other roads associated with the project either tie back into Tesoro del Valle or provide access to existing homes. It is important to note that the extension of utilities would not promote development in other areas because the developable land surrounding the project site is currently entitled for development, with the exception of some property between the proposed project site and Tesoro del Valle. These properties (if developed in the future) would be served through the extension of utilities from Tesoro del Valle; therefore, development of these properties would not be hastened by VTTM 53189. Thus, with regard to the second criterion, the proposed project would not be considered growth-inducing.

9.2 Significant Irreversible Environmental Changes

Pursuant to Section 15126.2(c) of the CEQA Guidelines, this EIR must consider significant irreversible environmental changes which would be caused by the proposed project, should it be implemented. The proposed project would not result in significant irreversible environmental changes.

The proposed project would require the grading of approximately 246,000 cubic yards of property, landform modifications, and alterations to the hydrology on the site. Permanent

changes to the aesthetics of the site would result from the landform modifications and the removal of existing vegetation; however, the impacts of these changes would be minimized by the use of contoured grading techniques that would conform to the natural topography to the greatest extent feasible. Therefore, changes would not be considered significant and would be in conformance with the character and land uses of the surrounding community. Vegetation would be restored, and the restoration monitored under the direction of a qualified biologist. The alterations to hydrology on the site would also be permanent. The Drainage Study mitigates for any potential impacts associated with changes in hydrology. The drainage design would mitigate for impacts; therefore, changes to hydrology would be permanent, but not significant.

The proposed project would impact approximately 64 acres of various vegetation types, including 5.0 acres of ruderal, 2.0 acres of coastal sage scrub, 0.8 acre of mixed chaparral/holly-leaf cherry woodland, 47.6 acres of non-native grassland, 1.1 acres of non-native grassland/chamise chaparral mix, and 5.6 acres of Riversidean alluvial fan sage scrub. Other biological impacts would include possible impacts to some special status plant species, jurisdictional areas, and nesting birds. However, all of these impacts would be fully mitigated through the proposed Mitigation Program. Therefore, no significant long-term or irreversible impacts to sensitive animal or plant species would result from implementation of the proposed project.

Non-renewable resources, such as natural resources and fossil fuels, would be committed to the proposed project, which future generations would be unable to reverse. Natural resources, including lumber, sand and gravel, asphalt, petrochemicals, and other construction materials would be used in the ultimate construction of the homes that would eventually be located on the graded pads. Fossil fuels would be used in the construction phase of the project and would be required to serve the project over the long-term. These incremental commitments of non-renewable resources are neither unusual nor unexpected and must be weighed against the benefits of the proposed project. The primary benefit of the proposed project would be to provide residential opportunities to serve the Santa Clarita community in Los Angeles County. The proposed project's use of non-renewable resources is not considered significant or excessive.

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SECTION 11.0 LIST OF EIR PREPARERS AND CONTRIBUTORS

LOS ANGELES COUNTY DEPARTMENT OF REGIONAL PLANNING

Director of Planning..... James E. Hartl, AICP
Impacts Analysis Section Head.....Daryl Koutnik, Ph.D.
Environmental Planner..... Hsiao-ching Chen, Ph.D.

CONSULTANTS

A.G.I. Geotechnical, Inc.

Project Geologist..... Mark A. Swiatek, C.E.G. 1781
Principal Engineer.....Juan A. Vidal, R.G.E. 861

BonTerra Consulting

Project Manager.....Thomas E. Smith, Jr., AICP
Principal, Biological Services .....Ann Johnston
Senior Project Manager, Biological Services .....Jeffrey C. Galizio
Managing Archaeologist.....Richard S. Shepard, M.A., RPA
Assistant Project Manager .....Kristin L. Keeling
GIS Specialist.....Jennifer Gómez

B & E Engineers

President.....James T. Emerson, P.E.

JHA Environmental Consultants

President.....Jo Anne H. Aplet
Air Quality Modeler.....Lowell J. Aplet, Ph.D.

Linscott, Law & Greenspan

Principal .....David S. Shender, P.E.
Transportation Planner III..... Bruce Chow